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## CURRENT AFFAIRS MAGAZINE

### January 2026



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## Editor's Note to Readers...

Dear Students,

Welcome to this edition of **CORE**.

First and foremost, I want to express my deepest gratitude for the way you have embraced this initiative. When we conceptualized CORE - aiming to be truly **C**omprehensive, **O**bjective, **R**elevant, and **E**xam-focused, our goal was to cut through the noise and provide clarity in your preparation. Your overwhelming response and trust tell us that we are on the right path. Thank you for making us a part of your daily study routine.

We also understand that consistency is the bedrock of UPSC preparation, and we are aware of the anxiety regarding the backlog of current affairs content. I want to assure you that the monthly magazines for June to September 2025 are currently in the final stages of production. You can expect these editions to be released **next month**. We have taken extra care to ensure these back-issues maintain our high standards of analysis and exam-relevance, ensuring you miss nothing crucial from those months.

This magazine is a reality due to the tireless efforts of our dedicated team members: **Rohan sir, Anisha ma'am, Nishi ma'am, and Rishikesh sir**. Furthermore, the leadership and strategic guidance of **Abhijeet sir and Shashank sir** have been crucial to this endeavour.

Finally, CORE is built for you, and it evolves with you. Your voice is critical in shaping the future of this magazine. Whether it is a note of appreciation that boosts our team's morale, or constructive criticism on how we can explain a concept better, we want to hear it all. Please share your feedback and suggestions for improvement on [newsletter@upscprep.com](mailto:newsletter@upscprep.com).

Keep reading, keep revising, and keep your focus sharp.

Regards,  
**Krishna Tupe**  
Faculty, UPSCprep.com

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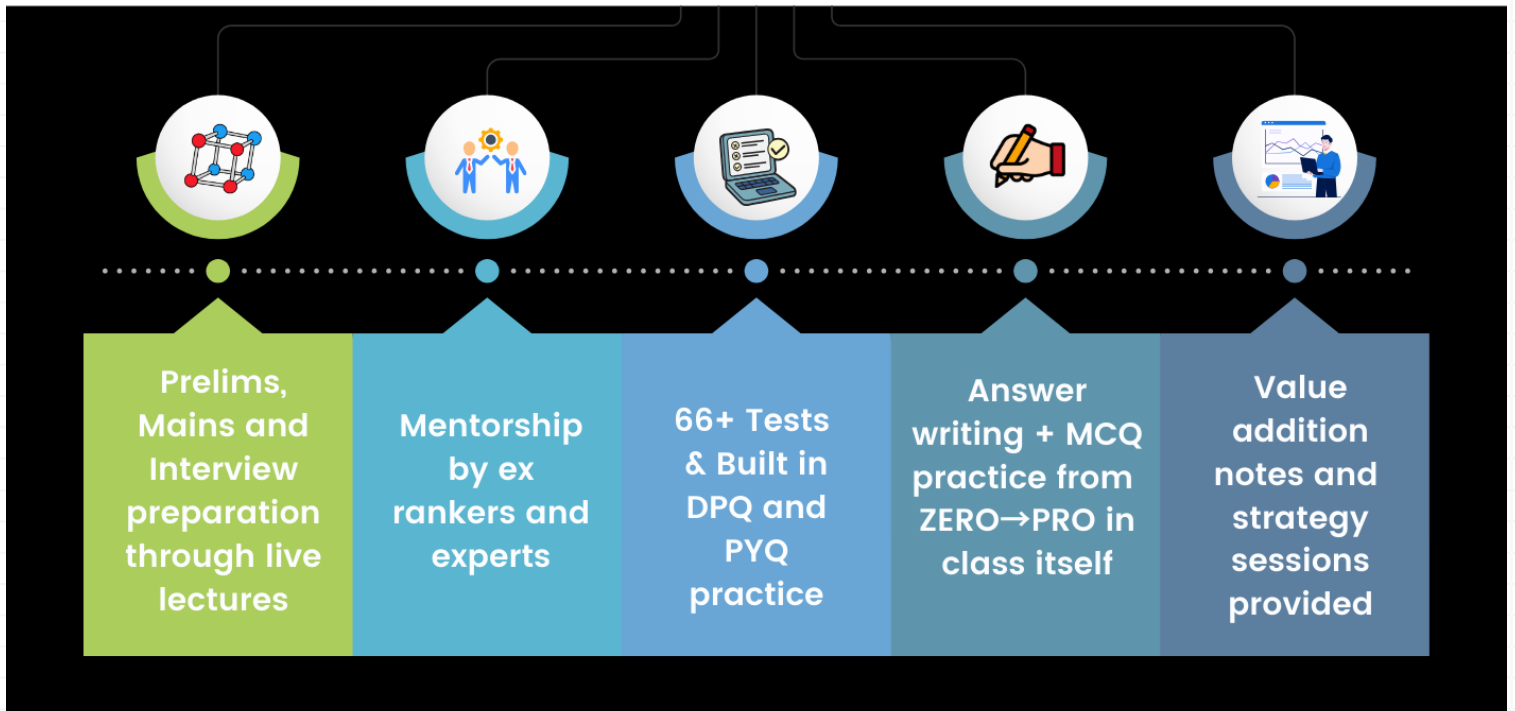
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# POLITY & GOVERNANCE

## PESA

### Context:

- In January 2026, Jharkhand officially notified the **Jharkhand PESA Rules, 2025**, becoming one of the last major Fifth Schedule states to do so.
- The move follows nearly **25 years** of statehood and sustained pressure from tribal organizations and the Jharkhand High Court to operationalize tribal self-rule.
- The new rules apply fully in 13 districts (including Ranchi, Khunti, and West Singhbhum) and partially in 3 others, impacting roughly 26.3% of the state's population.

### What is PESA?

- The **Panchayat (Extension to Scheduled Areas) Act, 1996** extends **Part IX (Panchayati Raj)** of the Constitution to **Fifth Schedule areas**.
- Recognises the **Gram Sabha** as the **primary authority** over local governance, land, forests, and community resources.
- Enacted on **24 December 1996** to operationalise tribal self-rule across **nine States**, including Jharkhand.

### Historical Background

- Colonial dispossession:** British forest and land laws undermined customary tribal governance, turning communities into encroachers.
- Constitutional response:** The Fifth Schedule (Article 244) sought protection but lacked grassroots self-governance.
- 73rd Constitutional Amendment (1992):** Introduced Panchayati Raj nationwide, excluding Scheduled Areas due to their special status.
- Bhuria Committee (1994-95):** Recommended Gram Sabha-centric control over resources and development.
- PESA enactment (1996):** Parliament legally empowered tribal villages through direct democracy.

### Key Features of PESA

- Gram Sabha supremacy:** Village assemblies are the core decision-making bodies in Scheduled Areas.
- Protection of customary law and culture:** Governance must respect local traditions and tribal social systems.
- Control over natural resources:** Rights over **minor forest produce**, village water bodies, and community lands.
- Land acquisition safeguards:** Mandatory Gram Sabha consultation; scope to **reverse illegal land transfers**.
- Local governance powers:** Regulation of markets, moneylending, liquor; selection of beneficiaries for government schemes.

### KNOW YOUR BASICS: Panchayati Raj Institutions (PRIs)

- Constitutional Status:** Established by the **73rd Constitutional Amendment Act, 1992**, adding **Part IX** and the **11th Schedule** (containing 29 functional items) to the Constitution.
- Three-Tier System:** Mandates a uniform structure at the **Village, Intermediate (Block), and District levels**, except in states with a population below 20 lakhs.
- Gram Sabha:** The foundational body of the system, consisting of all persons registered in the electoral rolls of a village within the Panchayat area.
- Reservation of Seats: Women:** Mandatory **one-third (1/3rd)** reservation for women in both membership and chairperson positions.
  - SC/ST:** Reservation in proportion to their population at all three levels.
- Duration and Elections:** Provides a fixed **five-year term**; if dissolved prematurely, elections must be held within **six months**.
- Financial Devolution: State Finance Commissions** are constituted every five years to review the financial position and recommend the distribution of taxes/grants between the State and PRIs.



Figure 1: PESA Act/ Source: PIB

- State Election Commission:** An independent body responsible for the superintendence, direction, and control of the preparation of electoral rolls and the conduct of all Panchayat elections.
- Exempted Areas:** The Act does not automatically apply to **Scheduled Areas (V Schedule)** and certain states like Nagaland, Meghalaya, and Mizoram; however, **PESA Act, 1996** extends these provisions to Scheduled Areas with modifications.

### Conclusion

The notification of PESA Rules in Jharkhand marks a belated but transformative step toward constitutional tribal self-

governance, with effective implementation now key to empowering Gram Sabhas and protecting indigenous rights.

## Sentencing in Heinous Crimes

**Context:** The Supreme Court of India has stayed the Delhi High Court order suspending the life sentence of former MLA Kuldeep Singh Sengar in the Unnao rape case.



Figure 2: Suspension of Sentence

### Situations When Suspension of Sentence is Considered

#### Fixed-term or Short Sentences

- Ordinarily granted.
- Rationale: Appellate delays may cause the convict to serve the entire sentence, making the right to appeal **illusory**.

#### Life Imprisonment or Heinous Offences

- **Exception, not the rule.**
- Requires strict scrutiny of:
  - Gravity and manner of offence
  - Societal impact
  - Probability of acquittal on appeal

#### Apparent Legal or Procedural Infirmities

- May be granted where:
  - Trial judgment shows **prima facie perversity**
  - Gross legal or procedural error
  - Misapplication of law risking miscarriage of justice

#### Humanitarian and Medical Grounds

- Exceptional circumstances such as:
  - Terminal illness
  - Extreme old age
  - Severe medical conditions

- Subject to assurance that **public safety and justice are not compromised**.

### Prolonged Incarceration with Delayed Appeal

- Considered only in **rare cases**.
- Not a standalone ground in **life sentence or heinous crime cases**.

### Law Governing Suspension of Sentence

#### Statutory Framework

- Governed by Section 389 of the CrPC, 1973, now Section 430 of the BNSS, 2023.
- Empowers appellate courts to suspend execution of sentence during pendency of appeal.

#### Key Legal Principles

- **Conviction remains intact:** Suspension affects only the punishment, not the finding of guilt.
- **Discretionary power:** Not a matter of right; guided by **reason, proportionality, and public interest**.
- **Higher threshold for serious offences:** Especially in rape and life imprisonment cases, courts must act with restraint to preserve deterrence and societal faith.

### Important Judicial Pronouncements

- **Bhagwan Rama Shinde Gosai v. State of Gujarat (1999):** Suspension generally justified for short-term sentences but must be exercised cautiously in serious offences.
- **Shivani Tyagi v. State of Uttar Pradesh (2024):** In heinous crimes, particularly sexual violence, **long** incarceration alone is not sufficient ground for suspension.
- **Chhotelal Yadav v. State of Jharkhand (2025):** In life imprisonment cases, suspension is permissible only when a palpable legal error indicates a real likelihood of acquittal.

### Conclusion

Suspension of sentence is a carefully balanced judicial tool, not an automatic relief. In heinous crimes, courts must apply a higher threshold of scrutiny to protect victims' rights, uphold deterrence, and maintain public confidence in the criminal justice system.

## India's PPP Project Pipeline

**Context:** Following the Union Budget 2025-26 announcement, the Department of Economic Affairs (DEA) launched a massive three-year Public-Private Partnership (PPP) project pipeline in January 2026.

## Scale and Sectoral Distribution

- **Investment Volume:** The pipeline comprises 852 projects with a combined total project cost exceeding ₹17 lakh crore.
- **Leading Sectors:** The Ministry of Road Transport and Highways dominate the list with 108 projects worth over ₹8.76 lakh crore, followed by significant investments in Power (₹3.4 lakh crore) and Ports & Shipping (₹37,644 crore).

## Regional Contributions and Governance.

- **State Participation:** Andhra Pradesh leads the state-level contribution with 270 projects, followed by Tamil Nadu (70 projects) and Madhya Pradesh (21 projects).
- **Policy Support:** The Economic Survey 2025-26 recommends moving from "transaction-centric" models to "market-building," with a focus on professionalizing PPP cells and adopting standardized biddable frameworks.

## Emerging Frontiers in PPP

- **Social Infrastructure:** New focus areas include Health, Education, and Urban Sanitation, where traditional concession models are being replaced by co-design and risk-sharing partnerships.
- **Green Transition:** The 2026 roadmap prioritizes Green Hydrogen and sustainable energy systems to align with India's decarbonization targets and the "Viksit Bharat 2047" vision.

## Conclusion

The ₹17 lakh crore PPP pipeline provides the necessary visibility and structural certainty for investors to bridge India's infrastructure gap through 2028.

## Judge Removal Process

The removal of a judge is in the news following a January 2026 motion signed by over 100 MPs against a High Court judge, reviving the debate on the high constitutional threshold required to ensure judicial independence.

### Constitutional Provisions and Grounds

- **Grounds for Removal:** A judge can only be removed on the grounds of "**proved misbehaviour**" or "**incapacity**."
- **The Motion:** A removal motion must be signed by at least **100 members** of the Lok Sabha or **50 members** of the Rajya Sabha and submitted to the Speaker/Chairman.

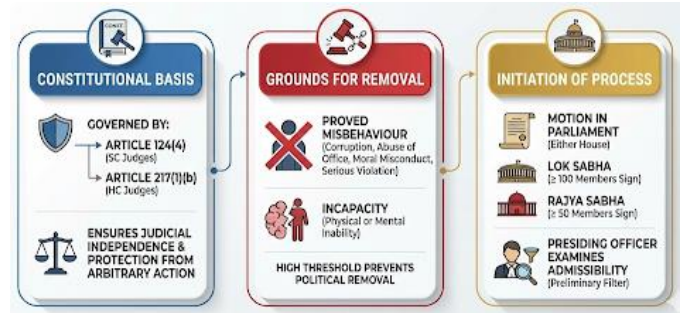


Figure 3: Constitutional Provisions and Grounds

## The Three-Stage Procedure

The **Judges (Inquiry) Act, 1968** outlines the statutory steps that must be followed once a motion is initiated.

- **Inquiry Committee:** If the motion is admitted, a 3-member committee—comprising a SC judge, a HC Chief Justice, and a distinguished jurist—investigates the charges.
- **Voting Threshold:** If the committee finds the judge guilty, the motion must be passed by both Houses by a special majority (absolute majority of total strength and 2/3rd majority of those present and voting).

## Conclusion

The process concludes with an order by the President; notably, in Indian history, no judge has ever been successfully removed as most resigned, or the motion failed the voting stage.

## Prevention of Corruption Act, 1988

**Context:** A two-judge Bench of the Supreme Court delivered a split verdict on the constitutional validity of Section 17A, a provision that mandates prior government approval before investigating public servants.

### The 2026 Legal Deadlock

The verdict in *CPIL v. Union of India* has referred the matter to a larger Bench due to fundamentally differing judicial views.

- **The "Rule of Law" Challenge:** Justice B.V. Nagarathna struck down Section 17A as unconstitutional, calling it "old wine in a new bottle" that creates an arbitrary shield for the corrupt at the threshold of a probe.
- **The "Steel Frame" Defense:** Justice K.V. Viswanathan upheld the provision but "read it down," suggesting that approval should come from an independent body like the Lokpal rather than the government, to prevent "play-it-safe syndrome" among honest officers.

### **FURTHER INFORMATION: Corruption in India**

**Corruption Perception Index (CPI) 2024:** India ranks 96th out of 180 countries (score: 38). This marks a slight decline from previous years (Rank 93 in 2023), with the report citing stagnating anti-corruption efforts globally.

#### **Key Causes of Corruption:**

- **Administrative Delays:** Delay in processing files creates a "speed money" culture to expedite services.
- **Opaque Political Funding:** The nexus between big business and politics often leads to policy paralysis or favouritism.
- **Weak Enforcement:** Low conviction rates and lengthy judicial delays reduce the deterrent effect of existing laws.

#### **Legislative Framework:**

- **Prevention of Corruption Act (PCA), 1988:** The primary law criminalizing bribery and criminal misconduct; amended in 2018 to criminalize the giving of a bribe as well.
- **Prevention of Money Laundering Act (PMLA), 2002:** Focuses on the "proceeds of crime" and allows for the attachment of assets derived from corruption.
- **Benami Transactions (Prohibition) Act, 1988:** Prohibits holding property in another's name to hide the source of funds.

#### **Institutional Framework:**

- **Central Vigilance Commission (CVC):** The apex integrity institution; it exercises superintendence over the CBI for corruption cases.
- **Central Bureau of Investigation (CBI):** The premier agency for investigating high-level corruption and complex economic offenses.
- **Lokpal & Lokayuktas:** Statutory ombudsmen at the Center and States designed to investigate complaints against even the highest public functionaries.

#### **2nd ARC Recommendations (4th Report):**

- **Reducing Discretion:** Use of e-governance to automate services and minimize "human interface."
- **Fast-Track Trials:** Establishing special courts to ensure corruption cases are settled within a fixed timeframe.
- **Whistleblower Protection:** Strengthening legal safeguards to encourage officials to report internal malpractice without fear of retaliation.

### **Evolution and Key Provisions**

The Act serves as India's primary legislative weapon against graft, significantly strengthened by the **2018 Amendment**.

- **Section 17A (2018 Insertion):** Mandates that no police officer can conduct an inquiry or investigation into an offence by a public servant (relatable to official decisions) without **prior approval** from the competent authority.
- **Redefining Bribery:** The 2018 update shifted the focus from "illegal gratification" to "**undue advantage**," making the **giving of a bribe** a direct offence, thereby holding private individuals and commercial organizations equally accountable.
- **Section 19 (Sanction for Prosecution):** Unlike Section 17A, which applies at the investigation stage, Section 19 requires government sanction before a court can take **cognizance** of the offence for trial.

### **Conclusion**

The 2026 split verdict highlights the ongoing struggle to balance administrative immunity with investigative independence, a decision that will redefine the accountability of India's civil services.

## **Gutkha Nation**

**Context:** The "Gutkha Nation" discourse has intensified following a landmark decision by the Odisha government to impose a complete statewide ban on all tobacco-nicotine products. Simultaneously, the Union Government notified a significant taxation overhaul for "sin goods".

### **The Socio-Economic Paradox**

- **Fiscal Burden:** According to the **Household Consumption Expenditure Survey (HCES) 2023-24**, tobacco-consuming households in rural India rose to **68.6%**. This leads to a "moral hazard" where the state bears the multi-billion-dollar cost of treating tobacco-related cancers (via schemes like **Ayushman Bharat**) while consumption continues to rise.
- **Productivity Loss:** Tobacco is linked to **13 lakh deaths annually** in India. For a welfare state, this represents a massive loss of human capital and a redirection of development funds toward preventable emergency care.

### **Regulatory & Fiscal Measures**

- **Taxation Overhaul:** Effective **February 1, 2026**, the GST on tobacco and pan masala has been hiked to **40%**. Furthermore, the old compensation cess has been

replaced by a **Health and National Security Cess**, creating a non-lapsable fund for medical infrastructure.

- **Capacity-Based Monitoring:** New rules require manufacturers to register all packing machines and install **CCTV systems** to prevent tax evasion, with the duty now linked to the maximum production capacity of each machine rather than declared output.
- **Odisha's Comprehensive Ban:** On **January 21, 2026**, Odisha prohibited the manufacture, sale, and transport of all food products containing tobacco or nicotine, specifically targeting the practice of selling tobacco and pan masala in separate sachets.

### Conclusion

The 2026 shift marks a transition from simple regulation to "fiscal deterrence," as the state recognizes that the survival of the welfare model depends on curbing the "Gutkha Nation" epidemic.

## Delimitation Post-2027

**Context:** The Union Government confirmed that the long-delayed national Census will be conducted in 2026–2027. This data will serve as the mandatory foundation for the next Delimitation Commission.

### Constitutional and Statutory Framework

- **Constitutional Mandate:** Under **Article 82**, Parliament enacts a Delimitation Act after every Census; **Article 170** provides for the same in State Assemblies.
- **The "Freeze" History:** The **42nd Amendment (1976)** froze seat allocation based on the 1971 Census to support family planning; the **84th Amendment (2001)** extended this freeze until the first Census after 2026.
- **The Commission:** It is a high-power, quasi-judicial body whose orders **cannot be challenged in any court** and carry the force of law. It typically comprises a retired Supreme Court judge, the Chief Election Commissioner, and State Election Commissioners.

### 2027 Significance: The Women's Reservation Link

- **Implementation Trigger:** The **Constitution (106th Amendment) Act, 2023** (Nari Shakti Vandan Adhiniyam) stipulates that the 33% reservation for women will only take effect **after** a delimitation exercise is conducted using the post-2026 Census data.
- **Seat Expansion Potential:** With the new Parliament house designed to seat **888 members**, the 2027-based delimitation could significantly increase the total number

of Lok Sabha seats from the current 543 to ensure equitable representation for a population that has tripled since 1971.

### Conclusion

The delimitation following the 2027 Census will be the most consequential in India's history, balancing the need for "one citizen, one vote, one value" with the federal concerns of states that have successfully stabilized their populations.

## Governor: Constitutional Limits

**Context:** The Supreme Court (SC) clarified that while the judiciary cannot impose rigid, one-size-fits-all timelines for a Governor to grant assent to bills, it will intervene on a case-by-case basis to prevent "prolonged and unexplained inaction."

### Key Constitutional Provisions and Limits

- **Article 163 (Aid and Advice):** The Governor is a constitutional head and must act on the **aid and advice** of the Council of Ministers, except in matters where the Constitution explicitly grants discretionary power.
- **Article 200 (Assent to Bills):** The Governor has four options: grant assent, withhold assent, return the bill for reconsideration, or reserve it for the President. The SC recently ruled that "withholding assent" must be followed by **returning the bill**; a Governor cannot simply sit on it indefinitely.
- **Article 176 (Governor's Address):** The special address at the start of the year is an executive function. The SC reaffirmed that the Governor **cannot unilaterally edit or skip** portions of the speech prepared by the Cabinet, as it represents the government's policy, not the Governor's personal view.

### Judicial Jurisprudence and Constraints

- **Article 361 Immunity:** While the Governor enjoys personal immunity from court proceedings, the **institutional office** is subject to judicial review. If inaction is found to be *mala fide* (in bad faith) or obstructive, courts can direct the Governor to take a decision.
- **"As Soon As Possible":** The SC emphasized that the phrase in Article 200 requires promptness. While no "deadline" exists, "elasticity" in the Constitution does not allow for a permanent "pocket veto" that thwarts the democratic mandate.
- **Discretionary Limits:** In cases like *Nabam Rebia* and *Shamsher Singh*, the court established that discretion is limited to specific areas (like Article 356 reports or choosing



a CM in a hung assembly) and cannot be used to interfere in daily legislative business.

#### KNOW YOUR BASICS: Constitutional Status and Powers of the Governor

- **Dual Capacity:** Serves as the **Constitutional Head** of the State (titular executive) and as a **Representative of the Union Government**, acting as a link between the Centre and the State.
- **Appointment (Article 155):** Appointed by the **President**; the office is an independent constitutional post and not an employment under the Central Government.
- **Tenure (Article 156):** Holds office during the "**Pleasure of the President**"; though the normal term is five years, there is no constitutional security of tenure or fixed grounds for removal.
- **Executive and Legislative Functions:** Under Articles 154 and 200, the Governor exercises all executive actions in their name—appointing the Chief Minister, Ministers, and the Advocate General—while also managing the legislative cycle by summoning, proroguing, or dissolving the Assembly and deciding the fate of Bills through assent, return, or reservation for the President.
- **Constitutional Discretion (Article 163):** Unlike the President, the Governor has the power to act in their own discretion in specific matters (e.g., recommending President's Rule under **Article 356** or exercising functions as an administrator of an adjoining UT).
- **Judicial Powers (Article 161):** Can grant pardons, reprieves, or remissions of punishment for offenses against state laws, but **cannot** pardon a death sentence.

#### Conclusion

The 2026 legal landscape reinforces that the Governor's role is to act as a bridge between the Centre and State, not as a "parallel authority" that can block the legislative process through indefinite silence.

## Digital Census 2026–2027

**Context:** The Registrar General and Census Commissioner of India (RG&CCI) issued a formal notification finalising the timeline for the nation's first fully digital census.

#### Timeline and Execution Phases

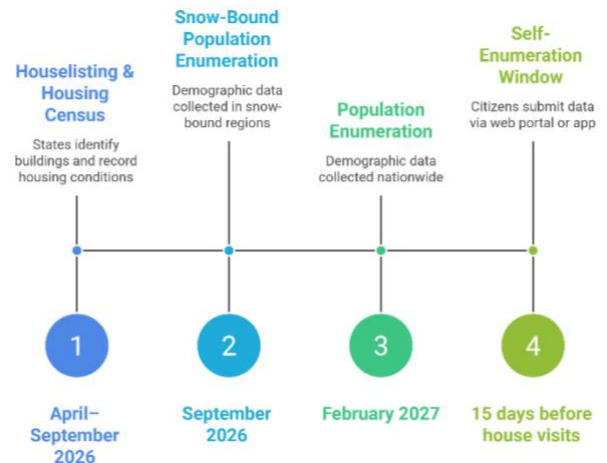


Figure 4: India's 2026-27 Census Timeline

#### Digital Innovations and New Features

This exercise replaces paper-based forms with a robust digital public infrastructure.

- **Mobile Data Collection:** Over **30 lakh enumerators** will use a specialized mobile app (Android/iOS) for real-time data entry, featuring GPS-tagging of buildings and automated error validation.
- **Caste Enumeration:** For the first time since 1931, the 2027 Census will include a comprehensive **caste-based count** for all communities, integrated directly into the digital Population Enumeration phase.
- **Expanded Questionnaire:** The survey adds new parameters, including **digital connectivity** (internet/smartphone usage), **climate-induced migration**, and refined categories for the transgender community.

#### Conclusion

The 2026–27 digital census is the foundational step for the upcoming delimitation of constituencies and the implementation of the Women's Reservation Act, which are legally tied to these first post-2026 census figures.

## UGC Reservation

**Context:** The Supreme Court (SC) stayed the implementation of the UGC (Promotion of Equity in Higher Education Institutions) Regulations, 2026.

#### Key Information

- **Constitutional Articles:** **Article 15(5)** allows special provisions for SC/ST/OBCs in education; **Article 17** prohibits

untouchability in any form; **Article 14** ensures equal protection of laws.

- **Regulatory Shift:** The 2026 rules marked a shift from an "Advisory" framework (2012) to a "Mandatory" regulatory regime with financial and academic debarment powers.
- **Statutory Body:** The **UGC** is a statutory body established under the **UGC Act, 1956**, and operates under the Ministry of Education.
- **Drafting Context:** These rules were framed following SC directions in the **Abedo Salim Tadvi case**, which highlighted the failure of the 2012 norms in preventing institutional casteism.

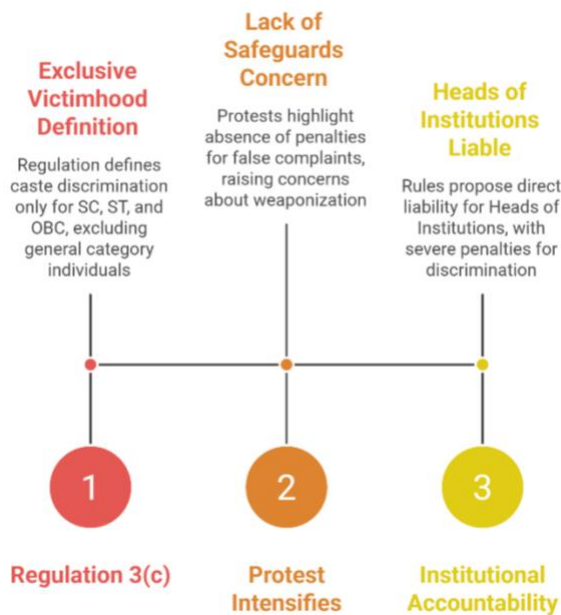


Figure 5: Key legal conflicts in caste discrimination regulation

## Conclusion

The 2026 stay by the Supreme Court reflects a judicial attempt to balance "substantive equality" for the marginalized with the "unity and fraternity" of the campus environment, pending a review by a larger committee.

## Arbitration Council of India (ACI)

**Context:** India has been actively reforming its arbitration framework to promote **alternative dispute resolution (ADR)**, reduce judicial backlog, and improve ease of doing business. In this backdrop, the **Arbitration Council of India** was established as an institutional mechanism to regulate and promote arbitration in the country, in line with global best practices.

### Establishment

- The Arbitration Council of India was established under the **Arbitration and Conciliation (Amendment) Act, 2019**.
- It is a **statutory body** aimed at strengthening institutional arbitration in India.
- The ACI functions under the administrative control of the **Ministry of Law and Justice**.
- Its creation reflects India's intent to emerge as a preferred hub for domestic and international arbitration.

### Composition

- The Council consists of a Chairperson, ex-officio members, and part-time members with expertise in arbitration, law, and public administration.
- Members include representatives from the judiciary, legal profession, and arbitration experts.

### Functions

- **Grading of arbitral institutions** in India based on infrastructure, quality of arbitrators, and performance.
- **Accreditation of arbitrators**, including laying down norms for professional and ethical standards.
- **Promotion of institutional arbitration** by encouraging parties to move away from ad-hoc arbitration.
- **Policy advisory role** to the government on arbitration-related reforms.
- **Training and capacity building** through workshops and guidelines to improve arbitration practices.
- **Maintaining a depository** of arbitral awards and arbitration-related data.

### Conclusion

The Arbitration Council of India represents a critical institutional reform in India's dispute resolution landscape. By standardising arbitral practices, accrediting arbitrators, and promoting institutional arbitration, the ACI has the potential to transform India into a reliable and efficient arbitration hub. However, its success will depend on functional autonomy, effective implementation, and continued stakeholder confidence.

## Juvenile Justice Act, 2015

### Context:

- **10th Anniversary Milestone:** January 15, 2026, marks exactly **10 years** since the JJ Act, 2015, came into force. This has sparked a national "Status of Implementation" review by the Ministry of Women and Child Development (WCD).

- **Juvenile Justice Amendment Bill, 2026:** The government has introduced/proposed a new bill in the winter-to-budget session transition to further lower the age threshold for adult trials in **heinous crimes** from 16 to **14 years**.
- **India Justice Report (IJR) 2025-26:** Released in late Jan, the report flags critical systemic failures, including a **55% pendency rate** in Juvenile Justice Boards (JJBs).

### What is the JJ Act?

The **Juvenile Justice (Care and Protection of Children) Act, 2015** provides the legal framework for the care, protection, rehabilitation, and social reintegration of vulnerable children, adopting a child-centric and rights-based approach.

### Institutional Mechanisms

- **Child Welfare Committees (CWCs):** district-level statutory bodies responsible for inquiry and care-related orders.
- **Juvenile Justice Boards (JJBs):** handle cases of children in conflict with law using child-friendly procedures.

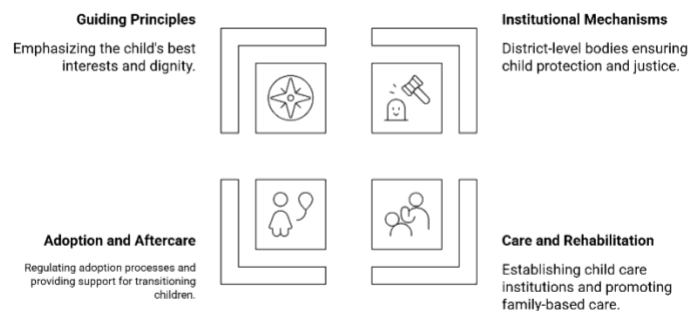


Figure 6: Framework for child welfare

### Care and Rehabilitation Measures

- Establishment of **child care institutions** such as children's homes, observation homes, and special homes.
- Preference for **family-based care** including foster care and adoption.
- Preparation of **individual care plans** focusing on education, health, and psychosocial support.

### Conclusion

The Juvenile Justice Act, 2015 aims to safeguard vulnerable children through structured care and rehabilitation mechanisms, with effective implementation being key to achieving child welfare outcomes.

## Right to Education (RTE) Act, 2009

### Context:

- **"National Mission" for EWS:** The Supreme Court (Jan 14) termed the 25% EWS quota in private schools a "national mission," mandating states to create binding rules for full compliance.
- **Karnataka Policy Shift:** The state moved to withdraw amendments that favored government school admissions over private ones, aiming to restore the RTE quota after a drop in enrollments.

### What is the RTE Act?

The **Right of Children to Free and Compulsory Education Act, 2009** operationalises **Article 21A of the Constitution**, making education a **fundamental right** for children.

### Scope and Applicability

- Guarantees free and compulsory education to children aged **6-14 years**.
- Applicable to government schools, government-aided schools, and specified categories of private unaided schools.

### Key Provisions

- Mandates **free education**, including textbooks, uniforms, and other essential learning materials.
- Prescribes **minimum norms and standards** for schools related to infrastructure, pupil-teacher ratio, and teacher qualifications.
- Prohibits **detention, expulsion, and physical or mental harassment** of children.
- Bans **screening procedures** for admission at the elementary level.

### Inclusion and Equity Measures

- Requires private unaided schools to reserve **25% seats** for children from economically weaker sections and Disadvantaged groups at the entry level.
- Ensures neighbourhood-based schooling to improve accessibility.

### Teacher and Curriculum Provisions

- Lays down qualifications and service conditions for teachers.
- Promotes child-friendly and activity-based learning methods.



- Discourages rote learning and emphasises comprehensive development.

### Monitoring and Enforcement

- Provides for grievance redressal mechanisms.
- Assigns responsibilities to central, state, and local governments for implementation.

### Conclusion

The RTE Act, 2009 establishes a rights-based framework for universal elementary education. Its success depends on effective implementation, quality enhancement, and addressing learning outcomes alongside access.

## Immoral Traffic (Prevention) Act, 1956

### Context:

- **SC Guidelines on Minor Trafficking:** In late January 2026, the Supreme Court issued fresh directives in the follow-up to the *K.P. Kiran Kumar v. State* case, mandating a "zero-delay" rehabilitation protocol for rescued minors.
- **AHTU Expansion:** The Ministry of Home Affairs issued a January 2026 advisory to all States/UTs to ensure **Anti-Human Trafficking Units (AHTUs)** are fully functional in every district with specialized training for child-friendly interrogations.

### What is the Immoral Traffic (Prevention) Act, 1956?

The Immoral Traffic (Prevention) Act, 1956 (ITPA) is India's primary law to combat trafficking for the purpose of commercial sexual exploitation.

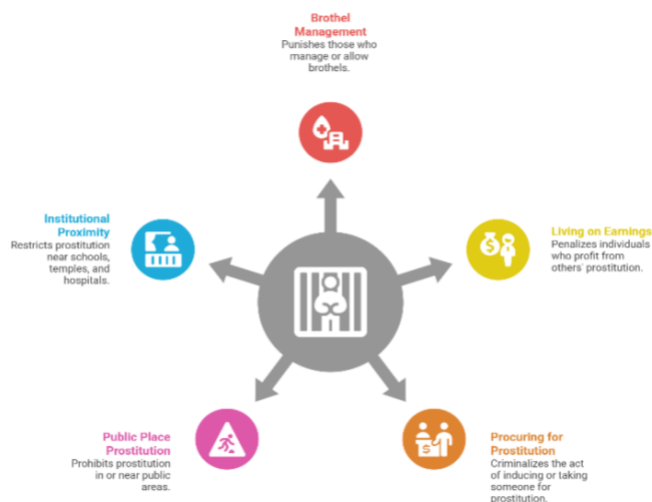


Figure 7: Anti – trafficking Law Provisions

### Protective Measures

- Provides for **rescue and rehabilitation** of victims through protective homes.
- Empowers magistrates to order removal of victims from brothels.
- Allows closure of premises involved in immoral trafficking.

### Law Enforcement Provisions

- Mandates appointment of **special police officers** to deal with offences under the act.
- Enables search, rescue, and seizure operations with judicial oversight.

### Conclusion

The Immoral Traffic (Prevention) Act, 1956 provides the legal framework to curb sexual exploitation and trafficking in India. Its effectiveness depends on strict enforcement, victim-centric rehabilitation, and coordination with social welfare mechanisms.

## Prevention of Cruelty to Animals Act, 1960

### Context:

- **Jallikattu Season 2026:** The annual bull-taming season officially began on **January 3, 2026**, in Pudukkottai, followed by major events in Madurai (Avaniyapuram, Palamedu, and Alanganallur) between January 15–17. These are regulated under the PCA Act (Tamil Nadu Amendment), 2017.
- **Supreme Court Verdict Reserved:** In late January 2026, the Supreme Court reserved its judgment on a batch of petitions regarding the **stray dog menace** and the enforcement of **Animal Birth Control (ABC) Rules**.

### What is the PCA Act?

The Prevention of Cruelty to Animals Act, 1960 (PCA Act) is India's principal legislation aimed at preventing unnecessary pain and suffering to animals.

### Objective and Scope

- Aims to prevent the infliction of unnecessary pain or suffering on animals.
- Applies to all animals, including domestic and captive animals.

- Promotes humane treatment in everyday use, transport, and commercial activities.

### Key Provisions

- Defines acts constituting cruelty to animals, such as beating, overloading, neglect, and abandonment.
- Penalises practices that cause unnecessary pain or suffering.
- Regulates experiments on animals, allowing them only for scientific purposes under prescribed conditions.
- Empowers authorities to seize animals subjected to cruelty.

### Institutional Mechanism

- Provides for the establishment of the **Animal Welfare Board of India (AWBI)**.
- The board advises the government on animal welfare policies, rules, and awareness programmes.

### Regulatory Framework

- Enables the central government to frame rules on:
  - Transport of animals
  - Animal slaughter and exhibition
  - Use of animals for performance and research
- Supports formulation of species- and activity-specific welfare standards.

### Penalties

- Prescribes fines and imprisonment for acts of cruelty.
- Penalties are relatively mild, often criticised for being inadequate as deterrents.

### Conclusion

The Prevention of Cruelty to Animals Act, 1960 provides the statutory basis for animal welfare in India. Strengthening enforcement mechanisms and updating penalties remain crucial to ensure effective protection of animals in a changing socio-economic context.

## Places of Worship (Special Provisions) Act, 1991

### Context:

- Judicial Status Quo:** The Supreme Court's 2024 directive remains in effect, restraining all courts from registering new lawsuits or passing final orders intended to alter the religious character of any site.

- Mathura & Gyanvapi Disputes:** The Allahabad High Court scheduled a **February 20, 2026**, hearing for 18 suits regarding the Shahi Idgah mosque (Mathura). Simultaneously, the SC is deliberating whether prayer-rights suits at the Gyanvapi (Varanasi) site are maintainable under the 1991 Act.
- Constitutional Validity:** A CJI-led three-judge bench is actively reviewing petitions challenging the Act's validity, testing whether its "freeze" on religious character violates fundamental rights under **Articles 25, 26, and 29**.

### What is the Places of Worship Act, 1991?

The Places of Worship (Special Provisions) Act, 1991 was enacted to preserve the religious character of places of worship as they existed at the time of India's independence and to prevent communal disputes arising from historical claims.

### Objective

- To maintain status quo of religious character of places of worship as on 15 August 1947.
- To promote communal harmony and secularism.

Dimension	Key Points
<b>Key provisions</b>	Maintains religious status quo as on 15 August 1947; bars pending and new cases; violation punishable with imprisonment and/or fine; Ram Janmabhoomi–Babri Masjid dispute excluded; overriding effect over other laws.
<b>Constitutional basis</b>	Upholds secularism and aligns with Articles 25 and 26 of the Constitution.

### Conclusion

The Places of Worship Act, 1991, seeks to freeze historical religious claims to safeguard communal peace and uphold constitutional secularism, making its faithful enforcement crucial for social stability.

## Right to Menstrual Health

**Context:** In a recent Supreme Court judgment, the Court held that menstrual health and hygiene are integral to the Right to Life and dignity under Article 21 of the Constitution.

### Rights-Based Framework

- Menstrual health recognised as part of the right to life with dignity (article 21).
- Linked with article 14 (equality) and article 21a (right to education).

- Denial of menstrual hygiene facilities viewed as structural discrimination against girls and women.

### Key Observations of the Supreme Court

- Access to safe menstrual hygiene products is essential for bodily autonomy and dignity.
- Lack of facilities leads to school absenteeism and dropout among adolescent girls.
- Menstrual health is not a matter of charity but a constitutional obligation of the state.

### Policy and Governance Dimensions

- Obligation on states and union territories to ensure:
  - Availability of free or affordable sanitary products.
  - Functional, gender-segregated toilets with water supply.
  - Safe disposal mechanisms for menstrual waste,
- Need for awareness and sensitisation programmes to address stigma and misinformation.

### Social and Educational Impact

- Menstrual stigma reinforces gender inequality and exclusion.
- Inadequate menstrual hygiene management affects health outcomes and participation in public life.
- Comprehensive menstrual education is necessary for adolescents of all genders.

### Conclusion

The Supreme Court's recognition of menstrual health as a constitutional right strengthens the rights-based approach to gender justice and public health, placing clear responsibility on the state to ensure dignity, equality, and access for all menstruating persons.

## Press Council of India

**Context:** The Press Council of India functions as an autonomous statutory authority to preserve the freedom of the press and maintain ethical standards of journalism, a role that remains significant amid concerns over media credibility and responsible reporting.

### Establishment and Legal Basis

- Established under the Press Council Act, 1978.
- Reconstituted in its present form in 1979.
- Operates as a quasi-judicial statutory body.

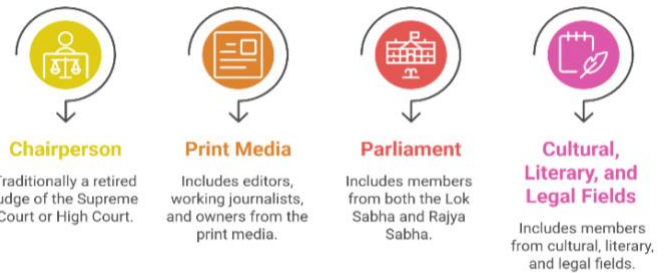


Figure 8: Composition of the Committee

### Functions

- Safeguards freedom of the press against encroachment.
- Ensures maintenance of journalistic ethics and standards.
- Inquiries into complaints against the press for professional misconduct.
- Examines complaints by the press regarding restrictions on press freedom.
- Issues advisories, warnings, and censures.

### Powers and Limitations

- Can summon witnesses and examine records.
- Does not have punitive powers; cannot impose fines or penalties.
- Its decisions are moral in nature, relying on public opinion for enforcement.

### Jurisdiction

- Applies to print media and news agencies.
- Does not regulate electronic or digital media directly.

### Conclusion

The Press Council of India plays a vital role in balancing press freedom with ethical responsibility. Its effectiveness depends on adherence to its moral authority and evolving coordination with broader media regulation mechanisms.

## UAPA: Redefining the "Terrorist Act"

**Context:** The Supreme Court provided a landmark interpretation of Section 15, significantly broadening the legal scope of what constitutes a "terrorist act."

### The Supreme Court Ruling

- **Expanded Interpretation:** The Court ruled that a "terrorist act" is not limited to physical violence (bombs/guns) but includes the "build-up" of a conspiracy and orchestrated

disruptions like "chakka jams" (road blockades) if intended to paralyze the state.

- **Hierarchy of Roles:** It introduced a distinction between "intellectual authors" (planners) and peripheral participants, denying bail to the former while granting it to the latter based on their level of influence.

#### Statutory Definition and Dimensions

- **The "Any Other Means" Clause:** While the law lists explosives and firearms, the 2026 ruling utilized the residual phrase **"by any other means"** to include non-violent but strategically planned disruptions that threaten economic or public security.
- **Individual Designation:** Under the 2019 amendment, the government can designate individuals as "terrorists" in the **Fourth Schedule**, a power recently exercised in 2025-26 against several high-profile operatives.

#### Conclusion

The 2026 judicial shift marks a transition from a "violence-centric" to an "intent-centric" definition of terrorism, prioritizing national security over traditional bail thresholds.

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# WORLD AFFAIRS

## The Venezuela Crisis

**Context:** The 2026 Venezuela crisis represents a critical case study in the collapse of a petro-state, exacerbated by the 2026 U.S. military intervention, "**Operation Absolute Resolve**," which captured Nicolás Maduro.



Figure 9: Venezuela Crisis | Source: The Hindu

### Root Causes: Economic and Institutional Decay

The crisis is a classic example of "**Dutch Disease**" and institutional erosion.

- **Over-reliance on Oil:** Export earnings were 98% oil-dependent, leaving the state vulnerable to price shocks and chronic underinvestment in the PDVSA (state oil company).

- **Democratic Backsliding:** The erosion of separation of powers and judicial independence led to systemic corruption and a breakdown of social contracts.

### Geopolitical Dimensions and International Law

- **Monroe Doctrine vs. Sovereignty:** The U.S. justification under the "narco-terrorism" framework challenges **Article 2(4)** of the UN Charter, while critics view it as a return to 19th-century spheres of influence.
- **Great Power Rivalry:** The crisis is a flashpoint for competition between the U.S. and the **China-Russia-Iran** axis, which holds significant debt and energy interests in the region.

### India's Strategic Position and Energy Security

India maintains a policy of **Strategic Autonomy**, balancing its energy needs with diplomatic principles.

- **Energy Diversification:** India has successfully reduced its reliance on Venezuelan crude (from \$13 billion in 2013 to <1% in 2026), insulating its economy from immediate supply shocks.
- **Diplomatic Restraint:** India's official stance emphasizes **non-intervention** and a "peaceful resolution through dialogue," upholding its tradition of respecting national sovereignty.

### Conclusion

The Venezuela crisis serves as a stark reminder of the risks of resource dependency and the evolving nature of unilateral intervention in the 21st century.

## Greenland

**Context:** The 2026 debate over Greenland's sovereignty has escalated following U.S. President Donald Trump's renewed interest in acquiring the island. This "**Arctic Allure**" is driven by melting ice caps, which have transformed Greenland into a central theater for Great Power Competition.

### Security and Resource Hegemony

Greenland's geography makes it a vital military and economic asset for global superpowers.

- **The GIUK Gap:** Situated between Greenland, Iceland, and the UK, this maritime chokepoint is critical for monitoring Russian naval movements in the North Atlantic.
- **Mineral Sovereignty:** Greenland holds massive deposits of Critical Raw Materials (e.g., neodymium and praseodymium) essential for green-tech and defence,



offering a strategic alternative to Chinese supply chain dominance.



Figure 10: Greenland | Source: Al Jazeera

### Legal Framework and The Sovereignty Debate

- **Self-Determination:** Under the 2009 Self-Government Act, Greenland is recognized as a "people" with the right to independence via referendum, though the Danish Parliament must approve the final terms.
- **Economic Barrier:** Despite political autonomy, Greenland relies on an annual block grant from Denmark (covering ~50% of its budget), making full sovereignty dependent on future mining revenues.

### India's Arctic Policy (2022)

- **Climate Linkage:** India's "Himadri" station in Svalbard monitors Arctic ice melt—specifically from the Greenland Ice Sheet—which directly impacts the **Indian Monsoon** through teleconnections.
- **Scientific Diplomacy:** As an **Observer State** in the Arctic Council since 2013, India advocates for "peaceful and sustainable" resource use, opposing any unilateral annexation that violates the rules-based international order.

### The "Golden Dome"

The U.S. pursuit is framed as an existential national security necessity.

- **Missile Defense:** Trump argues that Greenland is essential for "ownership" of the **Golden Dome**, a proposed advanced

missile defense shield intended to protect the U.S. from Russian and Chinese Arctic threats.

- **Resource Security:** Beyond defense, the island is prized for its vast deposits of **critical minerals** necessary for high-tech manufacturing, which are becoming accessible due to melting Arctic ice.

### The Global Response

- **Denmark's Rejection:** Prime Minister **Mette Frederiksen** called the discussion "absurd," stating that any military action against a NATO ally would mark the "end of the alliance."
- **Greenlandic Sovereignty:** Local leaders confirmed that **85% of Greenlanders** oppose a U.S. takeover, emphasizing that the territory is not a commodity to be traded.

### Conclusion

Greenland stands at the intersection of climate change and 21st-century "Realpolitik," where its sovereign choice will redefine Arctic security and global supply chains.

## Iran Protests



Figure 11: Iran Protests | Source: The Atlantic

**Context:** In early 2026, Iran faced its most significant internal challenge in decades as a record currency collapse sparked nationwide protests, leading to a severe state crackdown.

### Economic Catalysts and Civil Unrest

- **Currency Devaluation:** The Iranian rial plummeted following renewed "snapback" sanctions in late 2025, triggering hyperinflation and paralyzing the traditional "bazaar" merchant class.
- **State Response:** To quell the demonstrations, authorities implemented a total internet blackout in January 2026, with human rights groups reporting thousands of casualties during the height of the crackdown.

## Connectivity and the Chabahar Pivot

For India, the stability of the Iranian regime is directly linked to its "Connect Central Asia" policy.

- **Chabahar Port Operations:** India signed a 10-year contract in 2024 to develop the Shahid Beheshti terminal, but the 2026 unrest and new U.S. tariff threats of 25% have jeopardized its role as a bypass to Pakistan.
- **INSTC Corridor:** The International North-South Transport Corridor, intended to link Mumbai to Moscow via Iran, faces logistical delays as internal strikes and port breakdowns in Iran strand Indian consignments worth crores.

## Energy Security and Diaspora Safety

While India has reduced direct oil imports, Iran remains a critical geographical variable for India's energy and human security.

- **Maritime Chokepoints:** Approximately 40% of India's crude imports pass through the **Strait of Hormuz**; any regional escalation or internal chaos risks disrupting these vital supply lines and spiking domestic inflation.
- **Humanitarian Exposure:** The Ministry of External Affairs remains on high alert for the safety of nearly 10 million Indian workers in the broader Gulf region, whose stability is threatened by potential regional spillovers from Iran's instability.

## Conclusion

The 2026 crisis tests India's "Strategic Autonomy," forcing New Delhi to navigate between its infrastructure investments in Iran and the intensifying economic pressures from a transactional U.S. administration.

## Board of Peace



Figure 12: Board of Peace | Source: Better world campaign

**Context:** Established on January 22, 2026, on the sidelines of the World Economic Forum in Davos, the Board of Peace (BoP) is a U.S.-led international organization initiated by President Donald Trump.

## 2026 Launch and Structure

- **Governance Model:** Chaired by Donald Trump (designated "chairman for life"), the board includes world leaders and high-level officials like Jared Kushner, Tony Blair, and Ajay Banga.
- **Financial Pillar:** Unlike the UN, membership reportedly involves a financial commitment, with nations invited to contribute up to \$1 billion to a central reconstruction trust fund.
- **Gaza Mandate:** The immediate focus is supervising the National Committee for the Administration of Gaza (NCAG), a technocratic Palestinian authority tasked with stabilizing and redeveloping the territory.

## India's Strategic "Wait and Watch"

Despite receiving a formal invitation in mid-January 2026, India has adopted a calibrated approach to the new body.

- **Strategic Autonomy:** India is currently evaluating whether joining a non-UN multilateral framework aligns with its long-standing principles of sovereignty and multilateralism.
- **Regional Interests:** New Delhi's decision hinges on balancing its deep ties in West Asia, its support for a two-state solution, and the potential for Indian companies to participate in large-scale reconstruction contracts.

## Conclusion

The 2026 establishment of the Board of Peace marks a bold attempt to bypass traditional diplomatic gridlock, though its long-term legitimacy depends on its ability to move beyond a "personality-driven" model to achieve stable peace.

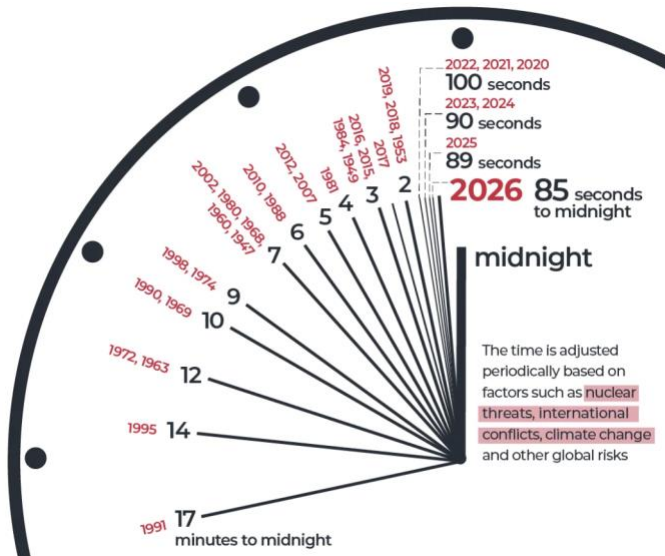
## Doomsday Clock

**Context:** The Doomsday Clock, maintained by the *Bulletin of the Atomic Scientists*, was recently highlighted after its annual review, reflecting heightened global risks due to nuclear tensions, climate change impacts, and geopolitical instability.

## Key Points

- A symbolic clock indicating proximity to global catastrophe, with **midnight** representing disaster.
- First introduced in **1947** in the context of nuclear weapons.

- Maintained by the **science and security board** of the bulletin with inputs from international experts.
- Clock settings consider nuclear threats, climate change, emerging technologies, and global political developments.
- Serves as a **warning symbol**, not a predictive or scientific measurement tool.
- Currently positioned at its **closest point to midnight**, signalling elevated existential risk.



## Conclusion

The Doomsday Clock underscores the urgency of coordinated global efforts to reduce risks and safeguard humanity's future.

## Holocaust Remembrance Day

**Context:** International Holocaust Remembrance Day was observed on 27 January, marking the liberation of the Auschwitz-Birkenau Nazi concentration camp in 1945. The observance remains significant in the context of rising hate crimes, antisemitism, and the need to safeguard historical memory.

### Key Aspects

- Observed annually on **27 January** as per a UN General Assembly resolution (2005).
- Commemorates the Holocaust in which six million Jews and millions of others were systematically killed.
- Aims to honour victims and survivors and promote Holocaust education.
- Seeks to counter Holocaust denial, distortion, and extremist ideologies.

- Serves as a global reminder of the consequences of racism, intolerance, and state-sponsored violence.

## Conclusion

The observance reinforces the importance of remembrance and human rights to prevent the recurrence of crimes against humanity.

## 21st Eurozone Member

**Context:** Bulgaria officially became the 21st member of the Eurozone, marking a major milestone in its economic integration with the European Union.



### Key Aspects

- Adoption of the euro as Bulgaria's official currency.
- Followed compliance with **Maastricht convergence criteria**, including fiscal discipline and price stability.
- Expected to strengthen investor confidence and ease cross-border trade.
- Reflects deeper economic and monetary integration within the EU.

## Conclusion

Bulgaria's entry into the Eurozone represents a significant step in European economic integration, reinforcing monetary stability while expanding the reach of the Euro area.



# SUMMITS & ORGANISATIONS

## NATO

### Nato members by decade of joining

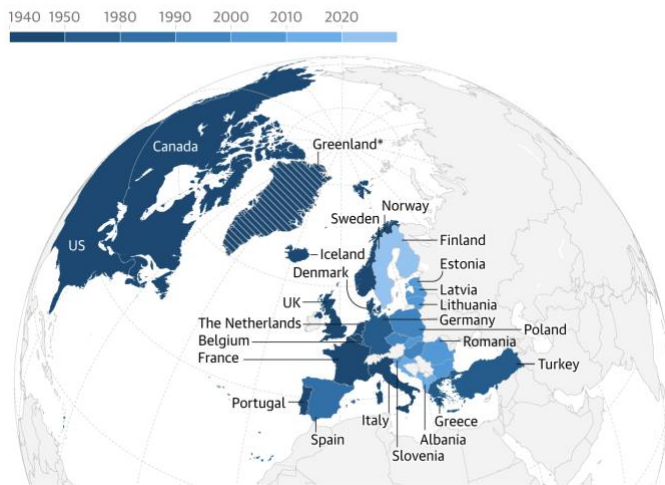


Figure 15: NATO Member Countries| Source: The Guardian

**Context:** NATO is currently in the news due to a historic agreement reached in late January 2026, where 31 of its 32 members (excluding Spain) pledged to raise defense spending to 5% of their GDP by 2035 to counter growing threats in the Arctic and from Russia.

### Strategic Importance: Why it is in the News

The alliance is undergoing a fundamental transformation to maintain its relevance in a fragmented global order.

- **The 5% Spending Target:** Announced following the **Hague Summit**, this "quantum leap" includes 3.5% for core defense and 1.5% for resilience (AI, cyber, and infrastructure), doubling the previous 2% benchmark.
- **Greenland/Arctic Crisis:** In January 2026, tensions spiked as the U.S. proposed a new "Arctic security framework" for Greenland. Denmark responded by launching Operation Arctic Endurance, asserting that any changes must stay within NATO's existing multilateral coordination.

### Formation and Legal Foundation

- **Origin:** Established on April 4, 1949, by the Washington Treaty (North Atlantic Treaty) to provide collective security against the Soviet Union.

- **Article 5 (Collective Defence):** The "one for all, all for one" clause, stating an attack on any member is an attack on the entire alliance. It has been invoked only once (post-9/11).
- **Decision-making:** All NATO decisions are made by consensus via the North Atlantic Council (NAC), the alliance's principal political decision-making body.

### Key Functions and Challenges

- **Modern Expansion:** Recently expanded to 32 members with the accession of Finland and Sweden, significantly shifting the security landscape of Northern Europe.
- **India-NATO Dialogue:** While India is not a member, it held its first formal political dialogue with NATO in 2019, focusing on maritime security and counter-terrorism in the Indo-Pacific.

### Conclusion

The 2026 fiscal pledge and the Ankara Summit (scheduled for July 2026) mark a new era where NATO seeks to bridge the transatlantic rift while securing the increasingly accessible and contested Arctic.

## The Arctic Council

**Context:** With Denmark assuming the 2026 chairmanship, the Council is refocusing on the "**Arctic Pause**"—balancing the resumption of scientific cooperation with the geopolitical tensions that have sidelined the body since 2022.



Figure 16: Arctic Council

## Formation and Structural Framework

- **Ottawa Declaration (1996):** Established as a high-level intergovernmental forum to promote cooperation, particularly on sustainable development and environmental protection.
- **Membership Tier:** Comprises **8 Arctic States** (Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden, USA) who hold the decision-making power.
- **Permanent Participants:** Unique status given to **6 Indigenous groups**, ensuring that native voices are part of the core dialogue, though they do not have a formal vote.
- **The "No Security" Mandate:** Explicitly excludes military security from its remit to maintain the Arctic as a zone of peace and scientific focus.

## The "New Ice Curtain": Geopolitical & Strategic Aspects

- **NATO vs. Russia:** With the accession of Finland and Sweden, seven of the eight members are now NATO allies. This has created a "bipolar Arctic," where Russia views the region as a strategic bastion for its nuclear deterrent, leading to increased militarization.
- **The Russia-China Axis:** Sidelined by the West, Russia has pivoted to China to develop the "Polar Silk Road." This partnership challenges the traditional Western-led order but is tempered by Russia's wariness of Chinese naval encroachment in its internal waters.
- **The "Sovereignty Scramble":** Melting ice is opening the Northern Sea Route (NSR), reducing Asia-Europe transit by 40%. Control over these waters has led to "Resource Nationalism," with states clashing over seabed claims (e.g., the Lomonosov Ridge).
- **Transactional Diplomacy:** Recent tensions over Greenland's strategic minerals and "America First" Arctic policies have tested the Council's resilience, shifting the focus from collective security to transactional, "mini-lateral" deals.

## India's Strategic Interests

- **Climate Tele-connections:** India's primary stake is scientific; Arctic warming directly affects Indian Monsoon variability, making the Himadri station critical for domestic food security.
- **Strategic Autonomy:** India maintains a delicate balance—partnering with Russia on NSR logistics (e.g., the Vladivostok-Chennai corridor) while collaborating with Nordic states on Green Shipping and renewable energy.
- **Global South Voice:** As an observer, India advocates for the "Common Heritage" principle, ensuring that Arctic

resources do not become the exclusive domain of a few powerful states.

## Conclusion

The Arctic Council remains the only viable framework for polar governance, provided it can successfully navigate the current geopolitical frost to address the urgent climate crisis.

## Board on Disarmament Matters

**Context:** The **Advisory Board on Disarmament Matters (ABDM)** has been in the news as it is currently chaired by an Indian diplomat, highlighting India's growing role in global disarmament and arms control discourse at the United Nations.

## Key Aspects

- ABDM is a subsidiary advisory body of the UN Secretary-General.
- Established in 1978 to provide expert advice on disarmament and international security issues.
- Composed of independent experts appointed in their personal capacity, ensuring regional and professional diversity.
- Advises on matters related to:
  - Nuclear disarmament and non-proliferation.
  - Conventional weapons.
  - Emerging technologies with military applications.
  - Confidence-building and arms control measures.
- The chairperson plays a key role in shaping discussions and coordinating recommendations to the UN General Assembly.

## Conclusion

India chairing the ABDM reinforces its image as a responsible nuclear power and a strong advocate of global disarmament, multilateralism, and strategic stability.

## ASEAN-India Digital Ministers Meeting

**Context:** The 6th edition of the ASEAN-India Digital Ministers Meeting was held recently, focusing on strengthening digital cooperation between India and ASEAN amid rapid digital transformation and emerging cyber challenges.

## Key Aspects

- Serves as a ministerial-level platform for **digital and ICT cooperation** between India and ASEAN member states



Figure 17: ASEAN Digital Ministers Meeting

- The 6th ADGMIN focused on:
  - Digital public infrastructure and interoperability.
  - Cybersecurity cooperation and cyber resilience.
  - Digital skills, innovation, and capacity building.
  - Use of emerging technologies such as AI and fintech.
- Aligns with India's **Act East Policy** and ASEAN's digital integration goals
- Builds on initiatives such as digital connectivity projects, start-up collaboration, and e-governance solutions

#### Conclusion

The ASEAN-India Digital Ministers Meeting strengthens India's role as a key digital partner for Southeast Asia, promoting inclusive, secure, and innovation-driven digital growth in the Indo-Pacific region.

## Global Future Councils



Figure 18: Global Future Councils

**Context:** The Global Future Councils meetings were recently hosted by the United Arab Emirates, reflecting the UAE's growing role as a hub for global dialogue on future-oriented governance, innovation, and risk management.

#### Key Aspects

- An initiative of the World Economic Forum (WEF).
- Brings together global experts, policymakers, academics, and industry leaders.
- Councils focus on long-term global challenges, including:
  - Geopolitics and global governance
  - Climate change and sustainability
  - Emerging technologies and AI

- Education, health, and economic resilience
- Aims to provide forward-looking policy insights and recommendations for global decision-making.

#### Conclusion

Hosting the Global Future Councils enhances the UAE's profile in shaping global conversations on future risks and cooperative solutions.

## IGES

**Context:** The International Geopolitics of Education Summit (IGES) was held in New Delhi, bringing global attention to the strategic importance of education in international relations and global power dynamics.



Figure 19: IGES

#### Key Aspects

- An international platform for dialogue on the **intersection of education and geopolitics**.
- Discussions focused on:
  - Education as a tool of soft power.
  - Cross-border student mobility and knowledge diplomacy.
  - Impact of geopolitics on curriculum, research, and academic freedom.
  - Role of education in global development and cooperation.
- Participation from policymakers, education leaders, and international experts.
- Aligns with India's emphasis on **knowledge diplomacy** and global educational engagement.

#### Conclusion

The IGES highlighted education as a strategic instrument in global geopolitics, reinforcing India's role as an emerging knowledge hub in international discourse.

## International Solar Alliance (ISA)

**Context:** The International Solar Alliance (ISA) remains relevant amid global efforts to accelerate the transition to renewable energy and achieve climate targets, particularly for countries located in the tropics.

### Key Aspects

- Launched in 2015 by India and France.
- Headquartered in Gurugram, India.
- Intergovernmental organisation focusing on solar energy deployment.
- Aims to mobilise finance, technology, and capacity building for solar projects.
- Supports member countries in achieving energy access, energy security, and climate mitigation.

### Conclusion

The ISA strengthens South–South cooperation by promoting solar energy as a key pillar of sustainable development.

- Founded in 1971; headquartered in Geneva, Switzerland.
- Annual meeting held at Davos, bringing together global leaders from government, business, and civil society.
- Releases key reports such as the Global Risks Report and Global Competitiveness Report.
- Focuses on issues like economic growth, climate change, geopolitics, and technological transformation.

### Conclusion

The WEF serves as a major platform for global dialogue, influencing policy debates and international cooperation on emerging global challenges.

## MIL Alliance

**Context:** The **Media and Information Literacy (MIL) Alliance**, led by UNESCO, has gained prominence due to rising concerns over misinformation, disinformation, and digital manipulation.

### Key Aspects

- A global initiative to promote critical thinking and digital literacy.
- Aims to empower citizens to access, evaluate, and use information responsibly.
- Addresses challenges related to fake news, hate speech, and algorithmic bias.
- Supports policy dialogue, capacity building, and educational integration of MIL.

### Conclusion

The MIL Alliance highlights the importance of informed and critical citizenship in the digital age.

## World Economic Forum (WEF)

**Context:** The World Economic Forum (WEF) remains in the news due to its annual meeting and the release of influential global reports shaping policy and economic discourse.

### Key Aspects



# INDIA & BILATERAL RELATIONS

## India-Japan 18th Strategic Dialogue



Figure 20: Japan Map

**Context:** External Affairs Minister Dr. S. Jaishankar and Japanese Foreign Minister Toshimitsu Motegi co-chaired the 18th Strategic Dialogue in New Delhi, elevating the **"Special Strategic and Global Partnership"** with a heavy focus on technology and economic resilience.

### New Strategic Initiatives

The dialogue marked a shift from traditional security toward securing the digital and resource supply chains of the future.

- **AI & Tech Talent:** Both nations launched the Japan-India AI Strategic Dialogue. As part of this, Japan announced it would invite 500 highly skilled Indian AI professionals by 2030 to collaborate on joint research and ethical AI frameworks.
- **Economic Security Framework:** A new "BtoB" Private-Sector Dialogue on Economic Security was established to start in Q1 2026, targeting five priority areas: semiconductors, critical minerals, ICT, clean energy, and pharmaceuticals.
- **Critical Minerals Group:** A formal Joint Working Group on Mineral Resources was activated to secure rare-earth

elements and reduce dependence on single-source suppliers for the green energy transition.

### Security and Regional Alignment

- **Indo-Pacific Convergence:** The leaders noted the strong alignment between India's MAHASAGAR (Oceans) initiative and Japan's Free and Open Indo-Pacific (FOIP) outlook, particularly in countering regional coercive measures.
- **Maritime Cooperation:** Coinciding with the dialogue, the 11th Navy-to-Navy Staff Talks concluded on January 29, 2026, focusing on deepening interoperability, equipment sharing, and personnel exchanges between the Indian Navy and the JMSDF.
- **75th Anniversary Milestone:** To mark the upcoming 75th anniversary of diplomatic ties in 2027, both ministers agreed to designate the year for high-level cultural and people-to-people exchanges.

### Conclusion

The 18th Strategic Dialogue transitions India-Japan relations into a "de-risking" phase, where bilateral cooperation on AI and critical minerals acts as a stabilizer for the international economy amidst 2026's geopolitical uncertainties.

## India-UAE Partnership



Figure 21: UAE Map

**Context:** Prime Minister Narendra Modi and UAE President Sheikh Mohamed bin Zayed Al Nahyan significantly expanded the Comprehensive Strategic Partnership, transitioning from

energy trade to deep collaboration in defense, AI, and nuclear technology.

### Strategic Outcomes

The high-level visit produced landmark agreements aimed at future-proofing both economies.

- **\$200 Billion Trade Target:** Building on the success of the 2022 CEPA, both nations set a bold goal to double bilateral trade to \$200 billion by 2032.
- **Strategic Defence Partnership:** A new Letter of Intent (LoI) was signed to move beyond joint drills toward industrial collaboration, covering drones, cybersecurity, and counter-terrorism.
- **Supercomputing & AI:** India's C-DAC and UAE's G42 agreed to establish a supercomputing cluster in India, providing high-performance computing for the National AI Mission.

### Energy and Nuclear Breakthroughs

- **10-Year LNG Pact:** HPCL and ADNOC Gas signed a decade-long agreement for **0.5 million tonnes** of LNG annually starting in 2028, making UAE India's second-largest supplier.
- **Nuclear Cooperation:** Leveraging India's new **SHANTI Act 2025**, the two sides are exploring joint development of Small Modular Reactors (SMRs) and large-scale nuclear power plants.
- **GIFT City Expansion:** First Abu Dhabi Bank and DP World established offices in Gujarat's GIFT City to facilitate ship leasing and offshore trade finance.

### Conclusion

The 2026 outcomes signal the UAE's transition into India's premier "non-aligned" strategic partner in West Asia, focusing on digital sovereignty and joint industrial growth.

## India-EU FTA

**Context:** India and the European Union are in the final stage of negotiating a long-pending Free Trade Agreement (FTA), expected to significantly boost India's exports, deepen services trade, and diversify partnerships amid rising global protectionism.

### About the India-EU FTA

#### What is the Agreement?

- A comprehensive trade pact between India and the 27-nation EU aimed at:

- Reducing or eliminating tariffs
- Aligning regulations and standards
- Opening services markets
- Facilitating investment flows



Figure 22: Key pillars of India- EU Engagement | Source: PIB

- Includes parallel negotiations on Investment Protection and Geographical Indications (GIs).
- Negotiation timeline:
  - **Launched:** 2007
  - **Stalled:** 2013
  - **Relaunched:** June 2022

### Current India-EU Trade (2024–25)

- **Largest goods trading partner:** EU is India's biggest partner for goods trade.
- **Services trade:**
  - India's services exports to EU: USD ... billion
  - Imports mainly in IT, IP, telecom, and business services
- **Export share:** EU accounts for ~17% of India's total exports, making it the largest export market bloc.
- **Major EU partners:** Germany, Spain, Belgium, Netherlands, Poland.

### India-EU FTA: Opportunities and Challenges

Dimension	Key points
<b>Trade and Manufacturing gains</b>	Tariff removal improves the competitiveness of textiles and leather; zero-duty access boosts pharmaceutical and engineering exports to the EU market.
<b>Services and Supply Chains</b>	Regulatory alignment expands IT and telecom services; positions India as a China-plus-one supply-chain alternative.

<b>Investment and Technology</b>	Legal certainty attracts EU FDI in green hydrogen and semiconductors, strengthening Make in India.
<b>Labour and Environmental Standards</b>	EU climate rules and CBAM act as non-tariff barriers, raising compliance costs for Indian exporters.
<b>Data and Digital Trade</b>	Differences over data localisation and cross-border data flows remain a key challenge in negotiations.

#### Market Access Sensitivities

- **Automobile and wine tariffs:** Pressure to reduce high duties risks disruption to domestic manufacturing.
- **Intellectual Property Rights (IPR):** EU's demand for data exclusivity could delay generics, affecting India's role as the "pharmacy of the world".
- **Public procurement:** EU access demands conflict with Aatmanirbhar Bharat preferences for local suppliers.

#### Way Ahead

- **Balanced tariff reductions:** Pursue asymmetric liberalisation, enabling early export gains for India with phased market opening.
- **Safeguard domestic manufacturing:** Carve-outs for agriculture and dairy to protect small producers from subsidised imports.
- **Protect digital sovereignty:** Leverage India's Digital Public Infrastructure (DPI) to craft data rules balancing privacy and trade.
- **Leverage EU market for Make in India:** Align FTA benefits with PLI schemes to catalyse high-end manufacturing and technology transfer.
- **Use FTA as a geopolitical hedge:** Deeper EU ties provide resilience against volatile global trade dynamics.

#### Conclusion

A carefully calibrated India-EU FTA can become a growth multiplier for exports, services, and manufacturing, provided negotiations balance market access with domestic safeguards and protect India's strategic and digital interests.

## India-Germany Strategic Partnership

**Context:** The India-Germany Strategic Partnership, established in 2000, reached a "transformational" milestone in January 2026 during Chancellor Friedrich Merz's visit.

#### Defence and Strategic Security

- **Defence Industrial Roadmap:** A 2026 agreement focuses on the co-development of submarines (Project-75I), fighter jet components, and counter-drone systems, supported by faster German export clearances.
- **Maritime & Air Interoperability:** Germany's participation in Exercise MILAN and Tarang Shakti 2026 signals a shared commitment to a "Free and Open Indo-Pacific" and monitoring the GIUK gap.

#### Technology and Sustainable Development

- **Green Energy & Hydrogen:** With a €10 billion commitment through 2030, the 2026 roadmap prioritizes Green Ammonia exports from India to Germany and the establishment of **Centres of Excellence** for battery technology.
- **Critical Tech Sovereignty:** New 2026 pacts on Semiconductors and Critical Minerals aim to create resilient supply chains, reducing mutual dependence on China for high-tech manufacturing.

#### Conclusion

By 2026, the partnership has transitioned into a "Future-Ready" alliance, blending German capital and technology with India's manufacturing scale and demographic dividend.

## Ganga Water Sharing Treaty

**Context:** The Ganga Water Sharing Treaty refers to the 1996 Ganges Water Treaty between India and Bangladesh, which continues to be relevant amid discussions on transboundary river management and water security.

#### Treaty Details

- Signed in 1996 for a 30-year duration.
- governs sharing of dry-season flows of the Ganga at the Farakka Barrage.
- Establishes quantified allocations for both countries based on availability.
- Provides for joint monitoring and dispute resolution mechanisms.
- Aims to ensure equitable and reasonable utilisation while minimising harm.

#### Conclusion

The Ganga Water Sharing Treaty remains a cornerstone of India-Bangladesh cooperation, demonstrating how negotiated frameworks can manage shared river resources and support regional stability.

## Weimar Triangle

**Context:** India engaged for the first time with the Weimar Triangle grouping—comprising France, Germany, and Poland—signalling deeper diplomatic outreach to key European partners.

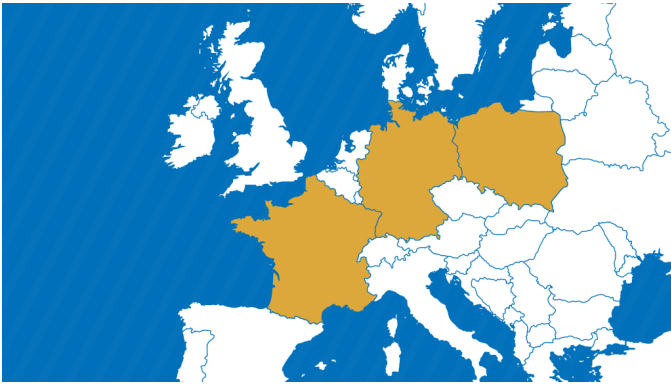


Figure 23: Weimar Triangle

### Grouping Details and Significance

- The Weimar Triangle is a trilateral diplomatic framework formed in 1991.
- Aims to promote cooperation on European security, foreign policy, and regional stability.
- India's engagement reflects growing India-EU strategic convergence.
- Discussions covered geopolitics, security, technology, and global governance.
- Complements India's partnerships with individual European states and the EU.
- Indicates India's intent to diversify strategic dialogues beyond traditional formats.

### Conclusion

India's first engagement with the Weimar Triangle marks an expansion of its European diplomacy, supporting shared interests in security, multilateralism, and a rules-based international order.

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# ECONOMY

## Silver Prices



**Context:** Silver prices dominated financial headlines in late January 2026 after a "vertical" rally saw the metal breach the psychological mark of ₹4 lakh per kg in India and \$120 per ounce globally.

### The "Kevin Warsh" Effect

- **The "Hawkish" Shift:** News that the U.S. administration intends to nominate **Kevin Warsh**—a known monetary hawk—as the next Federal Reserve Chair triggered a surge in the U.S. Dollar, making silver more expensive for global buyers.
- **Historic Peak:** Just 24 hours prior (Jan 29), silver hit an all-time high of **₹4,20,048 per kg** on the MCX and **\$121.78 per ounce** internationally, driven by a 30-million-ounce supply deficit and AI/Solar tech demand.

### Core Drivers of the 2026 Surge

- **Green Tech & AI:** Industrial demand now accounts for 55% of consumption; massive silver requirements for **AI data centers** and high-efficiency solar panels have strained global inventories to multi-year lows.
- **The "Greenland" Geopolitical Risk:** Earlier in the month, U.S. tariff threats against the EU over the Greenland issue drove investors toward silver as a "safe-haven" alternative to a weakening dollar.

### Conclusion

While the January 30 "flash crash" reflects aggressive profit-booking, the structural deficit in silver supply suggests that the metal remains in a long-term bull cycle despite short-term volatility.

## India's GDP Growth

**Context:** India's economic trajectory is currently the focal point of global discussions following the Economic Survey 2025-26, which identifies India as a "stabilizing force" in a volatile global market.

### Key Highlights

- **Growth Estimates:** The Survey pegs Real GDP growth for **FY26 at 7.4%**, cementing India's position as the world's fastest-growing large economy.
- **The "Warsh" Factor:** As of **January 30, 2026**, markets are reacting to the potential appointment of Kevin Warsh as US Fed Chair, which has strengthened the Dollar and put pressure on the Rupee despite India's strong internal fundamentals.

### Static Concept: Understanding GDP

Aspect	Explanation
<b>Definition Of GDP</b>	Gross Domestic Product (GDP) Is The Total Monetary Value Of All Final Goods And Services Produced Within A Country's Borders During A Specific Time Period.
<b>Calculation Methods</b>	<b>Expenditure Method:</b> $GDP = C + I + G + (X - M)$ Where C = Consumption, I = Investment, G = Government Spending, X = Exports, M = Imports. <b>GVA Method:</b> Measures Value Added By Different Sectors Of The Economy To Assess Sectoral Contributions.
<b>Real Vs Nominal GDP</b>	<b>Real GDP:</b> Adjusted For Inflation Using A Base Year (Currently 2011–12), Reflects Actual Growth In Production. <b>Nominal GDP:</b> Measured At Current Market Prices, Includes Impact Of Inflation.

### Key Drivers and Structural Shifts

- **Consumption Lead:** Private Final Consumption Expenditure (PFCE) has climbed to **61.5% of GDP**, supported by low inflation and a robust recovery in rural demand.
- **Capital Expenditure (Capex):** Public investment reached **₹11.21 lakh crore** in the current fiscal, creating a "crowding-in" effect for private sector manufacturing.

### Conclusion

India enters 2027 with a strong growth floor, though it must navigate rising global protectionism and currency volatility.

### **FURTHER INFORMATION: National Income and Economic Indicators**

- **Gross National Product (GNP):** Total value of output produced by **citizens** of a country, calculated as GDP plus Net Factor Income from Abroad (NFIA).
- **Net Domestic Product (NDP):** Represents the actual growth of the economy after accounting for the wear and tear of assets, calculated as **GDP minus Depreciation**.
- **Gross Value Added (GVA):** Measures the value of output minus the value of intermediate consumption; used to track performance at the **sectoral level** (Agriculture, Industry, Services).
- **GDP Deflator:** A comprehensive measure of inflation calculated as the ratio of **Nominal GDP to Real GDP**; unlike CPI/WPI, it covers all domestically produced goods and services.
- **GDP at Market Price vs. Factor Cost:** Market Price includes indirect taxes and excludes subsidies, whereas Factor Cost represents the actual cost of production (Rent + Wages + Interest + Profit).
- **Purchasing Power Parity (PPP):** An economic theory that compares different countries' currencies through a "basket of goods" approach to adjust for local cost-of-living differences.

aggregator for at least 90 days in a financial **year** to qualify for Central government-funded social security benefits.

- **State Innovations:** Rajasthan's Platform Based Gig Workers Act (2023) set a precedent by establishing a dedicated Welfare Board and a "Social Security Surcharge" on every platform transaction.

### **Algorithmic Governance and Challenges**

- **Algorithmic Transparency:** The Survey flags concerns over "invisible bosses" where algorithms control wages, work allocation, and arbitrary deactivations, calling for human-led appeals and transparency in ratings.
- **Credit Exclusion:** Due to "thin-file" credit histories and volatile incomes, gig workers face barriers in formal banking, prompting the Survey to recommend specialized micro-credit products linked to e-Shram IDs.

### **Conclusion**

The 2026 mandate for India is to transform gig work into a "choice of flexibility" by establishing wage floors and leveraging the e-Shram portal for portable, life-long social security.

## **Gig Economy**

**Context:** The Economic Survey 2025-26 tabled on January 29, 2026, highlights that India's gig workforce has grown 55% to 12 million in four years, yet 40% earn less than ₹15,000 monthly, necessitating urgent structural and legal reforms.

### **Relevant Trends and Data**

- **Economic Contribution:** Gig workers currently represent **2% of the total workforce**, with projections to reach 6.7% (23.5 million workers) of non-agricultural jobs by 2030, contributing **₹2.35 lakh crore** to GDP.
- **Skill Segmentation:** NITI Aayog projects that by 2030, the workforce will be split into **high-skilled (27.5%)** and **low-skilled (33.8%)** categories, requiring differentiated policy interventions rather than a "one-size-fits-all" approach.

### **Legal Framework and Static Provisions**

- **Code on Social Security (2020):** Formally defines Gig Workers (non-traditional relationships) and Platform Workers (app-based). It mandates a Social Security Fund where aggregators contribute 1–2% of their annual turnover (capped at 5% of worker payouts).
- **The "90-Day Rule":** Draft rules released in January 2026 propose that workers must be engaged with an

## **Retail Inflation**

**Context:** India's retail inflation is at a historic turning point in January 2026. Following months of record-low prints, the government is transitioning to a modernized Consumer Price Index (CPI) series to better reflect contemporary household spending.

### **Current Economic Landscape.**

- **The 1.33% Print:** The official retail inflation for **December 2025** stood at **1.33%**, marking the third consecutive month below the RBI's lower tolerance band of 2%.
- **Economic Survey 2025-26:** Tabled on **January 29, 2026**, the Survey highlighted an average inflation of just **1.7%** for the first three quarters (April–Dec 2025), driven primarily by a massive 20–40% crash in vegetable prices (potatoes, onions, and tomatoes).

### **The "Base Reset"**

- **New Base Year:** The base year has been updated from **2012 to 2024** to capture digital-age consumption.
- **Modern Basket:** For the first time, inflation data will directly track OTT subscriptions (like Netflix/Amazon Prime), airfares, e-commerce prices, and smartphone data, ensuring the index is no longer "stuck in 2012."

### **Strategic Importance and Challenges**

- **The "Core" Divergence:** While food prices contracted, core inflation stayed stubborn at 4.62% in December 2025, largely due to record-high prices of precious metals like gold and silver.
- **Interest Rate Cuts:** The benign inflation environment allowed the RBI to execute a decisive 125-basis-point reduction in the repo rate, bringing it down to 5.25% by January 2026 to support growth.

#### KNOW YOUR BASICS: Inflation

- **Definition:** A persistent rise in the general price level, which reduces the **purchasing power** of currency.
- **Demand-Pull vs. Cost-Push:** Demand-pull occurs when "too much money chases too few goods," while cost-push is driven by rising production costs (e.g., wages, raw materials).
- **Headline vs. Core:** Headline reflects total inflation (including volatile food/fuel), while **Core Inflation** excludes food and fuel to show long-term trends.
- **CPI vs. WPI:** **Consumer Price Index (CPI)** measures retail prices and is the RBI's primary policy anchor; **Wholesale Price Index (WPI)** tracks prices at the factory gate and excludes services.
- **Disinflation & Deflation:** Disinflation is a slowing rate of price increases, whereas **Deflation** is a persistent decrease in the general price level (negative inflation).
- **Stagflation:** A condition where high inflation coexists with stagnant economic growth and high unemployment.
- **Base Year:** Currently **2012** for CPI (combined) and **2011-12** for WPI.
- **Inflation Targeting:** The RBI's legal mandate is to maintain retail inflation at **4%**, within a tolerance band of **2% to 6%**.

#### Conclusion

The 2026 "inflation reset" aims to bridge the gap between official data and the "perceived inflation" felt by households, providing a more realistic anchor for the RBI's future monetary policy.

### Urban Cooperative Banks

**Context:** In January 2026, the Reserve Bank of India (RBI) issued a landmark discussion paper proposing to resume the licensing of new Urban Cooperative Banks (UCBs) after a 22-year pause.

#### The Policy Shift

- **₹300 Crore Capital Barrier:** To ensure stability, the proposed minimum capital requirement for new entrants is ₹300 crore, a significant hike from previous standards to prevent the early financial failure seen in the early 2000s.
- **Target Deadlines:** By March 31, 2026, all existing UCBs are mandated to achieve a 75% Priority Sector Lending (PSL) target and ensure that 50% of their total loans are "small value loans" (up to ₹3 crore).

#### Framework and Classification

The sector operates under a four-tiered regulatory structure introduced to tailor supervision based on deposit size.

- **Tier 1:** Unit banks and UCBs with deposits up to ₹100 crore.
- **Tier 2:** Deposits between ₹100 crore and ₹1,000 crore.
- **Tier 3:** Deposits between ₹1,000 crore and ₹10,000 crore.
- **Tier 4:** Deposits exceeding ₹10,000 crore.

#### Evolution and Regulatory Context

- **Formation:** The movement began with the *Anyonya Sahakari Mandali* in 1889; formal legislation followed with the Cooperative Credit Societies Act, 1904.
- **Dual Control:** Administrative functions (registration/audit) are managed by the Registrar of Cooperative Societies (RCS), while banking functions are regulated by the RBI under the Banking Regulation Act, 1949.
- **2020 Amendment:** A major legislative change in 2020 empowered the RBI to directly intervene in UCB management and boards, bringing their governance closer to that of commercial banks.

#### Conclusion

The 2026 proposal to reopen licensing signals the RBI's confidence in the sector's recovery, provided that new banks enter with high capital buffers and professionalized governance.

### Basmati Export

**Context:** In January 2026, Indian Basmati exports are facing a significant bottleneck due to a severe currency crisis in Iran, India's top buyer. This has led to the stranding of shipments worth over ₹2,000 crore at various international ports.

#### Current Crisis

- **Iranian Rial Collapse:** The sharp depreciation of the Iranian Rial (reaching 1,50,000 per USD) led the Iranian government to withdraw food import subsidies in early

January, causing importers to halt payments and shipments.

- **The "Trump Tariff" Factor:** Following U.S. policy shifts in January 2026, threats of a 25% tariff on countries trading with Iran have created a "wait-and-watch" sentiment among Indian banks and insurers, complicating trade settlements.

#### Market Dynamics and Significance

- **Record Production:** India reached a record production of 151 million tonnes in the 2025-26 season, keeping domestic supply high but putting downward pressure on prices (falling by ₹5–8 per kg in January mandis).
- **Geographical Indication (GI):** Only rice grown in specific regions of the Indo-Gangetic Plains (Punjab, Haryana, Himachal Pradesh, Uttarakhand, parts of UP, and J&K) can be legally exported as "Basmati."
- **Policy Shift:** In late 2024/2025, the government removed the Minimum Export Price (MEP) (floor price) to allow Indian exporters to compete more effectively with Pakistan in global markets.

#### Conclusion

While the 2026 Iran crisis poses a temporary risk, India is actively diversifying its reach to 26 new markets like Mexico and Japan to reduce dependency on traditional buyers and stabilize export earnings

## EPFO 3.0

**Context:** In January 2026, the Employees' Provident Fund Organisation (EPFO) accelerated the rollout of EPFO 3.0, a comprehensive technological and structural revamp.

#### Key Features and Digital Reforms

- **Core Banking Solution (CBS):** Shifting to a centralized, cloud-native architecture that allows members to access their accounts and resolve grievances at any EPFO regional office nationwide, regardless of where their account was originally registered.
- **UPI-Based Withdrawals:** A landmark facility (targeted for full rollout by April 2026) that allows members to withdraw eligible PF balances directly to bank accounts via **UPI (BHIM app)**, with initial transaction caps likely set at ₹25,000.
- **AI & Vernacular Support:** Integration of **Bhashini** (an AI-powered translation tool) to provide multilingual self-service, enabling members to interact with the portal in their native regional languages.

#### EPF And Pension Reforms:

Aspect	Key points
<b>Consolidated Withdrawal Rules</b>	Thirteen earlier provisions merged into three categories: essential needs, housing needs, and special circumstances.
<b>Minimum Balance Requirement</b>	Members must retain at least 25% of total contributions; up to 75% withdrawal allowed only in case of job loss.
<b>Wage Ceiling Proposal</b>	Proposal to raise PF wage ceiling from ₹15,000 to ₹25,000, potentially expanding social security coverage to about 1 crore workers.
<b>Centralised Pension (CPPS)</b>	Enables EPS pensioners to receive pensions from any bank branch without transferring the PPO.

#### Conclusion

EPFO 3.0 represents a shift from "patchwork fixes" to a future-ready, scalable platform designed to support the expanded coverage required under the new **Social Security Code**.

## CBDC in BRICS

**Context:** In January 2026, the Reserve Bank of India (RBI) recommended placing the interlinking of Central Bank Digital Currencies (CBDCs) on the agenda for the upcoming 2026 BRICS Summit, which India is hosting.

#### The "BRICS Bridge" Framework

- **Mechanism:** The proposal suggests a shared "bridge" layer based on Distributed Ledger Technology (DLT). This allows domestic CBDCs (like India's e-Rupee and China's e-CNY) to settle transactions directly without using the US dollar as an intermediary.
- **Financial Resilience:** By enabling "Payment-versus-Payment" (PvP) settlements, the system reduces the risk of "de-SWIFTing" and provides a sovereign alternative to Western-dominated financial messaging systems.

#### Strategic and Economic Implications

- **Cost & Speed:** CBDC-based cross-border payments can reduce transaction fees by nearly 50% and eliminate the typical T+2 settlement delays, moving toward near-instant finality.
- **Sanction Shielding:** A BRICS-wide CBDC framework simplifies trade with sanctioned members like Russia and Iran, as these digital corridors operate independently of the SWIFT network and US financial jurisdictions.

- **Capital Controls:** To maintain monetary stability, the RBI plans to embed programmability within the e-Rupee. This ensures every transaction is purpose-coded (e.g., for trade or tourism) to prevent unauthorized capital outflows.

- **Traceability Mandate:** Exchanges are required to collect a broader set of technical identifiers for every transaction, including IP addresses with timestamps, wallet addresses, and transaction hashes to enhance the audit trail.

#### **KNOW YOUR BASICS: Central Bank Digital Currency (CBDC)**

- **Digital Fiat Currency:** A digital version of physical cash issued and regulated by the **Reserve Bank of India (RBI)**, acting as a direct sovereign liability.
- **Legal Tender:** Holds the same value as physical currency and is recognized as a valid medium of payment for all debts and taxes.
- **Two-Tier Model:** Distributed via **Retail (e₹-R)** for the general public's daily use and **Wholesale (e₹-W)** for interbank settlements and large-value transactions.
- **Digital Wallet System:** Transactions occur directly between digital wallets; unlike UPI, it does not require a bank account for the settlement of funds.
- **Programmability:** Features the ability to "tag" currency for specific purposes, such as ensuring social welfare funds are spent only on designated services like health or education.
- **Offline Capability:** Designed to support peer-to-peer transactions in areas with limited internet connectivity using Near Field Communication (NFC) technology.
- **Non-Interest Bearing:** Does not earn interest to avoid competing with traditional commercial bank deposits, ensuring financial stability.

Provision	Explanation
<b>30% flat tax (Section 115BBH)</b>	Income from transfer of any virtual digital asset is taxed at a flat rate of 30% plus 4% cess, with no deductions allowed except the cost of acquisition.
<b>1% TDS (Section 194S)</b>	One percent tax deducted at source applies on every transfer of virtual digital assets exceeding ₹10,000 (₹50,000 for specified persons) in a financial year to track transactions.
<b>No loss offsetting</b>	Losses incurred from one virtual digital asset cannot be set off against gains from another, nor can they be carried forward to future years, which has been a key industry concern in Budget 2026 discussions.

#### **Conclusion**

The 2026 guidelines signal that India is moving toward "conditional integration" of crypto, where market activity is tolerated only if it remains fully transparent and compliant with the Prevention of Money Laundering Act (PMLA).

#### **Conclusion**

The 2026 proposal marks India's transition from a digital payment leader to a global rule-shaper, seeking a "non-weaponized" and efficient financial order for the Global South.

## **Crypto VDA Norms**

**Context:** The **Financial Intelligence Unit (FIU-IND)** issued updated AML and KYC guidelines for Virtual Digital Assets (VDAs), mandating stricter liveness checks and geo-location capture to curb the use of "mule accounts" in the Indian crypto ecosystem.

#### **New Compliance Standards**

- **Onboarding Integrity:** Platforms must now implement live identity verification (liveness checks) and capture GPS geo-location during user onboarding to prevent cross-border regulatory arbitrage.

## **Asia Manufacturing Index 2026**

**Context:** The Asia Manufacturing Index 2026 was released recently, ranking **India 6th** among major Asian economies, reflecting its evolving position in regional manufacturing competitiveness amid global supply chain realignments.

#### **Key Aspects**

- **The index assesses countries based on factors such as:**
  - Manufacturing output and efficiency
  - Infrastructure and logistics
  - Labour availability and skill levels
  - Regulatory environment and ease of doing business
- **India's rank indicates:**
  - Progress under initiatives like *Make in India* and production-linked incentive (PLI) schemes.
  - Continued challenges related to productivity, technology adoption, and export competitiveness.
- **Leading positions** were dominated by East and Southeast Asian manufacturing hubs.

## Conclusion

India's 6th rank highlights steady manufacturing progress, while underlining the need for deeper reforms, technological upgrading, and integration into global value chains.

## Dollar Index Drop

**Context:** The **US Dollar Index (DXY)** recently fell to its lowest level in four years, reflecting shifts in global macroeconomic conditions, monetary policy expectations, and investor sentiment.

### Key Aspects.

- The dollar index measures the value of the us dollar against a basket of major currencies.
- **The decline is attributed to:**
  - Expectations of interest rate cuts by the US Federal Reserve.
  - Easing inflationary pressures in the US economy.
  - Improved growth outlook in other major economies.
- **A weaker dollar can:**
  - Make US exports more competitive.
  - Increase capital flows towards emerging markets.
  - Lead to currency appreciation pressures for countries like India.

## Conclusion

The fall in the dollar index signals changing global financial dynamics with important implications for trade, capital flows, and emerging market economies.

## Exchange Traded Funds (ETFs)

**Context:** Exchange Traded Funds (ETFs) have gained prominence as a **popular investment instrument** due to rising retail participation in financial markets and the demand for low-cost, diversified investment options.

### Key Aspects

- ETFs are marketable securities that track an index, commodity, sector, or asset.
- Traded on stock exchanges like shares, with prices fluctuating during market hours.
- Combine features of mutual funds and equities.
- **Offer benefits such as:**
  - Diversification at low cost

- High liquidity and transparency
- Lower expense ratios compared to actively managed funds
- **Types of ETFs include equity ETFs, bond ETFs, commodity ETFs, and international ETFs.**

## Conclusion

ETFs have emerged as an efficient investment mechanism, offering flexibility, transparency, and cost-effectiveness for both retail and institutional investors.

## Green Ammonia Project

**Context:** India's **first green ammonia project** was announced in Andhra Pradesh, marking a significant step in India's transition towards clean energy and green hydrogen-based solutions in line with its climate commitments.

### Key Aspects

- Green Ammonia is produced using **green hydrogen** generated from renewable energy sources.
- Considered a **carbon-free alternative** to conventional Ammonia used in fertilisers and shipping.
- The project supports India's national green hydrogen mission.
- **Expected benefits include:**
  - Reduction in carbon emissions from fertiliser and industrial sectors.
  - Promotion of clean fuel exports.
  - Strengthening India's position in the global green energy value chain.

## Conclusion

The Green Ammonia project in Andhra Pradesh reflects India's strategic push towards decarbonisation, energy security, and leadership in emerging clean fuel technologies.

## Liberalized Remittance Scheme

**Context:** The **Liberalized Remittance Scheme (LRS)** has been in focus due to updated regulatory scrutiny and rising outward remittances by Indian residents for education, travel, investments, and overseas assets.

### Key Aspects

- Introduced by the **Reserve Bank of India (RBI)**.
- Allows resident individuals to remit up to **USD 250,000 per financial year**.
- **Permitted purposes include:**



- Education, medical treatment, and travel abroad.
  - Purchase of foreign securities and property.
  - Maintenance of close relatives overseas.
- **Prohibited uses include:**
  - Lottery and gambling activities.
  - Margin trading abroad.
- Subject to **tax collected at source (TCS)** under the Income Tax Act for specified transactions.

### Conclusion

The LRS framework balances individual financial freedom with regulatory oversight, facilitating global integration of Indian residents while ensuring financial stability and compliance.

## NITI Aayog Trade Report 2026

**Context:** The fifth edition of the **NITI Aayog Trade Watch Quarterly (Q1 FY26)**, released on January 6, 2026, provides specific data and strategic findings regarding India's role in the \$2.2 trillion global automotive export market.

### Key Findings:

- **Market Share & Growth Potential:** India currently holds only about 1% of global automobile trade and 3% of the global auto component trade (~\$20 billion). The report identifies a "vast scope" to expand this share in the \$2.2 trillion global market.
- **Export Divergence:** There is a growing gap within the sector; auto component exports have doubled since 2015, whereas shipments of finished vehicles have largely stagnated.
- **Sector Strengths:** India shows strong performance and global competitiveness in specific segments, particularly motorcycles, tractors, and auto components.
- **Economic Impact:** The automotive sector is a critical pillar of the economy, supporting nearly 30 million jobs, consuming 15% of domestic steel, and contributing 49% to manufacturing GDP.
- **Trade Balance:** The trade ratio in auto components is "near-neutral" (~0.99), meaning exports and imports nearly balance. However, imports of high-value, tech-intensive components (like engine parts and body structures) have risen, signalling a gap in domestic capability.
- **EV Challenges:** Despite the global surge in electric vehicle trade, India's share in EV exports remains negligible.

### Recommendations

- **Tariff & Policy Reform:** The report calls for tariff rationalization and "fine-tuning" the Production Linked Incentive (PLI) scheme to include non-EV segments and better support MSMEs.
- **Production Reorientation:** India must shift production toward high-demand segments like passenger vehicles and EVs rather than relying solely on two-wheelers and tractors.
- **Cost & Logistics:** To enhance competitiveness, NITI Aayog recommends reducing inland and port logistics costs and correcting cost distortions in manufacturing.
- **Quality Standards:** There is a pressing need to strengthen quality standards and certification systems to better integrate into global supply chains.

### Conclusion

The report underscores automotive exports as a key driver of India's trade growth, while stressing the need for innovation, sustainability, and policy support.

## Orange Economy

**Context:** Mentioned in the Economic Survey, the concept of the Orange Economy has gained attention in policy and development discourse due to its potential to generate employment, innovation, and inclusive growth, especially among youth and creative professionals.

### Key Aspects

- Refers to the creative economy, encompassing cultural and creative industries.
- Includes sectors such as art, music, film, publishing, design, fashion, gaming, and digital content.
- Driven by intellectual property, creativity, and cultural capital rather than traditional resources.
- Contributes to economic growth through startups, exports, and soft power.
- Supported by digital platforms, cultural tourism, and creative entrepreneurship.

### Conclusion

The Orange Economy highlights the economic value of creativity and culture, offering countries like India an opportunity to combine cultural heritage with innovation-driven growth.

## PLI Scheme for White Goods

**Context:** The Production Linked Incentive (PLI) Scheme for White Goods has been in focus as part of India's broader strategy to boost domestic manufacturing, reduce import dependence, and integrate India into global value chains in the appliances sector.

### Key Aspects

- Covers air conditioners (ACs) and LED lights.
- Aims to promote local manufacturing of critical components rather than finished goods alone.
- Incentives provided on incremental sales over a base year.
- Implemented by the Department for Promotion of Industry and Internal Trade.
- **Objectives include:**
  - increasing domestic value addition
  - attracting foreign and domestic investment
  - generating employment and building supplier ecosystems
- aligned with *Make in India* and *Atmanirbhar Bharat* initiatives.

### Conclusion

The PLI Scheme for White Goods seeks to strengthen India's manufacturing capabilities by encouraging component-level self-reliance and export competitiveness.

## Tailings Policy

**Context:** India has been exploring a Tailings Policy amid rising demand for critical minerals and supply-chain vulnerabilities, focusing on the recovery of valuable minerals from mine waste (tailings) generated by past and ongoing mining activities.

### Key Aspects

- Tailings are residual waste left after the extraction of the main mineral from ore.
- Policy aims at **reprocessing mine waste** to recover critical and strategic minerals such as lithium, cobalt, rare earth elements, and copper.
- Supports **resource efficiency and circular economy** by reducing waste and environmental hazards.
- Helps lower dependence on imports and enhances domestic mineral security.
- Involves use of advanced technologies for mineral recovery while ensuring environmental safeguards.

### Conclusion

The Tailings Policy reflects a shift towards sustainable mining and strategic resource management, aligning mineral security with environmental responsibility.

## Tax-RAMPS Scheme

**Context:** The Tax-RAMPS Scheme was introduced to support the textile and apparel sector, especially in the context of export competitiveness, compliance burden, and ease of doing business.

### Key Aspects

- Tax-RAMPS stands for **Tax Remission and Market Promotion Scheme**.
- Aims to provide remission of state and central taxes and levies not refunded under existing mechanisms.
- Designed to enhance the **price competitiveness** of Indian textile exports.
- Complements schemes such as PLIs for textiles, RoSCTL.
- Supports MSMEs and labour-intensive segments of the textile value chain.

### Conclusion

The Tax-RAMPS Scheme seeks to strengthen India's textile exports by reducing tax-related cost burdens and supporting sustained growth in a key employment-generating sector.



# SOCIAL ISSUES

## Haryana's Sex Ratio



Figure 26: Haryana Sex Ratio

**Context:** As of January 2026, Haryana has reached a historic milestone in its effort to correct gender imbalance, reporting its highest **Sex Ratio at Birth (SRB)** in years. This shift reflects a move from being one of India's worst performers to a model of administrative intervention.

### Current Status and Recent Surge

- **Record Performance:** Haryana recorded an SRB of **923** in 2025, a 13-point jump from 910 in 2024. This nears the national average of 933.
- **District Highlights:** **Panchkula** emerged as the leader with a staggering SRB of **971**, followed by Fatehabad (961) and Panipat (951).

### Strategic Drivers of Change

The improvement is attributed to a combination of "digital tracking" and "on-ground enforcement" under the Beti Bachao Beti Padhao (BBBP) framework.

- **Strict Law Enforcement:** In 2025 alone, authorities conducted 154 raids under the PC-PNDT Act, leading to the sealing of 41 chemist shops and nearly 400 illegal MTP centers.
- **Technological Tracking:** The state utilizes the **RCHID** (Reproductive and Child Health Identity) system to track every pregnancy. The "Saheli Project" specifically monitors women who already have a daughter to prevent second-trimester sex selection.

### Socio-Economic Incentives

- **Aapki Beti Hamari Beti:** A flagship scheme providing a one-time grant of ₹21,000 for the first girl child of SC/BPL families and the second girl child of any family.

- **Educational Support:** Initiatives like Sukanya Samridhi Yojana and scholarships for girls in STEM (Vigyan Jyoti) are reducing the perceived "economic burden" of female children.

### Conclusion

While urban hubs like Gurugram (901) still lag, Haryana's rise to 923 proves that sustained administrative vigilance can successfully challenge entrenched social biases.

## Romeo-Juliet Clause

**Context:** The Supreme Court of India in January 2026 urged the Union Government to introduce a "Romeo-Juliet clause" in the POCSO Act to prevent the criminalization of consensual, close-in-age adolescent relationships.

### Need For Reform and Proposed Exception

Aspect	Key points
<b>Why in the news</b>	Supreme Court observations in <i>State of Uttar Pradesh v. Anurudh (2026)</i> highlighted frequent misuse of POCSO provisions.
<b>Misuse by families</b>	Law often used to oppose consensual teenage relationships, turning it into a tool for settling personal or social disputes.
<b>High incidence of cases</b>	Studies indicate around 25% of POCSO cases involve consensual peer relationships with small age gaps, leading to unjust incarceration.
<b>Proposed Romeo-Juliet exception</b>	Suggests a close-in-age exemption for consensual relationships between adolescents (e.g., 16–18 years) with a small age gap.
<b>Consent safeguards</b>	Applicable only to fully consensual and non-exploitative relationships; excludes cases involving coercion, authority, or trust.

### Legal Framework: POCSO Act, 2012

- **Age of Consent:** Under current law, the age of consent is **18 years**. Any sexual act involving a person below this age is a crime, regardless of the child's "willingness" or consent.
- **Gender Neutrality:** POCSO is a **gender-neutral** law, treating all children under 18 equally, but in practice, boys are overwhelmingly prosecuted as perpetrators in peer-led relationships.

- **Global Precedent:** Similar clauses already exist in several jurisdictions, including various **U.S. states, Japan, and France**, to protect teenagers from the lifelong stigma of being registered as sex offenders for consensual acts.

### Conclusion

While the Union Government has historically opposed lowering the age of consent to prevent trafficking, the 2026 judicial push for a Romeo-Juliet clause highlights the need for a "balanced protection paradigm" that respects adolescent autonomy.

## Bamanwas Kankar

**Context:** In January 2026, the Bamanwas Kankar Panchayat in the newly formed Kotputli-Behror district became the first in Rajasthan to be officially certified as a fully organic village body for both its land and livestock.

### Key Highlights of the 2026 Milestone

- **Scope and Certification:** The certification covers seven hamlets and over 1,500 hectares of land. It was facilitated by COFED (Cofarmin Federation of Organic Societies and Producer Companies) under the National Programme for Organic Production (NPOP) standards.
- **Dual Focus:** Uniquely, the status applies to both agriculture (100% chemical-free) and animal husbandry, ensuring that the entire dairy and crop output is free from synthetic inputs and pesticides.

### Drivers and Significance.

- **Community-Led Change:** Driven by local residents (especially women farmers), the shift aimed to reverse soil degradation, declining groundwater levels, and health issues linked to long-term chemical exposure.
- **Sustainable Model:** By eliminating synthetic fertilizers and relying on natural manure and crop rotation, the panchayat serves as a replicable model for water-stressed and arid regions like Rajasthan.

### Conclusion

The 2026 declaration of Bamanwas Kankar proves that sustainable agriculture can succeed when local communities take ownership, aiming to inspire **300 more panchayats** to turn organic by the end of the year.

## ASHA and Anganwadi Workers

**Context:** In January 2026, the rights of frontline health and childcare workers gained significant attention following the Kerala Budget 2026-27, which announced a ₹1,000 hike in honorariums.

### Current Legal Status and Rights

Aspect	Details
<b>Legal classification</b>	Treated as honorary workers/volunteers, not employees, and excluded from minimum wage laws and labour code benefits.
<b>Right to gratuity</b>	Supreme Court recognised Anganwadi work as continuous service, making workers eligible for gratuity.
<b>Living wage vs minimum wage</b>	Gujarat High Court held that Anganwadi workers are entitled to a living wage under Article 21.

### Social Security and Welfare Benefits

- **Ayushman Bharat Coverage:** As of **January 2026**, all ASHA and Anganwadi workers and their families are fully covered under the **PM-JAY** scheme, providing health insurance up to **₹5 lakh** per year.
- **Maternity & Leave:** Anganwadi workers are entitled to **180 days of paid maternity leave** and 20 days of annual leave. However, ASHA workers, being "activists," still lack standardized maternity leave across many states.
- **Insurance Schemes:** They are enrolled in the **PMJJBY** (Life Cover of ₹2 lakh) and **PMSBY** (Accidental Cover of ₹2 lakh), with premiums often shared between the Centre and States.

### Key Data for State Comparison (2026)

- **High-Pay States:** States like **Haryana** and **Kerala** provide higher total monthly payments, with Kerala's recent 2026 hike bringing more financial stability.
- **Promotion Quotas:** In several states, **50% of Supervisor posts** are reserved for promotion from the ranks of experienced Anganwadi workers.

### Conclusion

The 2026 landscape for ASHA and Anganwadi workers is defined by a "Rights vs. Resources" conflict; while courts increasingly recognize their role as essential to the State's Article 47 obligations (nutrition and health), the executive maintains their volunteer status to limit fiscal liability.

## Inter-Caste Marriage

**Context:** In January 2026, the Supreme Court issued a landmark directive reinforcing that any attempt by families or local bodies (like Khap Panchayats) to socially boycott couples for inter-caste marriages is unconstitutional.

### Judicial Jurisprudence and Rights

- **Choice as a Fundamental Right:** The Supreme Court (reaffirming *Shakti Vahini* and *Lata Singh*) ruled that the right to choose a partner is an integral part of **Article 21** (Right to Life and Liberty). No third party—family or community—has the "consent" power over two consenting adults.
- **Violation of Article 15 & 17:** Social boycotts based on caste are viewed as modern extensions of **untouchability**. Courts have declared that "class honor" cannot supersede individual constitutional dignity.
- **2026 Directive:** In late December 2025/early January 2026, the SC ordered states to set up **Special Cells** in every district to provide immediate protection and "safe houses" for inter-caste couples facing threats.

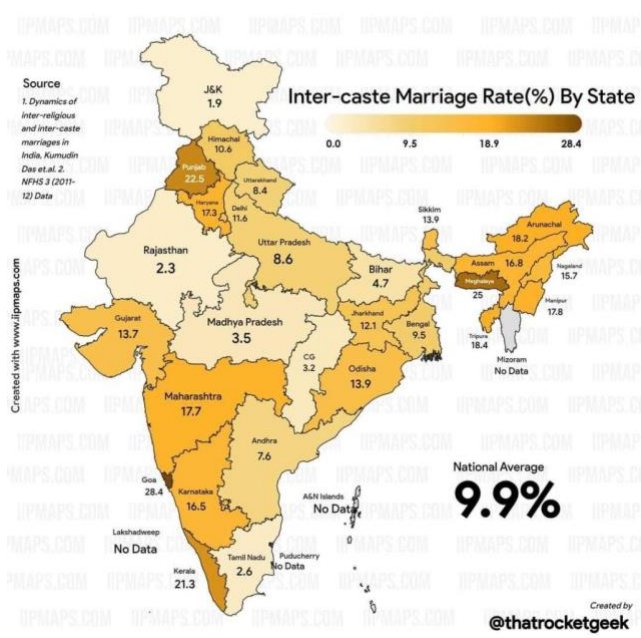


Figure 27: Inter caste Marriage rate map [Source: The Satyasodhak]

### Legislative Frameworks (State-Specific)

- **Maharashtra Act (2016):** The first of its kind, it defines 15 acts of social boycott (e.g., denying access to water, temples, or community functions) as criminal offenses. It carries a punishment of up to **3 years imprisonment** and a ₹1 lakh fine.

- **Karnataka Act (2025/2026):** Modeled on the Maharashtra law, this new Act specifically targets "Caste Panchayats". It renders any resolution to boycott a family void ab initio (legally void from the start) and mandates the appointment of Social Boycott Prohibition Officers.
- **Central Assistance:** Under the Protection of Civil Rights Act (1955), the Central Government provides financial incentives (ranging from ₹50,000 to ₹2.5 lakh in various states) to couples where one spouse belongs to a Scheduled Caste to encourage social integration.

### Conclusion

The 2026 legal stance clarifies that "social excommunication" is not a private community matter but a criminal act of harassment that the State is mandated to stop to preserve the "Fraternity" promised in the Preamble.

## Menopause Clinics in Maharashtra

**Context:** Maharashtra launched the first-of-its-kind menopause clinics in India, marking a significant step towards addressing women's mid-life health needs, an area traditionally neglected in public health discourse.

### Key Aspects

- Dedicated clinics focusing on menopause-related physical and mental health issues.
- Provide counselling, medical advice, and awareness on hormonal changes.
- Aim to reduce stigma and misinformation around menopause.
- Strengthen women's healthcare beyond maternal and reproductive health.
- Part of a broader move towards life-cycle-based women's health policies.

### Conclusion

The launch of menopause clinics represents a progressive shift towards inclusive and holistic women's healthcare in India.

## Nari Adalat Programme

**Context:** The Nari Adalat Programme has been promoted as a women-centric dispute resolution mechanism, aimed at ensuring access to justice at the grassroots level, particularly for vulnerable and marginalised women.

### Key Aspects

- Community-based women's courts functioning at the village or local level.
- Address issues such as domestic violence, marital disputes, property rights, and maintenance.
- Emphasise mediation, reconciliation, and social justice rather than formal litigation.
- Enhance legal awareness and confidence among women.
- Supported through the convergence of legal aid, women's collectives, and local administration.

### Conclusion

The Nari Adalat Programme strengthens grassroots justice delivery by empowering women as agents of resolution, promoting dignity, equity, and social harmony.

- Enhances inclusiveness in grassroots democracy.
- Strengthens women's participation in local governance.
- Signals a shift from coercive to rights-based population policy approaches.

### Conclusion

The abolition of the two-child rule in Telangana represents a progressive step towards inclusive local governance, recognising reproductive choice as a personal right rather than a political qualification.

## Two Child Rule

**Context:** Telangana abolished the two-child norm for contesting local body elections, marking a significant policy shift in population-related electoral disqualifications. The move aligns with evolving demographic trends and changing perspectives on reproductive rights and inclusive democracy.

### About the Two-Child Rule

- The two-child norm disqualified individuals with more than two children from contesting local body elections.
- Aimed to promote population control through electoral incentives.
- Similar provisions existed earlier in several Indian states.

### Decision to Abolish the Norm

- Telangana removed the restriction to expand **democratic participation**.
- Acknowledges declining fertility rates and changing socio-economic realities.
- Reflects recognition that reproductive choices should not determine political eligibility.

### Rationale Behind the Move

- India's total fertility rate has approached replacement levels.
- Concerns that the rule disproportionately affected women and marginalised communities.
- Evidence showed the limited effectiveness of coercive population control measures.
- Aligns with constitutional values of equality, privacy, and reproductive autonomy.

### Implications

# DEFENCE & SECURITY

## Pinaka LRGR-120



Figure 28: Pinaka LRGR-120 | Source: PIB

**Context:** The Defence Research and Development Organisation (DRDO) has successfully conducted the maiden flight test of the Pinaka Long Range Guided Rocket (LRGR-120) at Integrated Test Range Chandipur, marking a major milestone in India's precision rocket artillery capability.

### About Pinaka Long Range Guided Rocket (LRGR-120)

#### What is LRGR-120?

- An indigenously developed, precision-guided rocket variant of the Pinaka Multi-Barrel Rocket System.
- Designed for long-range, high-accuracy strikes with minimal collateral damage.

#### Development and Aim

- **Developed by:**
  - Armament Research and Development Establishment (ARDE), DRDO
  - In collaboration with High Energy Materials Research Laboratory (HEMRL)
- **Objectives:**
  - Extend the strike range of the Pinaka system
  - Provide precision-guided firepower
  - Enhance operational flexibility using existing Pinaka launchers

#### Key Features

- **Extended range:** Capable of striking targets up to **120 km**, significantly increasing battlefield reach.
- **Precision guidance:** Advanced navigation and control systems ensure **high accuracy**.
- **In-flight manoeuvrability:** Demonstrated controlled manoeuvres throughout the trajectory.
- **Launcher compatibility:** Can be fired from **in-service Pinaka launchers**, enabling multiple variants from a single platform.
- **Fully indigenous design:** Entirely designed and developed using domestic technologies.

#### Conclusion

The successful test of LRGR-120 strengthens India's long-range precision strike capability, enhances artillery deterrence, and reinforces Atmanirbhar Bharat in Defence manufacturing.

## Defence Acquisition Council (DAC)

**Context:** The Defence Acquisition Council has accorded Acceptance of Necessity (AoN) for capital acquisition proposals worth about ₹79,000 crore, aimed at strengthening the operational capabilities of the Indian Armed Forces.

### About Defence Acquisition Council (DAC)

#### What is the DAC?

- The highest decision-making body for capital defence procurements in India.
- Responsible for granting in-principle approvals and Acceptance of Necessity (AoN) for major defence acquisitions.

**Establishment:** Constituted following the recommendations of the Group of Ministers on Reforming the National Security System.

#### Composition

- **Chairman:** Raksha Mantri
- **Members:**
  - Raksha Rajya Mantris
  - Chief of Defence Staff (CDS)
  - Chiefs of the Army, Navy, and Air Force
- **Other members:**
  - Defence Secretary
  - Secretaries of Defence Production, Defence R&D, and Defence Finance
- **Member Secretary:**
  - Deputy Chief of Defence Staff (PP&FD)



## Key Functions

- **Approval of Long-Term Perspective Plan (LTPP):** Grants in-principle approval to acquisitions in the 15-year LTPP, especially projects with long gestation periods.
- **Acceptance of Necessity (AoN):** First formal step in defence procurement for inclusion in Five Year Plans.
- **Categorisation of projects:** Decides procurement routes—Buy, Buy and Make, or Make—to promote indigenisation.
- **Monitoring major projects:** Reviews progress of key programmes via inputs from the Defence Procurement Board.
- **Policy coordination:** Balances operational needs, financial prudence, and domestic defence production goals.

## Conclusion

DAC approvals are a critical gateway in India's defence procurement cycle, aligning long-term capability development with Atmanirbhar Bharat and strategic preparedness.

## Pralay Missile



Figure 29: Pralay Missile

**Context:** The Defence Research and Development Organisation (DRDO) has successfully conducted a **salvo launch** of two Pralay missiles in quick succession from the same launcher off the Odisha coast, marking a key milestone in user evaluation trials.

### What is a Salvo launch?

- A salvo launch is the rapid, successive, or simultaneous firing of multiple missiles or projectiles from the same launcher or platform.
- This tactical method is designed to overwhelm enemy defense systems by engaging targets with high-intensity

firepower, ensuring maximum impact in a short timeframe.

### What is Pralay Missile?

- An indigenously developed, solid-propellant, quasi-ballistic surface-to-surface missile.
- Designed for high-precision conventional strikes against a wide range of targets.

### Objectives

- Provide the Indian Army and Indian Air Force with a rapid-response, high-accuracy strike capability.
- Strengthen tactical deterrence and battlefield dominance through precision attacks.

### Key Features

- **Quasi-ballistic trajectory:** Reduces predictability and makes interception by enemy air defence systems difficult.
- **Range:** Approximately 150 km to 500 km.
- **Solid propellant:** Ensures quick launch readiness and high operational reliability.
- **Advanced guidance and navigation:** Enables high precision against diverse target sets.
- **Multiple warhead capability:** Supports different warhead types for varied mission requirements.
- **Salvo launch capability:** Ability to fire multiple missiles in rapid succession from the same launcher, enhancing saturation attack potential.

### Conclusion

The successful salvo launch of Pralay underscores India's progress in precision conventional strike systems, enhancing credible deterrence and reinforcing indigenous missile development capabilities.

## ICGS Samudra Pratap



Figure 30: ICGS Samudra Pratap

**Context:** The ICGS Samudra Pratap, commissioned in January 2026, is India's first indigenously built Pollution Control Vessel (PCV), representing a major milestone for "Aatmanirbhar Bharat" in maritime safety.

#### Technical Capabilities and Indigenous Design

- **Pollution Recovery:** Equipped with advanced oil-containment booms and recovery systems capable of handling 300 tonnes per hour, supported by an onboard laboratory.
- **Operational Reach:** At 114.5 meters long, it features Dynamic Positioning (DP-1) for precise station-keeping during firefighting and deep-sea recovery.

#### Strategic and Environmental Significance

- **Ecological Defense:** Primary role involves mitigating oil spills to protect sensitive mangrove and coral ecosystems along India's coastline.
- **Maritime Security:** Outfitted with 30mm CRN-91 guns and remote-controlled weaponry, it doubles as a patrol vessel for Exclusive Economic Zone (EEZ) surveillance.

#### Conclusion

The vessel bridges the gap between maritime industrial growth and ecological preservation, ensuring a sustainable and secure Indian Ocean Region.

## Man Portable ATGM



Figure 31: Man Portable ATGM | Source: Military WIKI

**Context:** The DRDO successfully conducted a decisive flight test of the Man Portable Anti-Tank Guided Missile (MPATGM) on January 11, 2026, at the KK Ranges in Maharashtra, marking the final technical milestone before its induction into the Indian Army.

#### January 2026 Flight Test

- **Moving Target Precision:** The test successfully engaged a moving target using "top-attack" mode, proving the

system's ability to strike the vulnerable upper armor of modern tanks while they are in motion.

- **Operational Readiness:** Following this successful engagement, DRDO Chairman Dr. Samir V. Kamat confirmed that the weapon system has met all General Staff Qualitative Requirements (GSQR) and is now ready for serial production.

#### Technical Capabilities and Design

- **Fire-and-Forget:** Equipped with an Imaging Infrared (IIR) Seeker, the missile autonomously tracks its target after launch, allowing the operator to relocate immediately to avoid retaliatory fire.
- **Lethality:** It features a tandem-charge high-explosive anti-tank (HEAT) warhead designed to penetrate Explosive Reactive Armour (ERA) with an effective range of 200m to 4km.

#### Conclusion

The 2026 test paves the way for the mass production of the MPATGM by Bharat Dynamics Limited (BDL), significantly reducing India's dependence on expensive imported anti-tank systems.

## C-295 Aircraft

**Context:** External Affairs Minister S. Jaishankar confirmed during bilateral talks with his Spanish counterpart that the first indigenously manufactured C-295 transport aircraft is expected to roll out from the **Vadodara facility** before **September 2026**.



Figure 32: C-295 Aircraft | Source: TH

#### Production and Strategic Framework

- **Manufacturing Split:** Under the ₹21,935 crore deal for 56 aircraft, 16 are delivered in "fly-away" condition from Spain, while the remaining 40 units are being manufactured at the Final Assembly Line (FAL) in Vadodara.
- **Indigenization Level:** Domestic production involves over 13,000 detailed parts and 85% of the aircraft's structural assembly. The 32nd aircraft (expected by 2029) is targeted to be nearly 100% Indian-made.

- **Economic Impact:** The project has onboarded 37 Indian suppliers and is projected to generate approximately 10,000 high-skilled and indirect jobs within the aerospace ecosystem.

#### Technical and Tactical Capabilities

- **Operational Role:** It will replace the aging **Avro-748** fleet, capable of carrying 71 troops or 50 paratroopers, and operating from short, semi-prepared, or unpaved airstrips.
- **Specialized Suites:** Indian-manufactured units feature an indigenous **Electronic Warfare Suite** developed by Bharat Electronics Limited (BEL) and Bharat Dynamics Limited (BDL).
- **Performance:** Powered by two **Pratt & Whitney** turboprop engines, it has a cruise speed of 480 km/h and an endurance of up to 11 hours, making it ideal for logistics, medical evacuation, and disaster response.

#### Conclusion

The September 2026 rollout represents the first instance of a private-sector company establishing a full-scale military aircraft assembly line in India, effectively breaking a long-standing public sector monopoly in aviation.

## India's Hypersonic Arsenal

**Context:** In January 2026, India achieved two major breakthroughs in hypersonic technology. DRDO successfully conducted a record 12-minute ground test of an actively cooled scramjet engine.

#### Key Hypersonic Systems and Technologies

- **Long-Range Anti-Ship Hypersonic Missile (LR-AShM):**  
**Type & Speed:** A Hypersonic Glide Vehicle (HGV) reaching speeds of **Mach 10** (max) with an average cruise of Mach 5.
  - **Trajectory:** It follows a **quasi-ballistic trajectory** using "atmospheric skips" and low-altitude flight to stay below enemy radar horizons.
  - **Range:** Currently capable of striking targets up to **1,500 km**, with future variants planned for 3,500 km.
- **Hypersonic Technology Demonstrator Vehicle (HSTDV):**
  - **Propulsion:** Utilizes an indigenous **Scramjet engine** (Supersonic Combustion Ramjet). Unlike HGVs that glide, HSTDV-based missiles (like the future **BrahMos-II**) will use sustained engine power to fly at hypersonic speeds.
  - **2026 Milestone:** The January 12-minute test validated the **active cooling** system, essential for

preventing the missile from melting due to extreme atmospheric friction.

#### Strategic and Defense Specifications

- **A2/AD Strategy:** The LR-AShM is a key component of India's **Anti-Access/Area Denial** approach in the Indian Ocean, designed specifically to neutralize high-value assets like aircraft carriers.
- **Dual-Use Capability:** These systems are engineered to carry both **conventional and nuclear** warheads, providing a high-speed deterrent that current missile defense systems (like THAAD) struggle to intercept.
- **Indigenization:** The systems feature 100% indigenous avionics, high-accuracy sensor packages for moving targets, and carbon-silicon carbide heat shields.

#### Conclusion

By 2026, India has successfully bridged the gap between "technology demonstration" and "operational hardware," positioning its hypersonic arsenal as a critical deterrent in a contested Indo-Pacific.

## National Intelligence Grid

**Context:** The National Intelligence Grid (**NATGRID**) has been in the news as part of India's efforts to strengthen counter-terrorism and internal security architecture through data-driven intelligence coordination among security agencies.

#### Key Aspects

- A centralised, secure intelligence database linking multiple government data sources.
- Conceptualised after the 26/11 Mumbai terror attacks to improve intelligence sharing.
- Enables authorised security and law enforcement agencies to access real-time data.
- Integrates databases related to immigration, banking, telecom, railways, airlines, and passports.
- Functions under the Ministry of Home Affairs.
- Aims to support prevention, detection, and investigation of terror and serious crime.
- Access is regulated with safeguards to protect privacy and prevent misuse.

#### Conclusion

NATGRID enhances India's internal security by enabling seamless intelligence coordination while balancing national security needs with data protection concerns.

## Operation DragNet

**Context:** Tamil Nadu police launched Operation DragNet to **track and arrest individuals with pending non-bailable warrants**, strengthening law enforcement and judicial compliance.

### Key Aspects

- State-wide police operation targeting absconders and repeat offenders.
- Focused on the execution of long-pending non-bailable warrants (NBWs).
- Aimed at improving conviction rates and reducing case pendency.
- Involved coordinated action by district police units and special teams.
- Enhances deterrence and reinforces rule of law.

### Conclusion

Operation DragNet reflects proactive policing in Tamil Nadu, aimed at improving public safety, judicial effectiveness, and accountability within the criminal justice system.

## Operation Megaburu

**Context:** **Jharkhand** witnessed Operation Megaburu, a major **anti-Maoist security operation**, as part of intensified efforts to curb left-wing extremism (LWE) in insurgency-affected forested regions.

### Key Aspects

- Launched by state police and central armed police forces
- Aimed at dismantling Maoist hideouts and disrupting leadership networks.
- Focused on remote forest and hill areas with long-standing Maoist presence.
- Involved intelligence-based search, area domination, and combing operations.
- Part of the broader national strategy to eliminate LWE through security action, development, and governance.

### Conclusion

Operation Megaburu reflects India's continued commitment to addressing Maoist violence through coordinated security operations alongside long-term developmental measures.

## Operation Trashi-I

**Context:** **Jammu and Kashmir** saw the launch of Operation Trashi-I, a targeted **anti-terror operation** amid heightened security concerns and efforts to neutralise terrorist networks.

### Key Aspects

- Conducted by security forces based on specific intelligence inputs.
- Aimed at identifying and neutralising terrorists and their support systems.
- Focused on preventing infiltration, arms movement, and terror attacks.
- Part of sustained counter-terrorism operations to maintain internal security and public order.
- Reinforces vigilance in sensitive and strategically important regions.

### Conclusion

Operation Trashi-I underlines India's zero-tolerance approach towards terrorism and the importance of intelligence-led operations in ensuring security and stability in Jammu and Kashmir.

# DISASTER MANAGEMENT

## HNS Drill

**Context:** The Hazardous and Noxious Substances (HNS) Drill was conducted as a joint exercise by the Indian Coast Guard and the Japan Coast Guard, underscoring growing India–Japan cooperation in maritime safety, disaster response, and marine environmental protection.



Figure 33: HNS Drill | Source: International Maritime Organization

### Key Aspects

- Hazardous and noxious substances (HNS) include chemical substances such as **acids, liquefied gases, and toxic industrial materials** that pose serious risks to human health and marine ecosystems when released at sea.
- The drill aimed to enhance preparedness and response capabilities for chemical spills and maritime accidents involving HNS cargo.
- **Key Objectives included:**
  - Testing joint standard operating procedures (SOPs) for HNS incidents.
  - Improving coordination, communication, and interoperability between the two coast guards.
  - Strengthening command, control, and information-sharing mechanisms.
- Involved simulated scenarios of accidental chemical release from ships, including containment, recovery, and mitigation measures.
- Facilitated exchange of best practices, technical expertise, and pollution response techniques.
- Aligned with international maritime frameworks such as MARPOL and global conventions on marine pollution preparedness and response.

### Conclusion

The India–Japan HNS Drill enhances bilateral maritime cooperation and builds joint capacity to respond effectively to chemical pollution incidents, contributing to safer seas and strengthened environmental security in the Indo-Pacific region

## Mumbai Climate Week 2026

**Context:** Mumbai Climate Week 2026 was organised as India's **first city-led climate action initiative**, marking a shift from nation-centric climate action towards urban-led climate governance, recognising cities as both major contributors to emissions and key drivers of climate solutions.

### Key Aspects

- First climate-focused platform in India conceptualised and led by a city government.
- Brought together policymakers, urban planners, climate experts, businesses, startups, civil society, and youth.
- Focused on translating national climate commitments into local, implementable urban actions.
- **Key thematic areas included:**
  - Climate-resilient urban infrastructure.
  - Clean energy transition and green mobility.
  - Waste management and circular economy.
  - Coastal resilience and flood mitigation.
  - Climate finance and green investments.
- **Aimed to:**
  - Showcase Mumbai's climate action roadmap.
  - Promote inter-city collaboration and knowledge sharing.
  - Mobilise private sector participation in climate solutions.
  - Strengthen local capacity for adaptation and mitigation.
- Aligned with India's broader climate goals under the **Nationally Determined Contributions (NDCs)** and global climate frameworks

### Conclusion

Mumbai Climate Week 2026 represents a significant milestone in India's climate journey by empowering cities to lead climate action and demonstrating how urban governance and local innovation can deliver scalable and effective climate solutions.

## Zero-Fatalities Road Safety Program

**Context:** The Zero-Fatalities Road Safety Program was launched as a data-driven national initiative targeting **100 high-**



**risk districts** with the highest incidence of road accidents and fatalities.

Ministry of Road Transport and Highways (MoRTH)

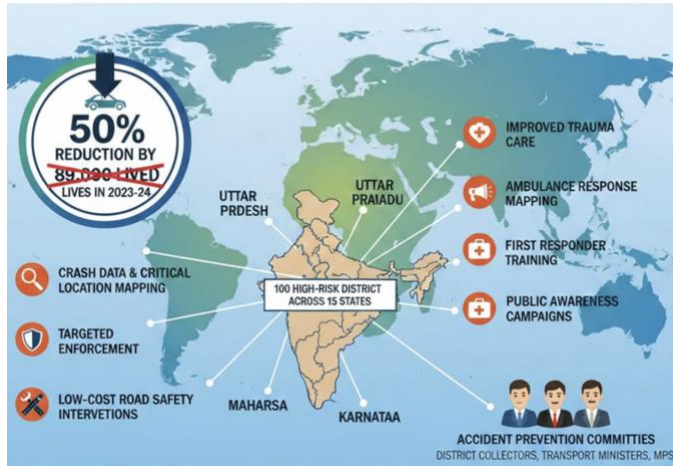


Figure 34: Road Safety System

#### Key Aspects

- Focuses on districts identified through accident and fatality data analysis.

- Adopts a **zero-fatality vision**, aiming to eliminate preventable road deaths rather than merely reducing numbers.
- Uses technology and data analytics to identify accident-prone stretches, black spots, and behavioural risk factors.

#### Key Interventions Include:

- Targeted enforcement of traffic laws.
- Engineering improvements such as safer road design and signage.
- Emergency response strengthening and trauma care preparedness.
- Behaviour change campaigns on speeding, drunk driving, helmet, and seatbelt use.
- Involves coordination between transport departments, police, health services, and local administrations.
- Aligns with India's goal of reducing road accident fatalities under national road safety strategies.

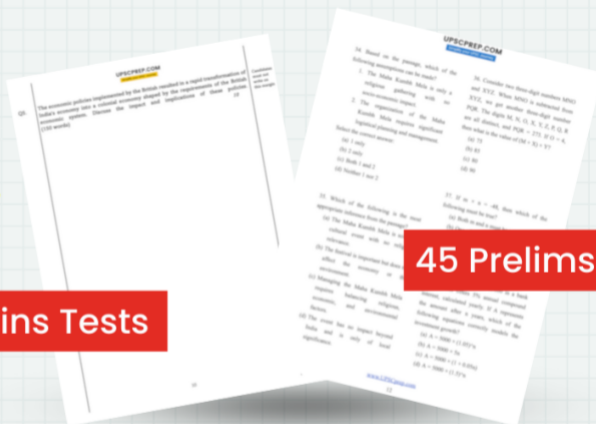
#### Conclusion

The Zero-Fatalities Road Safety Program marks a proactive and scientific approach to road safety, emphasising prevention, accountability, and inter-agency coordination to save lives on India's roads.

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# AGRICULTURE

## AWD Technique

**Context:** the Alternate Wetting and Drying (AWD) technique has gained importance amid rising concerns over water scarcity, climate change, and sustainable agriculture, particularly in rice cultivation, which is highly water-intensive.

### Method and features

- A water-saving irrigation practice for paddy cultivation.
- Fields are not kept continuously flooded; instead, irrigation is applied intermittently.
- Water is supplied only when soil moisture falls below a defined threshold.
- Farmers use field water tubes or markers to monitor groundwater levels.
- Requires proper land levelling and controlled irrigation.

### Benefits:

- Reduces water use by 15–30%.
- Lowers methane emissions, supporting climate mitigation.
- Maintains or improves crop yield if managed correctly.
- Reduces energy consumption for irrigation.

### Challenges:

- Demands technical knowledge and timely monitoring.
- Risk of yield reduction if drying is excessive.
- Limited suitability in rainfed or poorly levelled fields.

### Conclusion

The AWD technique supports sustainable and climate-resilient rice cultivation by conserving water and reducing emissions, provided it is implemented with proper training and monitoring.

## Happy Seeder

**Context:** The Happy Seeder has gained prominence as a sustainable agricultural technology to address the problem of crop residue burning, particularly in the rice–wheat cropping system of north India, which contributes to severe air pollution and soil degradation.



figure 35: Happy Seeder

### Key aspects

- A tractor-mounted implement that enables sowing of wheat directly into standing paddy stubble.
- Cuts and lifts rice straw, sows seeds, and deposits straw as mulch over the field in a single operation.
- Eliminates the need for burning crop residue.

### Benefits:

- Reduces air pollution and greenhouse gas emissions.
- Improves soil health by enhancing organic matter and moisture retention.
- Conserves water and reduces weed growth.
- Saves time and fuel compared to conventional land preparation.

### Adoption and support:

- Promoted under government schemes for in-situ crop residue management.
- Supported through subsidies and farmer training programmes.

### Challenges:

- High initial cost for small and marginal farmers.
- Requires access to suitable tractors and technical awareness.

### Conclusion

The Happy Seeder offers an effective and environment-friendly solution to crop residue management, aligning agricultural productivity with environmental protection and sustainable farming practices.

## Bovine Breeds

**Context:** **Indigau** and **Nandigau** have been in the news as synthetic cattle breeds developed in India to enhance dairy productivity, improve genetic performance, and support farmers' incomes while adapting to Indian Agro-climatic conditions.



figure 36: Bovine Breeds | Source: Shree Krishanayam

### Development and features

- **Indigau** and **Nandigau** are synthetic (crossbred) cattle breeds, developed by selectively combining:
  - High milk-yielding exotic cattle genetics.
  - Hardy indigenous cattle traits such as heat tolerance and disease resistance.
- Aim to bridge the gap between low-yielding indigenous breeds and climate-sensitive exotic breeds.
- Designed to perform well under Indian feeding systems and tropical climates.
- Support genetic improvement without complete dependence on foreign breeds.

### Benefits:

- Higher milk yield compared to many indigenous breeds.
- Better adaptability to Indian climatic stress than pure exotic breeds.
- Supports dairy sector growth and farmers' income.
- Contributes to genetic diversification in cattle breeding.

### Concerns:

- Risk of dilution of pure indigenous cattle gene pool.
- Need for scientific breeding regulation and proper record-keeping.
- Requires veterinary support and farmer training.

### Conclusion

The development of **Indigau** and **Nandigau** reflects India's effort to balance productivity, climate resilience, and genetic improvement in the dairy sector, highlighting the importance of regulated and sustainable cattle breeding policies.

## Digital Climate Atlas

**Context:** the digital climate atlas, titled **Atlas of Climate Adaptation in Indian Agriculture (ACASA-India)**, was launched to support farmers and policymakers in addressing climate variability, extreme weather events, and agricultural vulnerability through data-driven planning.

### Key aspects

- A digital, interactive platform providing region-specific climate risk information.
- Maps climate hazards such as droughts, floods, heat stress, and rainfall variability.
- Links climate risks with crop suitability, adaptation options, and resilience strategies.
- Supports evidence-based decision-making for:
  - Crop planning and diversification
  - Water and irrigation management
  - Climate-resilient agricultural practices
- Aims to bridge the gap between climate science and farm-level action.
- Strengthens the adaptive capacity of small and marginal farmers.

### Conclusion

ACASA-India represents a significant step towards climate-smart agriculture, enabling informed planning and reducing climate-related risks to livelihoods and food security.

## Global summit on blue food security

**Context:** India participated in the global summit on blue food security held in Israel, highlighting its commitment to sustainable fisheries, aquaculture, and ocean-based food systems amid rising global food and nutrition challenges.

### Key aspects

- Focused on the concept of **blue foods**, including fish, shellfish, and aquatic plants.
- Addressed challenges such as overfishing, marine ecosystem degradation, and climate impacts.
- Emphasised sustainable aquaculture, technological innovation, and ecosystem-based management.
- Provided a platform for international cooperation and knowledge sharing.
- **Aligned with India's priorities of:**
  - Coastal livelihood security
  - Nutrition enhancement
  - Sustainable use of marine and inland water resources

### Conclusion

India's participation in the summit reinforces its role in advancing **sustainable blue food systems**, balancing food security with marine conservation and international cooperation.

## India's fish production



Figure 37: fish production in India

**Context:** India recorded historic growth in fish production, reaching 197.75 lakh tonnes in FY 2024–25, reflecting the strengthening of the fisheries and aquaculture sector as a key pillar of food security, nutrition, livelihoods, and the blue economy.

### Key aspects

- India is among the leading fish-producing countries globally.

- Growth driven by expansion of inland fisheries and aquaculture, alongside marine fisheries.
- **Supported by policy initiatives such as:**
  - Infrastructure development in fishing harbours and cold chains
  - Promotion of scientific aquaculture practices
  - Access to credit, insurance, and market linkages for fishers
- Fisheries sector provides livelihood to millions of fishers and fish farmers, especially in coastal and rural areas.
- **Contributes significantly to:**
  - Nutritional security, as fish is a major source of protein
  - Export earnings, particularly through shrimp and value-added products
- Aligns with India's broader blue economy and sustainable development goals.

### Conclusion

The record fish production of 197.75 lakh tonnes underscores India's growing strength in fisheries and aquaculture, highlighting the sector's role in economic growth, livelihood security, and sustainable food systems.

## Kashmir Saffron

**Context:** Kashmir Saffron has been highlighted in the context of geographical indication (GI) protection, reflecting efforts to safeguard traditional agricultural products, prevent misuse of regional names, and enhance farmers' incomes through authenticity-based branding.



Figure 38: Kashmir saffron production| Source: Krishji Jagran

### GI tag details

- Kashmir Saffron holds a geographical indication (GI) tag under the Geographical Indications of Goods (Registration and Protection) Act, 1999.
- Cultivated primarily in the Pampore region of Jammu and Kashmir, known for its unique soil and climatic conditions.



- Distinguished by its high **crocin** (colour), **safranal** (aroma), and **picrocrocin** (flavour) content.

#### Gi tag ensures:

- Legal protection against imitation and adulteration.
- Recognition of product quality linked to geographic origin.
- Better market access and price realisation for local farmers.
- Supports export promotion and strengthens India's position in the global saffron market.

#### Conclusion

The GI tag for Kashmir Saffron protects its unique identity and quality, reinforcing the role of intellectual property rights in preserving traditional knowledge, regional heritage, and farmers' livelihoods.

## Nagauri Ashwagandha

**Context:** Nagauri ashwagandha received the geographical indication (GI) tag, recognising its unique quality and traditional cultivation practices and providing legal protection to farmers against misuse of the name.

#### Gi tag details

- Cultivated mainly in the Nagaur region of Rajasthan.
- Known for high withanolide content, making it valuable for medicinal and ayurvedic use.
- Adapted to arid and semi-arid conditions, requiring low water input.

## PM-RKVY

**Context:** the Pradhan Mantri-Rashtriya Krishi Vikas Yojana (PM-RKVY) continues to be a key scheme to accelerate agricultural growth, enhance farmers' incomes, and promote state-led, demand-driven agricultural development.

#### Scheme details

- Centrally sponsored scheme providing flexible funding to states based on local priorities.
- Aims to improve farm productivity, value addition, and market access.
- **Supports activities such as:**
  - Infrastructure development and farm mechanisation
  - Soil health management and water-use efficiency

- Promotion of agribusiness, Agri-entrepreneurship, and innovation

- Encourages convergence with other agricultural and rural development schemes.
- Focuses on sustainability, diversification, and climate-resilient agriculture.

#### Conclusion

PM-RKVY empowers states to drive agricultural transformation through flexible, targeted interventions, contributing to productivity growth, income enhancement, and long-term sustainability of Indian agriculture.

## World's largest rice producer

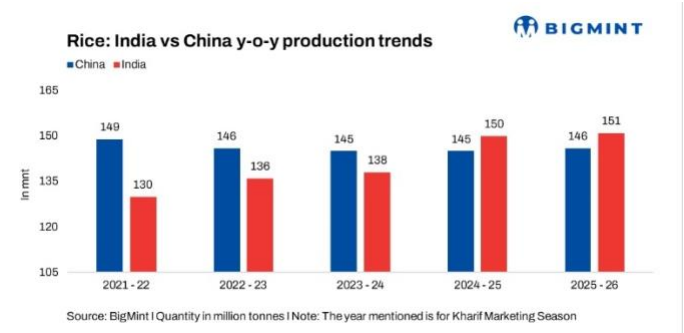


figure 39: rice production | Source: Big Mint

**Context:** India overtook China to become the world's largest rice producer, marking a significant milestone in global agriculture.

#### Overview

- India's rice production growth is driven by:
  - Expansion of cultivated area
  - Improved high-yielding and climate-resilient varieties
  - Better irrigation and farm practices
- Rice is a **staple food** for a large population and a key contributor to food security.
- India is also one of the **largest rice exporters**, strengthening its role in global food markets.
- Achievement has implications for:
  - Global food supply and price stability
  - India's agricultural exports and farmer incomes

#### Conclusion

India's emergence as the world's largest rice producer highlights the strength of its agricultural sector and its growing role in ensuring both domestic and global food security.



# ENVIRONMENT & GEOGRAPHY

## Dugong Conservation Centre



Figure 40: Dugong

**Context:** The Expert Appraisal Committee under the Ministry of Environment, Forest and Climate Change has asked Tamil Nadu to revise the design of the proposed International Dugong Conservation Centre at Manora (Thanjavur), citing environmental and regulatory considerations

### About Dugongs

- Dugong is a large, slow-moving marine mammal, commonly known as a “sea cow”.
- Scientific name: *Dugong dugon*
- Exclusively herbivorous, feeding on seagrass.
- A keystone species, crucial for maintaining healthy seagrass ecosystems.

### Habitat and Distribution

- Found in warm, shallow coastal waters of the Indian and western Pacific Oceans.
- Inhabits seagrass meadows, lagoons, estuaries, and nearshore waters.
- Unlike manatees, dugongs are strictly marine and do not enter freshwater.

### Conservation Status

- **IUCN Red List:** Vulnerable
- Threats include:
  - Seagrass loss
  - Coastal development
  - Fishing net entanglement

- Boat strikes

### FURTHER INFORMATION: Seagrasses

- Submerged flowering plants found in shallow, sunlit coastal and marine waters.
- Form highly productive ecosystems known as seagrass meadows.
- Grow in estuaries, lagoons, and nearshore regions with sandy or muddy substrates.
- Act as **blue carbon sinks** by storing large amounts of carbon in their biomass and sediments.
- Provide breeding, nursery, and feeding grounds for fish, crustaceans, sea turtles, and dugongs.
- Stabilize seabed and reduce coastal erosion by trapping sediments.
- Improve water quality by absorbing excess nutrients and enhancing water clarity.
- Major **seagrass regions in India** include the gulf of Mannar, Andaman and Nicobar islands, Lakshadweep islands, the Tamil Nadu coast, and parts of Gujarat.
- Threatened by coastal development, dredging, pollution, eutrophication, climate change, and destructive fishing practices.
- Conservation measures include marine protected areas, coastal regulation frameworks, habitat restoration, and integration into blue economy and climate mitigation strategies.

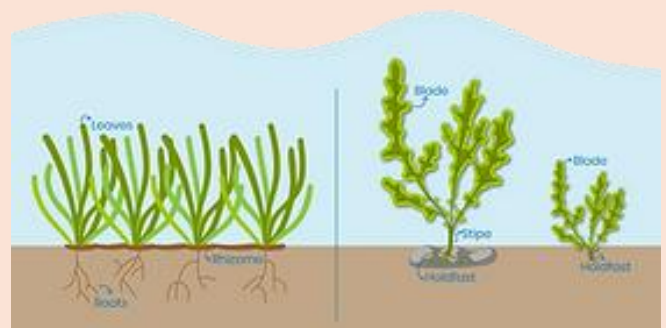


Figure 41: Seagrasses

### Key Characteristics and Ecological Role

- Grows up to 3 meters and weighs 400 kg or more.
- Paddle-like flippers and whale-like tail fluke.
- Acts as an ecosystem engineer, grazing patterns help seagrass regenerate.
- Holds cultural significance for coastal communities and is linked to ancient mermaid legends.

### Conclusion

Dugong conservation is critical for marine ecosystem health and coastal livelihoods. Environmentally sensitive planning of the conservation centre is essential to balance species protection with coastal sustainability.

## Forest Conservation Guidelines, 2026

**Context:** In January 2026, the Ministry of Environment, Forest and Climate Change amended guidelines under the Van (Sanrakshan Evam Samvardhan) Adhiniyam, 1980 to enable non-government participation in restoring degraded forest land, while retaining state control.

### About the Amended Forest Conservation Guidelines, 2026

#### What is the Amendment?

- Revises the **2023 guidelines** issued under the Van (Sanrakshan Evam Samvardhan) Adhiniyam (earlier Forest Conservation Act, 1980).
- Reclassifies plantation and afforestation** on forest land as **“forestry activities”**, even when undertaken by non-government entities.
- Such activities must:
  - Align with **approved Working Plans/Management Plans**
  - Remain under **State Forest Department supervision**

#### Key Amendments

- Reclassification of plantations:** Plantation and afforestation on forest land are treated as forestry activities, not non-forest use.
- Exemption from Compensatory Afforestation (CA):** Restoration on degraded forest land does not require CA, as no formal diversion is involved.
- Waiver of Net Present Value (NPV):** NPV charges are not applicable for plantation/restoration activities on forest land.
- Entry of non-government entities:** States may engage private and non-government actors for plantations and afforestation.
- Approval through Working/Management Plans:** Activities must strictly follow State Forest Department-approved plans.
- State discretion on utilisation and revenue sharing:** States can design case-specific frameworks for use of produce and revenue sharing.

- Central approval retained:** Ownership and control of forest land remain with the government; management is not transferred.

#### Conclusion

The 2026 amendments aim to accelerate ecological restoration by leveraging non-state capacity while preserving public control and scientific forest management, though careful oversight is vital to prevent commercial misuse.

## Mugger Crocodile Recovery

**Context:** Similipal National Park in Odisha recorded an increase in its mugger crocodile population to 84 during the 2026 census, reversing a recent declining trend.

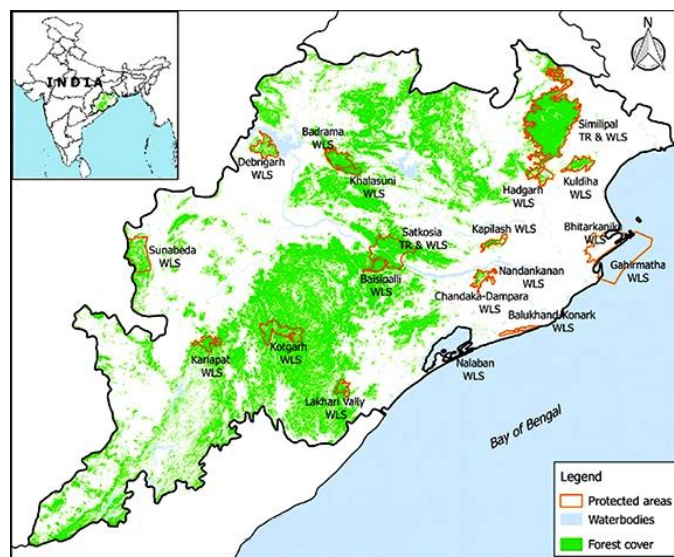


Figure 42: Similipal National Park

#### About Similipal National Park

- A National Park, Tiger Reserve, and Biosphere Reserve.
- Forms part of the Mayurbhanj Elephant Reserve.
- Included in the UNESCO World Network of Biosphere Reserves (since 2009).

#### Location and Extent

- Located in Mayurbhanj district, northern Odisha.
- Lies in the Eastern Ghats.
- Covers about 2,750 sq km, making it one of India's largest tiger reserves.

#### Key Geographical Features

- A high-plateau forested massif with an average elevation of ~900 m.
- Prominent peaks:
  - **Meghasani** (1,158 m)
  - **Khairiburu** (1,178 m)
- Major waterfalls:
  - **Barehipani** (217 m)
  - **Joranda** (181 m)
- River systems:
  - **Budhabalanga, Salandi, Deo, Khairi**
  - Create rich **wetland habitats** for crocodiles and aquatic fauna.

#### FURTHER INFORMATION: Mugger Crocodiles

- Also known as the **marsh crocodile**, native to the Indian subcontinent.
- Found in freshwater habitats such as rivers, lakes, reservoirs, marshes, and ponds.
- Scientifically known as *Crocodylus palustris*.
- Medium to large-sized crocodile with a broad snout adapted for diverse prey.
- Feeds on fish, amphibians, reptiles, birds, and small mammals.
- Capable of digging burrows to survive extreme temperatures and dry seasons.
- **Distribution** includes India, Sri Lanka, Nepal, Pakistan, and Iran. In India, found in states such as Gujarat, Rajasthan, Madhya Pradesh, Maharashtra, and Odisha.
- Listed as **Vulnerable** on the IUCN Red List due to habitat loss, water pollution, and human-wildlife conflict.
- Protected under **Schedule I of the Wildlife (Protection) Act, 1972**, providing the highest level of legal protection.
- Conservation efforts include habitat protection, captive breeding, and reintroduction programmes under crocodile conservation initiatives.



Figure 43: Mugger Crocodiles

#### Crocodile Census and Conservation

- **2026 census:** 84 mugger crocodiles (up from 81 in 2025).
- West Deo River hosts around 60 individuals.
- Recovery linked to the Ramtirtha Mugger Crocodile Breeding Centre, which releases hatchlings annually into Similipal's rivers.

#### Conclusion

The rising mugger crocodile numbers signal successful species-specific conservation, reinforcing Similipal's role as a critical biodiversity stronghold and the value of sustained habitat and breeding interventions.

## Bannerghatta NP and ESZ Restoration

**Context:** In January 2026, the Central Empowered Committee recommended restoring the original 2016 Ecologically Sensitive Zone (ESZ) around Bannerghatta National Park, reversing the reduced ESZ notified in 2020, citing ecological and wildlife corridor concerns.

#### About Bannerghatta National Park (BNP)

- A protected wildlife reserve and biodiversity hotspot forming the southern green lung of Bengaluru.
- Plays a critical role in conserving forests, elephants, and associated wildlife in a rapidly urbanizing region.

#### Location and Extent

- Located about 22 km south of Bengaluru.
- Spreads across Bengaluru Urban and Ramanagara districts in Karnataka.
- Lies within the Anekal hill range.

#### Historical Background

- Declared a reserve forest in 1970.
- Notified as a National Park in 1974.
- In 2002, a part was carved out as the Bannerghatta Biological Park (zoo and safari) to promote conservation education and tourism.

#### Geological and Physical Features

- **Granite hill ranges:** Part of the **Anekal Hills**, composed of ancient granite sheets creating rugged terrain.
- **Moist deciduous valleys:** Support elephants, deer, and carnivores.
- **Dry scrub uplands:** Higher elevations dominated by scrub vegetation, crucial for grazing species.

- **Wildlife corridors:** BNP forms a vital **elephant corridor** linking **BR Hills** and **Sathyamangalam forests**.
- **Water system:** The **Suvarnamukhi stream** flows through the park, sustaining wildlife in a semi-arid landscape.

### Conclusion

Restoring the original ESZ around Bannerghatta National Park is vital to buffer urban pressures, protect elephant corridors, and maintain ecological integrity in one of southern India's most threatened wildlife landscapes.

#### KNOW YOUR BASICS: Eco-Sensitive Zones (ESZ)

- areas notified around **protected areas** such as national parks and wildlife sanctuaries
- declared under the **Environment (Protection) Act, 1986**
- aim to act as **shock absorbers** by regulating human activities near protected areas
- intended to balance **environmental conservation and sustainable development**
- extent of ESZ varies and is generally up to **10 km** around protected areas, depending on ecological sensitivity
- boundaries are notified by the central government in consultation with state governments
- activities are classified into **prohibited, regulated, and permitted** categories
- prohibited activities include mining, polluting industries, and major hydroelectric projects
- regulated activities include tourism, construction, and use of natural resources
- permitted activities include traditional agriculture and eco-friendly livelihoods
- help reduce **human-wildlife conflict** and prevent habitat fragmentation

## Gandikota Canyon

**Context:** Gandikota Canyon has gained renewed attention as a spectacular yet underdeveloped natural-heritage site, even as the Andhra Pradesh government plans to strengthen tourism infrastructure and promote the region more actively.

### About Gandikota Canyon

- A dramatic river gorge carved by the Penna River (Pennar River).
- Often referred to as the "Grand Canyon of India" due to its sheer cliffs and striking geomorphology.

- Represents an important example of fluvial erosion in the Deccan plateau.



Figure 44: Gandikota Canyon | Source: Exoticamp

### Location and Physical Setting

- Located in Kadapa district, Andhra Pradesh.
- Lies within the Erramala Hills, along the banks of the Penna River.
- Approximately:
  - 77 km from Kadapa town
  - 300–380 km from Bengaluru, Hyderabad, and Chennai

### Historical and Cultural Background

- The canyon overlooks the historic **Gandikota Fort**, dating back to **1123 CE**.
- The fort rose to prominence under the **Pemmasani Nayaks**, feudatories of the **Kakatiya dynasty**.
- It later came under the rule of:
  - **Vijayanagar Empire**
  - Qutb Shahis of Golconda
  - Mughals
  - Nawabs of Kadapa
  - Kingdom of Mysore
  - British colonial administration
- Gandikota is mentioned in the travel accounts of **Jean-Baptiste Tavernier**, reflecting its historical importance.
- The region is culturally linked to **Vijayanagara art**, **Indo-Islamic architecture**, and local folklore, including associations with **Yogi Vemana**.

### Key Features and Tourism Potential

- **Geomorphological significance:**
  - Steep red sandstone and quartzite cliffs
  - Gorge nearly 200 meters wide, offering panoramic views.
- **Riverine landscape:** The Penna River flows sinuously through the canyon, creating dramatic visual contrasts.
- **Architectural heritage:**
  - Gandikota Fort complex includes:



- Madhavaraya Temple
- Ranganatha Temple
- Jama Masjid
- Granary, jail, step wells, and gun foundry
- **Tourism potential:**
- Scenic viewpoints and heritage trails
- Proximity to Tirupati enables development of integrated cultural–eco tourism circuits.

### Conclusion

Gandikota Canyon represents a rare confluence of geological grandeur and layered historical heritage. With eco-sensitive and heritage-conscious tourism planning, it can emerge as a flagship destination while preserving its natural and cultural integrity.

## Rare-Earth Elements (REEs)

**Context:** Rare-earth elements (REEs) have drawn renewed global attention as critical inputs for green technologies, electronics, and defence systems, amid growing concerns over supply-chain vulnerabilities and strategic dependence, especially on China-dominated processing.



Figure 45: Rare Elements | Source: Earth Science Australia

### About Rare-Earth Elements (REEs)

- A group of 17 metallic elements, comprising:
  - 15 lanthanides (Lanthanum to Lutetium)
  - Scandium and Yttrium
- Known for their unique magnetic, optical, and electronic properties, making them indispensable for advanced technologies.

### Key Characteristics of REEs

#### Physical Characteristics

- Mostly silvery, soft metals with high density.

- Possess high melting points and good thermal stability.
- Due to high reactivity, they are often used in oxide form.

### Chemical Characteristics

- Predominantly exhibit a +3 oxidation state.
- Presence of highly localised 4f electrons results in:
  - Strong magnetism (high magnetic moments)
  - Sharp and stable optical emissions (used in phosphors and lasers)
- Chemically very similar to each other, making separation difficult, costly, and energy-intensive.

### Global Distribution and Strategic Significance

- Occur in minerals such as **bastnäsite, monazite, and ion-adsorption clays**.
- **Major global reserves (approximate):**
  - **China:** ~44 million tonnes (dominant in refining)
  - **Brazil:** ~21 million tonnes
  - **India:** ~6.9 million tonnes
  - **Australia:** ~5.7 million tonnes
  - Russia, Vietnam, USA, Greenland – smaller but strategic reserves
- China controls over 90% of global refining and magnet production, making midstream processing the real strategic chokepoint rather than raw reserves.

### Conclusion

Rare-earth elements are strategic minerals of the 21st century, central to clean energy transitions and national security. Diversifying processing capabilities and securing resilient supply chains is crucial to reduce geopolitical and economic risks.

## Kanger Valley National Park



Figure 46: Kanger Valley National Park

**Context:** Kanger Valley National Park has gained attention as the Government of Chhattisgarh, with support from the



Wildlife Institute of India, has initiated biodiversity surveys to seek its recognition as a UNESCO World Heritage Site.

### About Kanger Valley National Park

- A biodiversity-rich protected area known for:
  - Dense forests
  - Limestone caves
  - Waterfalls
  - Highly diverse ecosystems
- Considered one of the most ecologically significant national parks in Central India.

### Location and Setting

- Located in Bastar district, Chhattisgarh.
- About 24 km southeast of Jagdalpur, along the Jagdalpur–Darbha Road.
- Lies within the Deccan biogeographical zone.
- Named after the Kanger River, which flows through the park.

### Key Ecological and Physical Features

#### Area and Terrain

- Covers approximately 200 sq km.
- Terrain is highly heterogeneous, including:
  - Flat plains
  - Steep slopes and plateaus
  - Valleys and stream courses

#### Hydrology and Geomorphology

- Dense network of seasonal and perennial streams draining into the Kanger River.
- Famous for subterranean limestone caves, including:
  - Kotumsar Cave
  - Kailash Cave
- These caves are among the most biologically diverse cave systems in India and South Asia.
- Flora, Fauna and Scenic Value
- Dominated by dense sal and mixed forests.
- Habitat of the Bastar Hill Myna, the state bird of Chhattisgarh.
- Supports rich mammalian, avian, reptilian, and insect diversity.
- Notable scenic features include:
  - Tirathgarh waterfalls
  - Undulating forested valleys and landscapes

### Conclusion

Kanger Valley National Park represents a unique convergence of geological, ecological, and scenic values. UNESCO recognition could strengthen global conservation efforts while promoting sustainable eco-tourism in the Bastar region.

## Parasitic Weed Crisis

**Context:** In January 2026, agricultural reports designated *Orobanche aegyptiaca* (Egyptian Broomrape) as the "No. 1 hidden threat" to India's mustard production, with yield losses reaching 30–70% in key rabi belts.

### The Biological Crisis

The infestation has transitioned from a localized issue to a systemic threat to India's **National Mission on Edible Oils**.

- **Yield Devaluation:** In Rajasthan and Haryana, farmers report average yields falling from 12 quintals per acre to just **6 quintals**, forcing a large-scale shift toward less profitable crops like barley and chickpea.
- **Persistent Seed Bank:** A single weed shoot produces up to **45,000 seeds** that remain viable in the soil for **20 years**, making the infestation nearly impossible to eradicate through traditional crop rotation alone.

### Biological and Regulatory Framework

- **Holoparasite Nature:** Unlike common weeds, *Orobanche* is achlorophyllous (lacks chlorophyll) and survives entirely as a holoparasite, using a specialized organ called a haustorium to drain water and carbon directly from the mustard plant's vascular system.
- **Herbicide Dilemma:** Common herbicides like glyphosate are non-selective; at doses high enough to kill the parasite, they also destroy the mustard crop. This has accelerated the debate on Herbicide Tolerant (HT) Mustard and GM hybrids (DMH-11).
- **Economic Security:** Mustard accounts for nearly 40% of India's indigenous edible oil; the 2026 crisis threatens to increase India's annual edible oil import bill, which already exceeds \$18 billion.

### Conclusion

The 2026 infestation highlights a critical need for integrated weed management, where biotechnological solutions like imidazolinone-resistant hybrids are increasingly viewed as essential for safeguarding India's oilseed self-reliance.

**FURTHER INFORMATION: National Mission on Edible Oils (NMEO)**

- A centrally sponsored scheme launched to **increase domestic production of edible oils** and reduce import dependence.
- Focuses on achieving **self-reliance (Atmanirbharata)** in edible oils.
- Consists of two major components:
  - **National mission on edible oils – oil palm (NMEO-OP)**
  - **National mission on edible oils – oilseeds (NMEO-OS)**
- Aims to promote cultivation of oil palm and oilseed crops such as mustard, groundnut, soybean, sunflower, and sesame.
- Targets expansion of oil palm cultivation mainly in the **north-eastern states and Andaman and Nicobar Islands**, along with other suitable regions.
- Provides financial assistance for planting material, irrigation, intercropping, and farm inputs.
- Ensures price assurance to farmers through a **viability gap payment mechanism** for fresh fruit bunches of oil palm.
- Encourages use of high-yielding varieties, improved agronomic practices, and value-chain development.
- Implemented by the **Ministry of Agriculture and Farmers' Welfare** in collaboration with state governments.

notably weak or shifted northward in early 2026, leaving the Western Himalayas with a severe rainfall deficit.

- **Vanishing Natural Reservoir:** Snow acts as a slow-release water source; its absence reduces the groundwater recharge necessary for crops during the critical grain-filling stage in February and March.

**KNOW YOUR BASICS: Rabi Crops**

Crops sown in the **winter season** and harvested in spring.

- Sowing generally takes place from **October to December**, after the southwest monsoon.
- Harvesting usually occurs from **March to April**.
- Require **cool temperatures** during growth and **warm, dry conditions** at harvest.
- Depend mainly on **irrigation**, as rainfall is limited during the rabi season.
- Major rabi crops include wheat, barley, gram, peas, mustard, and linseed.
- Wheat is the most important rabi cereal crop in India.
- Mustard is a key rabi oilseed crop.
- Grown extensively in regions with assured irrigation such as the **Indo-Gangetic plains**.
- Rabi crops contribute significantly to **food security and farmers' income**.

**Conclusion**

The 2026 season highlights an urgent need for climate-adaptive farming, as traditional rain-fed rabi crops struggle to survive the increasing frequency of dry and snowless Himalayan winters.

**Snowless Winter: Rabi impact**

**Context:** The Himalayan regions of Jammu & Kashmir, Himachal Pradesh, and Uttarakhand experienced a near-total "snow drought" in January 2026. While record-high rabi sowing initially promised a bumper harvest, the lack of winter precipitation is now threatening crop health.

**Agricultural Crisis**

- **The "False Spring" Effect:** High daytime temperatures (up to 15–20°C) in high-altitude areas like Uttarakhand are triggering premature flowering in wheat and apple orchards, making them vulnerable to later cold shocks.
- **15-25% Yield Loss:** Early assessments by state agriculture departments indicate significant damage in rain-fed regions where soil moisture has evaporated, particularly affecting lentils, mustard, and barley. **Why the Snow is Missing**
- **Weak Western Disturbances:** The extra-tropical storms that typically bring moisture from the Mediterranean were

**Coconut Root Wilt Disease**

**Context:** In January 2026, "Phytoplasma-induced" Root Wilt Disease (RWD) emerged as a critical threat to the coconut economies of Kerala, Karnataka, and Tamil Nadu, which together account for over 80% of India's production. Despite over 150 years of research, a definitive cure remains elusive.

**Disease Crisis**

- **Rapid Expansion:** reports highlighted that RWD is no longer localized to Kerala but has devastated large tracts in peninsular India, worsened by erratic temperatures and the rise of sap-sucking whiteflies.
- **Vector Transmission:** The disease is caused by Phytoplasma (wall-less, phloem-restricted bacteria) and is spread by insect vectors like the lace bug (*Stephanitis tyrica*) and plant hopper (*Proutista moesta*).

### Core Characteristics and Symptoms

- **Diagnostic Symptom:** The most distinctive field indicator is flaccidity, where leaflets bend abnormally inward (ribbing), giving the frond a cup-like appearance.
- **Progressive Decline:** Other symptoms include yellowing of leaves, marginal necrosis, and a tapering of the trunk. In advanced stages, nut yield can drop by 35–80%, and the quality of the kernel (copra) becomes soft and rubbery.

### Integrated Management Strategies

- **Eradication:** Removing "disease-advanced" palms (yielding fewer than 10 nuts/year) is mandatory to reduce the infection source for healthy trees.
- **Nutritional Boost:** Applying a balanced fertilizer dose of 500g N, 300g P, and 1000g K per palm, along with 500g Magnesium Oxide, helps maintain the vigour of early-infected palms.
- **Biological Control:** The use of Cococon (a specialized microbial consortium) and green manuring (cowpea/sunn hemp) in the palm basins is recommended to improve soil health and suppress secondary root pathogens.

### Conclusion

The 2026 outbreak underscores that while we cannot yet kill the phytoplasma, integrated management and the adoption of RWD-tolerant varieties (like Kalpa Raksha) are the only ways to safeguard the "Kalpavriksha" for future generation

## Green Penalty Funds

**Context:** The Ministry of Environment, Forest and Climate Change (MoEFCC) notified the Environmental (Protection) Fund Rules, 2026. This marks India's first unified fiscal mechanism to manage penalties collected from environmental violators under the "Polluter Pays" principle.

### Regulatory Milestone

The new rules operationalize **Section 16** of the Environment (Protection) Act, 1986, creating a dedicated, non-lapsable fund.

- **75:25 Sharing Formula:** In a major federal shift, 75% of penalties collected will now be remitted to the concerned State/UT, while the remaining 25% is retained by the Centre for national initiatives.
- **Unified Collection:** All fines imposed under the Air Act (1981), Water Act (1974), and Environment Protection Act (1986) will be funneled into this single "Environmental Protection Fund" (EPF) via the digital Bharatkosh portal.

### Usage and Oversight

- **Permitted Activities:** Funds are earmarked for remediating contaminated sites, modernizing pollution laboratories, purchasing monitoring equipment, and sponsoring research into clean technologies.
- **The "Negative List":** The rules explicitly prohibit using penalty funds for foreign travel, medical expenses, or constructing office buildings and purchasing furniture/vehicles for government officials.
- **Digital Transparency:** The Central Pollution Control Board (CPCB) is mandated to launch a real-time tracking portal by mid-2026, allowing the public to monitor fund allocation and project outcomes.

### Parallel Shift: Exemption for Commercial Plantations

- **NPV Waiver:** Commercial plantations on forest land have been reclassified as "forestry activities." Consequently, they are now **exempt** from paying **Net Present Value (NPV)** and compensatory afforestation fees if they follow an approved state working plan.

### Conclusion

The 2026 "Green Penalty" framework ensures that environmental fines directly finance ecological restoration rather than vanishing into general state budgets, though the parallel waiver for commercial plantations remains a point of debate among conservationists.

## 100 GW Hydro Pumped Storage Mission

**Context:** India has set an ambitious target to establish 100 GW of hydro pumped storage capacity by 2047, in line with its long-term vision for energy security, renewable energy integration, and climate commitments.

### Significance and key features

- Pumped storage hydropower acts as a **large-scale energy storage solution** for excess renewable power.
- Surplus electricity from solar and wind is used to pump water to an upper reservoir and released during peak demand.
- Helps address the **intermittency of renewable energy** and ensures grid stability.
- Supports peak load management, frequency regulation, and reliable power supply.
- Provides **long-duration storage**, complementing battery-based storage systems.

- Strengthens India's transition towards a low-carbon and resilient energy system

### Conclusion

The 100 GW hydro pumped storage mission is a strategic intervention to ensure reliable renewable energy integration, enhance grid resilience, and support India's clean energy transition by 2047.

## State Microbe of Kerala

**Context:** Kerala declared *Bacillus Subtilis* as its state microbe, underscoring the role of microorganisms in sustainable agriculture, public health, and environmental conservation.

### Significance and applications

- *Bacillus subtilis* is a beneficial, non-pathogenic soil bacterium.
- Widely used as a bio-fertiliser and biocontrol agent, reducing chemical input in farming.
- Plays a role in improving soil health and crop productivity.
- Used in probiotics, enzyme production, and biotechnology research.
- Promotes scientific temper and awareness about microbial diversity.
- Aligns with Kerala's focus on sustainability and innovation.

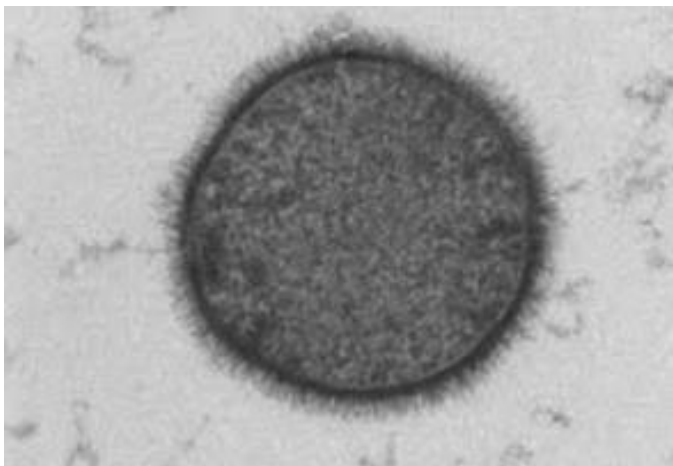


Figure 47: *Bacillus Subtilis*

### Conclusion

Kerala's designation of *Bacillus subtilis* as the state microbe reflects a forward-looking approach to science-based sustainability, highlighting the positive role of microbes in human and environmental well-being.

## BBNJ Agreement

**Context:** The biodiversity beyond national jurisdiction agreement, also known as the High Sea treaty, is coming into force, marking a historic step in strengthening global ocean governance beyond national maritime boundaries.

### Significance and key provisions

- Applies to areas **beyond national jurisdiction**, which cover nearly **two-thirds of the world's oceans**.
- Adopted under the **United Nations Convention on the Law of the Sea (UNCLOS)**.
- Aims to conserve and sustainably use **marine biodiversity in the high seas**.
- **Key pillars include:**
  - Creation of marine protected areas (MPAs) in international waters.
  - Regulation of marine genetic resources and fair benefit-sharing.
  - Mandatory Environmental Impact Assessments (EIAs) for high seas activities.
  - Capacity building and technology transfer for developing countries.
- Addresses threats such as overfishing, deep-sea mining, pollution, and climate change.

### Conclusion

The entry into force of the BBNJ agreement strengthens global cooperation for ocean conservation, filling a major governance gap and reinforcing the principle of oceans as the common heritage of humankind.

## Carbon Credit Trading Scheme (India)

**Context:** India's Carbon Credit Trading Scheme (CCTS) is being expanded to include additional sectors such as refineries and textiles, reflecting a move towards market-based climate mitigation and broader industrial decarbonisation.

### Significance and key features

- Establishes a domestic carbon market to reduce greenhouse gas emissions cost-effectively.
- Allows entities to earn or trade carbon credits by cutting emissions below prescribed limits.
- Expansion to sectors like refineries and textiles brings more energy-intensive industries under the carbon pricing framework.
- Encourages adoption of cleaner technologies, energy efficiency, and process innovation.

- Aligns with India's climate commitments, including net-zero by 2070 and updated Nationally Determined Contributions (NDCs)
- Supports transition from command-and-control regulation to market-based climate governance.

### Conclusion

The expansion of India's carbon credit trading scheme signals a shift towards comprehensive, incentive-driven climate action, balancing industrial growth with emissions reduction and long-term sustainability.

## Himalayan Climate Action

**Context:** A recent report by the International Centre for Integrated Mountain Development (ICIMoD) highlighted serious gaps in climate finance for the Himalayan region, despite it being one of the most climate-vulnerable mountain systems in the world.

### Climate funding and key findings

- The Himalayas are warming faster than the global average, leading to glacier retreat, erratic rainfall, floods, and landslides.
- The region supports the livelihoods of over 240 million people directly and nearly two billion downstream.
- The report noted a mismatch between climate vulnerability and funding allocation.
- Climate finance remains fragmented, project-based, and insufficient for long-term adaptation.
- Limited access to finance for local communities and sub-national governments.
- **Calls for:**
  - Increased adaptation-focused climate finance.
  - Region-specific funding mechanisms.
  - Stronger cross-border cooperation among Himalayan countries.
  - Integration of indigenous knowledge with scientific planning.

### Conclusion

The ICIMoD report underscores the urgent need to scale up and localise climate finance for the Himalayas, treating mountain ecosystems as critical to regional water security, disaster resilience, and sustainable development.

## Ice Memory Sanctuary



figure 48: Ice memory sanctuary/ Source: WMO

**Context:** The ice memory sanctuary, the world's first mountain ice core repository, was established in Antarctica to preserve climate records locked in glaciers that are rapidly disappearing due to global warming.

### Purpose and significance

- Stores ice cores extracted from mountain glaciers across the world.
- Ice cores contain invaluable data on:
  - Past atmospheric composition
  - Temperature variations
  - Volcanic activity and pollution history
- Antarctica was chosen due to its stable, extremely cold conditions, ensuring long-term preservation.
- Acts as a scientific archive for future generations, when current glaciers may no longer exist.
- Supports global climate research and enhances understanding of long-term climate change.
- Represents international scientific cooperation in response to the climate crisis.

### Conclusion

The ice memory sanctuary is a landmark scientific initiative, safeguarding Earth's climatic history and reinforcing the urgency of climate action before irreplaceable natural records are permanently lost.

## Jalaj Livelihood Centres

**Context:** The Jalaj livelihood centres initiative has been highlighted as a community-based model linking river



conservation with sustainable livelihoods, especially in riverine and wetland-dependent regions.

#### **River conservation and livelihood linkages**

- Focuses on restoration and protection of rivers, wetlands, and aquatic ecosystems.
- Promotes nature-based livelihoods such as inland fisheries, aquaculture, wetland farming, eco-tourism, and value addition.
- Supports capacity building, skill training, and market access for local communities.
- Integrates conservation goals with income generation, reducing pressure on river ecosystems.
- Strengthens community stewardship and participatory water governance.
- Aligns with sustainable development, blue economy, and river rejuvenation objectives.

## **Kaimur Wildlife Sanctuary**

**Context:** Kaimur Wildlife Sanctuary has been proposed to be developed as Bihar's second tiger reserve, reflecting efforts to expand tiger conservation beyond traditional landscapes.

#### **Ecological significance and proposal**

- Located in the Kaimur range along the Vindhya plateau
- Characterised by forests, plateaus, rivers, and rich biodiversity
- Provides suitable habitat and corridor potential for tiger conservation
- Proposal aims to strengthen wildlife protection, habitat management, and eco-development
- Expected benefits include enhanced biodiversity conservation, eco-tourism potential, and local employment
- Contributes to national goals under Project Tiger and landscape-level conservation.

## **Solid Waste Management**

**Context:** Solid waste management (SWM) remains a major governance and environmental challenge in India amid rapid urbanisation, rising consumption, and increasing waste generation.

#### **Key challenges:**

- Low levels of waste segregation at source.

- Inadequate processing and recycling capacity.
- Dependence on open dumping and landfills.
- Environmental and public health risks from unscientific disposal.

#### **Major initiatives:**

- **Swachh Bharat Mission (Urban)** focusing on waste segregation and cleanliness
- Solid waste management rules, 2016, promoting decentralised waste processing
- Emphasis on **reduce, reuse, recycle (3r)** principles
- Promotion of waste-to-energy, composting, and material recovery facilities
- Use of digital tools and citizen participation for monitoring and compliance

#### **Conclusion**

Effective solid waste management in India requires behavioural change, robust urban infrastructure, and coordinated governance to move towards a circular and sustainable waste economy.

## **State of Finance for Nature 2026**

**Context:** The State of Finance for Nature 2026 report, released by united nations environment programme (UNEP), has drawn attention to the imbalance between nature-negative finance and nature-positive investments at a time of accelerating biodiversity loss and climate stress.

#### **Nature-negative vs nature-positive finance**

- **Nature-negative finance** refers to financial flows that contribute to deforestation, pollution, habitat destruction, and ecosystem degradation.
- **Nature-positive finance** supports conservation, restoration, sustainable land use, and biodiversity protection.
- The report highlights that:
  - Nature-negative financial flows significantly outweigh investments in nature protection.
  - Public and private finance continue to subsidise activities harmful to ecosystems.
  - Funding for biodiversity and ecosystem restoration remains inadequate.
- **Calls for:**
  - Redirecting harmful subsidies.
  - Scaling up green finance and private sector participation.

- Aligning financial systems with global biodiversity and climate goals.

### Conclusion

The UNEP report underscores the urgent need to transform global finance from nature-depleting to nature-restoring, making environmental sustainability central to economic decision-making.

## Vulture Safe Zones

**Context:** Tamil Nadu has expanded Vulture Safe Zones (VSZs) as part of its efforts to conserve critically endangered vulture species, whose populations have declined sharply in India.

### Conservation Measures and Significance

- Vulture safe zones are areas where toxic veterinary drugs, especially diclofenac, are strictly regulated or banned.
  - Aim to ensure safe food sources and nesting habitats for vultures.
  - Involve coordination with veterinarians, livestock owners, forest officials, and local communities.
- Support awareness campaigns on vulture-friendly practices.
  - Contribute to ecosystem health, as vultures play a crucial role in carcass disposal and disease control.
  - Align with national vulture conservation action plans.

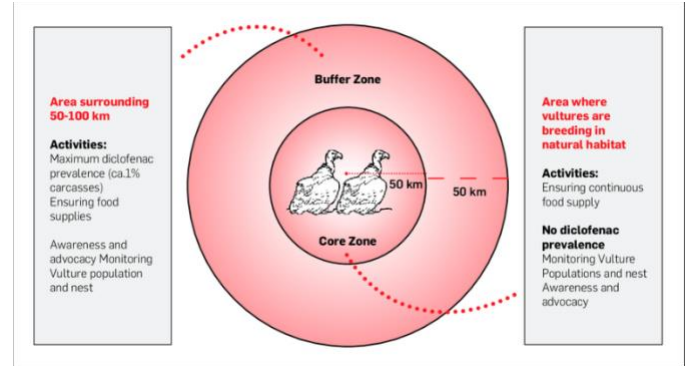


Figure 49: Vulture Safety Zone

### Conclusion

The expansion of Vulture Safe Zones in Tamil Nadu reflects a targeted, science-based conservation approach to protect keystone scavenger species and maintain ecological balance.

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## SPECIES IN NEWS

Species	Why in News	Habitat & Distribution	Status & Challenges
<b>Calamaria mizoramensis</b> 	Newly discovered reed snake species	<p>Endemic to <b>Mizoram, Northeast India</b>, part of the <b>Indo-Myanmar biodiversity hotspot</b>.</p> <p>Inhabits <b>tropical evergreen and semi-evergreen forests</b>, living in leaf litter and loose soil on the forest floor.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Not evaluated</li> <li>• <b>CITES:</b> Not listed</li> <li>• <b>WPA (India):</b> Not listed</li> <li>• <b>Challenges:</b> Limited known distribution, habitat disturbance, and lack of scientific data.</li> </ul>
<b>Chinese Pangolin</b> 	Conservation status highlighted due to trafficking	<p>Found in <b>northeast India and the eastern Himalayas</b>, within tropical and subtropical forest regions.</p> <p>Inhabits <b>forests and grasslands</b>, often in burrows; its distribution is declining due to habitat loss and poaching.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Critically Endangered</li> <li>• <b>CITES:</b> Appendix I</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Illegal wildlife trade, poaching for scales, habitat loss, and low reproductive rate.</li> </ul>
<b>Fishing Cat</b> 	Conservation initiatives and sightings	<p>Distributed across <b>eastern and southern India</b>, especially in the Gangetic plains, eastern coast, and wetland-rich regions.</p> <p>Inhabits <b>wetlands, mangroves, riverbanks, and marshes</b>, closely associated with freshwater ecosystems.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Vulnerable</li> <li>• <b>CITES:</b> Appendix II</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Wetland degradation, human-wildlife conflict, pollution, and habitat fragmentation.</li> </ul>
<b>Indiaphonte ijoyi</b> 	New copepod species discovered	<p>Discovered from the <b>marine waters of the Lakshadweep Islands</b> in the Arabian Sea.</p> <p>Inhabits <b>coral reef-associated marine ecosystems</b>, indicating rich but underexplored marine biodiversity.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Not evaluated</li> <li>• <b>CITES:</b> Not listed</li> <li>• <b>WPA (India):</b> Not listed</li> <li>• <b>Challenges:</b> Restricted marine habitat, ecological sensitivity, and lack of long-term monitoring.</li> </ul>
<b>Golden Langur</b> 	Primate species in conservation news	<p>It is endemic to the <b>India-Bhutan border region</b>, mainly in <b>western Assam</b> and southern Bhutan. It inhabits <b>tropical moist deciduous and semi-evergreen forests</b> and has a highly restricted and fragmented range.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Endangered</li> <li>• <b>CITES:</b> Appendix I</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Habitat fragmentation, deforestation, human encroachment, and small population size.</li> </ul>

<b>Metadon Ghorpadei &amp; Metadon Reimeri</b> 	<p>A new ant fly species discovered</p>	<p>Discovered from <b>forest ecosystems of the Western Ghats, India</b></p> <p>Associated with <b>leaf litter and shaded forest habitats</b>, indicating high insect diversity in forest ecosystems of the Western Ghats</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Not evaluated</li> <li>• <b>CITES:</b> Not listed</li> <li>• <b>WPA (India):</b> Not listed</li> <li>• <b>Challenges:</b> Very limited distribution, habitat disturbance, and insufficient taxonomic research.</li> </ul>
<b>Mishmi Takin</b> 	<p>Species-related biodiversity studies</p>	<p>It is found in the <b>Eastern Himalayas, mainly in Arunachal Pradesh</b>, particularly in the <b>Mishmi Hills</b>. It inhabits sub-alpine and <b>alpine forests</b> and high-altitude meadows.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Vulnerable</li> <li>• <b>CITES:</b> Appendix II</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Habitat loss, hunting pressure, climate change, and infrastructure development in high-altitude regions.</li> </ul>
<b>Olive Ridley Turtle</b> 	<p>Mass nesting (arribada) season</p>	<p>It is distributed across the tropical coastal waters of <b>the Indian Ocean</b>, especially along the coast of India. It nests on sandy beaches, notably in <b>Odisha at Gahirmatha, Rushikulya, and the mouth of the Devi River</b>.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Vulnerable</li> <li>• <b>CITES:</b> Appendix I</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Bycatch, coastal development, plastic pollution, and disturbance at nesting beaches</li> </ul>
<b>Parakaempferia Alba</b> 	<p>New ginger species discovered</p>	<p>It is endemic to <b>Arunachal Pradesh</b> in northeast India. It is found in the understorey of <b>tropical evergreen forests</b>, preferring moist and shaded habitats.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Not evaluated</li> <li>• <b>CITES:</b> Not listed</li> <li>• <b>WPA (India):</b> Not applicable</li> <li>• <b>Challenges:</b> Habitat loss, limited geographic range, and lack of conservation assessment.</li> </ul>
<b>Rugose Spiralling Whitefly</b> 	<p>Invasive pest affecting coconut crops</p>	<p>Invasive species spread across <b>southern India</b> (Kerala, Tamil Nadu, Karnataka).</p> <p>Infests <b>coconut and other plantation crops</b>, thriving in warm tropical climates.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Not evaluated</li> <li>• <b>CITES:</b> Not listed</li> <li>• <b>WPA (India):</b> Not applicable</li> <li>• <b>Challenges:</b> It is an invasive pest causing severe damage to coconut, banana, and ornamental plants by sap sucking; increased management costs for farmers.</li> </ul>
<b>Sandalwood Leopard</b> 	<p>Rare colour morph sighted</p>	<p>It was sighted in <b>Karnataka as part of the Western Ghats</b> landscape. It inhabits forest and <b>forest-edge ecosystems</b> and represents a rare colour morph of the leopard.</p>	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Vulnerable (same as Indian leopard)</li> <li>• <b>CITES:</b> Appendix I</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Habitat fragmentation, human-wildlife conflict, poaching, and pressure</li> </ul>



			from development activities; being a rare colour morph, it also faces higher visibility-related risks.
<b>Small-Clawed Otter</b> 	Recent sighting in Tamil Nadu	Distributed in <b>southern and northeast India</b> .  Inhabits <b>rivers, wetlands, mangroves, and coastal ecosystems</b> .	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Vulnerable</li> <li>• <b>CITES:</b> Appendix II</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Wetland loss, water pollution, illegal pet trade, and human disturbance.</li> </ul>
<b>Kashmir Markhor</b> 	Conservation-related discussions due to habitat pressure and concerns over its population in Jammu and Kashmir.	It inhabits rugged, high-altitude rocky slopes and dry temperate forests of <b>Jammu and Kashmir</b> and adjoining Himalayan regions.	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Near Threatened</li> <li>• <b>CITES:</b> Appendix I</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Habitat fragmentation, poaching, human interference, and climate change impacts in mountain ecosystems.</li> </ul>
<b>Antarctic Penguins</b> 	In the news due to climate change impacts on sea ice, food availability, and breeding success.	They inhabit coastal <b>Antarctica</b> and surrounding sub-Antarctic islands, relying on <b>sea ice and cold ocean waters</b> for breeding and feeding.	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Species-specific (most are Least Concern; Emperor penguin is Near Threatened)</li> <li>• <b>CITES:</b> Appendix I</li> <li>• <b>WPA (India):</b> Not applicable</li> <li>• <b>Challenges:</b> Sea ice loss due to climate change, decline in krill availability, and human activities such as fishing and tourism.</li> </ul>
<b>Indo-Pacific Leopard Shark</b> 	Highlighted in marine conservation discussions due to concerns over declining populations.	It is found in <b>shallow coastal waters, coral reefs, and sandy lagoons</b> across the Indo-Pacific region, including the <b>Indian Ocean and western Pacific</b> .	<ul style="list-style-type: none"> <li>• <b>IUCN status:</b> Endangered</li> <li>• <b>CITES:</b> Appendix II</li> <li>• <b>WPA (India):</b> Schedule I</li> <li>• <b>Challenges:</b> Overfishing, bycatch, coral reef degradation, and slow reproductive rate.</li> </ul>



# SCIENCE & TECHNOLOGY

## Nipah Virus Outbreak

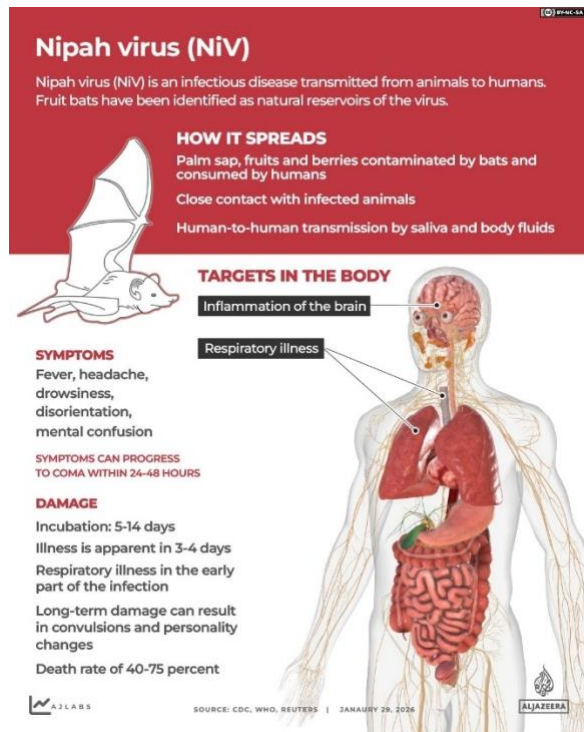


Figure 50: Nipah Virus Outbreak | Source: Al Jazeera

**Context:** Two nurses in West Bengal have tested positive for the Nipah virus, with one in a coma and another on ventilator support, prompting emergency contact tracing and isolation of over 120 people.

### About Nipah Virus (NiV)

- Nipah virus (NiV) is a **zoonotic virus** that spreads from animals to humans and between humans.
- Causes illness ranging from mild fever to fatal encephalitis and respiratory failure.

### Natural and Intermediate Hosts

- Primary reservoir:** Fruit bats (*Pteropus* species – flying foxes)
- Intermediate hosts:** Pigs, horses, goats, dogs (can transmit to humans)

### Modes of Transmission

- Consumption of **bat-contaminated food** (e.g., fruits, date-palm sap)
- Contact with **infected animals**
- Human-to-human transmission** via:
  - Respiratory droplets
  - Body fluids
  - Close caregiving contact

### Symptoms and Disease Progression

- Early symptoms:** Fever, headache, muscle pain, sore throat, vomiting
- Progressive symptoms:** Dizziness, drowsiness, confusion
- Severe disease:**
  - Acute respiratory distress
  - Encephalitis (brain inflammation)
  - Seizures and coma within 24–48 hours

### Key Features

- Case fatality rate:** 40%–75%
- Incubation period:** 4–14 days (may extend up to 45 days)
- Listed as a WHO priority pathogen under the R&D Blueprint.

### Treatment and Control

- No specific antiviral drug or vaccine available.
- Supportive care is the mainstay:
  - Oxygen therapy and ventilator support
  - Intensive care for neurological and respiratory complications
- Early isolation, contact tracing, and infection control are crucial to prevent outbreaks.

### Conclusion

The Nipah outbreak highlights India's continued vulnerability to zoonotic diseases, underscoring the need for early surveillance, rapid response, and strong public health systems

## V2V Communication Technology

**Context:** The Government of India has announced that Vehicle-to-Vehicle (V2V) communication technology will be rolled out nationwide by end-2026 to significantly reduce road accidents and traffic fatalities.

### About Vehicle-to-Vehicle (V2V) Communication

#### What is V2V Technology?

- A wireless communication system that enables vehicles to directly exchange data with nearby vehicles.

- Does not depend on mobile networks, allowing real-time interaction between cars.

### Objectives

- Prevent collisions and pile-ups** by providing instant warnings on:
  - Sudden braking
  - Speed changes
  - Proximity of nearby vehicles
- Improve safety in **blind spots, fog, curves, and low-visibility conditions**.

### How V2V Works

- Each vehicle is fitted with a **SIM-like onboard communication device**.
- Vehicles continuously share and receive data such as:
  - Location
  - Speed
  - Direction
  - Braking or acceleration status
- Communication uses a **dedicated radio frequency band (5.875–5.905 GHz)** approved by the **Department of Telecommunications**, ensuring functionality even without internet.
- If a risk is detected:
  - Drivers receive **instant alerts**.
  - In vehicles equipped with **Advanced Driver Assistance Systems (ADAS)**, the system can assist with **automatic braking or evasive action**.

### Conclusion

Nationwide adoption of V2V technology marks a shift toward intelligent transport systems, with the potential to substantially reduce road accidents and enhance real-time vehicular safety in India.

## Typhoid Outbreak

**Context:** The 2026 typhoid surge in urban clusters highlights the critical vulnerability of municipal water systems to cross-contamination.

### Mechanics of Waterborne Transmission

Contamination occurs when the **Salmonella Typhi** bacterium enters the drinking supply.

- Infrastructure Failure:** Sewage seepage into cracked water mains creates a direct "fecal-oral" pathway for pathogens.

- Point-Source Leaks:** High-pressure leaks during monsoon or construction phases allow wastewater to bypass filtration.

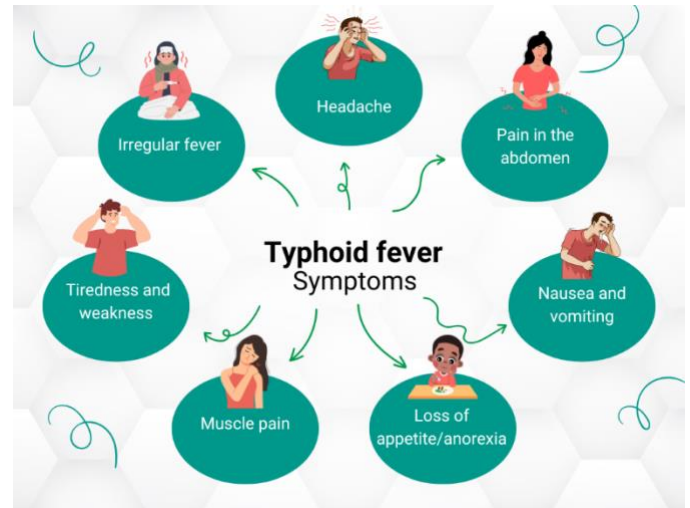


Figure 51: Typhoid Fever Symptoms | Source: Carewell Hospital

### Clinical and Strategic Challenges

- Antimicrobial Resistance (AMR):** High resistance to standard antibiotics (fluoroquinolones) is forcing a shift toward more complex treatments.
- WASH Interventions:** Effective control relies on **Water, Sanitation, and Hygiene (WASH)** protocols, including super-chlorination and the adoption of Conjugate Vaccines.

### Conclusion

The crisis underscores that safe water is a prerequisite for public health and requires rigorous infrastructure maintenance.

## Diamond Defects and Quantum Physics

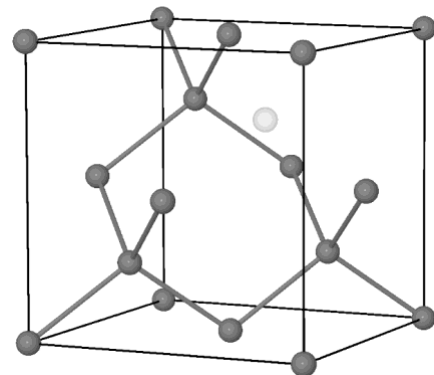


Figure 52: Diamond Defects | Source: Crystal.unito.in

**Context:** Research published in late January 2026 has identified diamond defects—specifically Nitrogen-Vacancy (NV) centers—as the primary solution for scalable "quantum highways," allowing quantum computers to operate at room temperature rather than near absolute zero.

#### The 2026 Breakthrough: "Defects as Infrastructure"

- **Quantum Highways:** A study revealed that natural dislocations (line defects) in diamonds act as "gathering points" that organize qubits into stable, ordered arrays, significantly improving their ability to communicate.
- **Geodesic Control:** New techniques in early 2026 have enabled millihertz-level resolution in quantum sensing. By manipulating the electron spin of NV centers, researchers can now eliminate systematic errors in quantum measurements, making them 40 times more sensitive than 2025 standards.

#### The Nitrogen-Vacancy (NV) Center.

- **Mechanism:** An NV center is formed when a Nitrogen atom replaces a Carbon atom in the diamond lattice, and an adjacent Carbon site is left vacant.
- **The "Shielding" Effect:** The ultra-rigid diamond lattice acts as a "physical cage," protecting the quantum state (spin) of the electrons from environmental noise. This allows "coherence"—the time a qubit stays stable—to last for milliseconds even at room temperature.
- **Optical Readout:** When hit with a green laser, these defects emit red light. The intensity of these light changes based on the electron's quantum state, allowing scientists to "read" quantum data using simple optics.

#### Applications in Modern Science

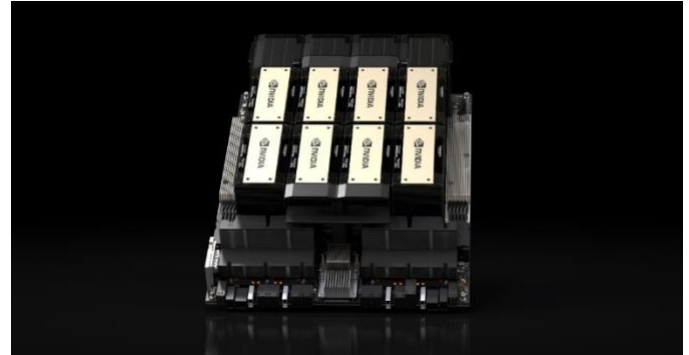
- **Quantum Sensing:** Used in Quantum Diamond Microscopes to see invisible magnetic fields in computer chips and detect malicious hardware alterations (cybersecurity).
- **Quantum Internet:** Researchers in Japan (Jan 2026) demonstrated using polarized light to entangle diamond defects over remote distances, a key step toward a hack-proof global quantum network.
- **Super radiant Masers:** Dense packs of NV centers are being used to create continuous microwave lasers (masers) that act as ultra-stable frequency sources for deep-space navigation and timekeeping.

#### Conclusion

While traditional quantum systems require massive cooling infrastructure, the 2026 advancements in diamond-defect

engineering are paving the way for "quantum-on-a-chip" devices that can fit inside satellites or even handheld PCs.

## NVIDIA H200



*Figure 53: NVIDIA*

**Context:** NVIDIA H200 Tensor Core GPU has become the critical infrastructure for the next generation of "Reasoning AI." It is the first chip designed specifically to overcome the memory bottlenecks of trillion-parameter models like GPT-5 and Llama-4.

#### Global Market Developments

- **China Import Clearance:** On January 28, 2026, Beijing officially approved the first batch of H200 imports for tech giants like ByteDance, Alibaba, and Tencent, marking a significant de-escalation in the "chip war" to support domestic AI development.
- **DeepSeek Integration:** Leading AI startup DeepSeek received conditional approval in late January to acquire H200 units, aiming to use the hardware for its upcoming V4 model, which promises "Western-grade" performance at a lower computational cost.

#### Technical Evolution: H200 vs. H100

The primary innovation of the H200 is the transition to **HBM3e (High-Bandwidth Memory)**, which transforms how data reaches the processor.

- **Memory & Bandwidth:** The H200 offers 141GB of HBM3e (vs. 80GB in H100) and a bandwidth of 4.8 TB/s, allowing it to process massive datasets up to 1.4x faster than its predecessor.
- **Inference Efficiency:** For large language models (LLMs), the H200 delivers nearly double the inference performance of the H100. For example, it can generate over 31,000 tokens per second on Llama-2 70B, compared to ~21,000 on the H100.

- **Energy Density:** While it maintains a 700W power profile, its increased speed means it completes tasks faster, effectively reducing the **total energy cost per query** for large data centers by up to 30%.

### Conclusion

As of 2026, the H200 is the "gold standard" for real-time AI services, enabling the transition from simple chatbots to complex, multi-modal reasoning engines that require massive, high-speed memory.

## Guillain-Barré Syndrome (GBS)

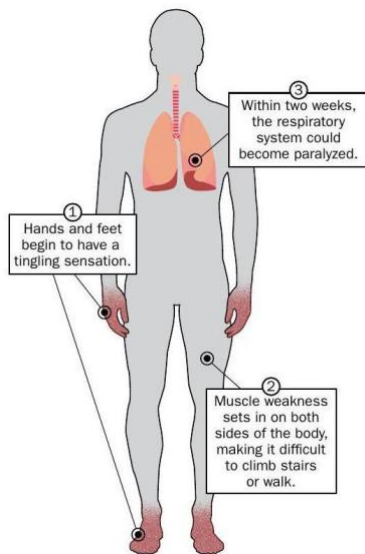


Figure 54: Guillain Barre Syndrome

**Context:** Clusters of Guillain-Barré Syndrome (GBS) were reported in Madhya Pradesh (Neemuch district) and Maharashtra. This rare autoimmune disorder causes the body's immune system to attack its own peripheral nerves, potentially leading to rapid paralysis.

### Pathology and Symptoms

- **Nature of the disorder:** GBS is an *aftermath condition*, meaning it develops after a bacterial or viral infection when the immune response becomes misdirected.
- **Trigger and mechanism:**
  - Most cases are preceded by infections such as *Campylobacter jejuni* (commonly associated with contaminated water) or viral infections like norovirus.
  - The condition occurs due to *molecular mimicry*, where immune cells mistake components of peripheral nerves for pathogens and attack them.

- **Progression of symptoms:**
  - Muscle weakness typically begins in the lower limbs and *ascends* upwards.
  - Patients may experience tingling, loss of reflexes, and difficulty in movement.
  - Severe cases can lead to respiratory muscle paralysis, with nearly 30% of patients requiring ventilatory support and intensive care.
- **Treatment and prognosis:**
  - Early diagnosis is crucial for preventing complications.
  - Intravenous Immunoglobulin (IVIG) therapy and plasma exchange are the primary treatment options and significantly improve recovery outcomes.

### Conclusion

The recent GBS clusters highlight the critical link between water safety, infectious diseases, and neurological health. Timely detection and prompt IVIG therapy remain essential for reducing mortality and ensuring recovery.

## Fukushima Daiichi



Figure 55: Fukushima Daiichi | Source: World Nuclear News

**Context:** The International Atomic Energy Agency (IAEA) confirmed that Japan's ongoing discharge of treated wastewater remains within safety limits. Simultaneously, plant operator TEPCO announced a 14% increase in discharge volumes for the 2026 fiscal year, while full-scale removal of melted fuel debris has been officially delayed to 2037.

### Wastewater Management and ALPS

- **The ALPS Process:** Removes 62 radionuclides using chemical adsorption; however, it cannot filter out **Tritium** (radioactive Hydrogen).



- **Safety Thresholds:** Treated water is diluted with seawater to bring tritium levels below **1,500 Bq/L**, which is significantly stricter than the WHO drinking water standard of 10,000 Bq/L.
- **2026 Discharge Plan:** TEPCO plans to release **62,400 tons** of water over eight rounds, improving efficiency to shorten intervals between discharge cycles.

#### Decommissioning and Fuel Debris Status

- **The 2037 Delay:** Full-scale removal was pushed back from the early 2030s to **2037** due to extreme radiation and the need for complex, custom-built robotics.
- **Current Volume:** Approximately **880 tonnes** of radioactive debris remain inside Units 1–3; decommissioning is still targeted for completion by **2051**.
- **INES Rating:** The 2011 disaster remains a **Level 7** ("Major Accident") on the International Nuclear and Radiological Event Scale; a rating shared only with Chernobyl.

#### Conclusion

The 2026 status reflects a stabilized cleanup; while wastewater discharge has gained regulatory acceptance, the mission of fuel retrieval remains a technological challenge for the next decade.

## Viral Remnants in Human DNA

**Context:** The breakthrough research published in *The Transmitter* and *ScienceDaily* revealed that ancient viral remnants in our DNA—long dismissed as "junk"—are critical regulators of brain development and embryonic plasticity.

#### Biological Composition: Human Endogenous Retroviruses (HERVs)

Approximately 8% of the human genome is composed of viral sequences, a legacy of ancient infections that integrated into the germline (sperm and egg cells) millions of years ago.

- **Mechanism of Entry:** Ancient retroviruses (similar to modern HIV) inserted their genetic material into host chromosomes using the enzyme reverse transcriptase, becoming permanent "endogenous" elements passed through generations.
- **The HERV-K Family:** This is the most "recent" and biologically active group; though they can no longer produce infectious viruses, they still express proteins and regulate thousands of nearby human genes.

#### Functional Roles in Human Life

- **Placental Development:** The gene **Syncytin-1**, which allows the formation of the human placenta, is derived entirely from an ancient retroviral envelope gene (*env*). Without this viral remnant, human live birth would not be possible.
- **Immune Defense:** Viral DNA acts as a "trigger" for the innate immune system. When the body senses a modern infection, it "awakens" these ancient viral pieces to help activate **interferon responses**, essentially using old viruses to fight new ones.
- **Pathological Reactivation:** While beneficial in health, the "aberrant" reactivation of HERVs is linked to modern diseases. January 2026 data suggest their involvement in **ALS (Amyotrophic Lateral Sclerosis)**, certain cancers (prostate and breast), and autoimmune disorders like **Rheumatoid Arthritis**.

#### Conclusion

The 2026 findings shift the perspective of the human genome from a "pure" blueprint to a symbiotic mosaic, where viral remnants are not just relics but the very engineers of human complexity and survival.

## Artemis II Mission



Figure 56: Artemis II Mission | Source: Space

**Context:** the **Artemis II** mission was in the news as NASA entered the final stages of preparation for its first crewed lunar flight in over 50 years, marking humanity's return to deep space with astronauts after the Apollo era.

#### Significance

- First crewed mission of the Artemis programme.
- Astronauts will travel around the Moon without landing, testing life-support, propulsion, and navigation systems.
- Serves as a critical precursor to Artemis III, which aims to land humans on the Moon.



- Strengthens international collaboration in space exploration.
- Advances long-term goals of sustained lunar presence and future human missions to Mars.

### Conclusion

Artemis II represents a decisive step in human space exploration, reviving crewed lunar missions and laying the foundation for deeper interplanetary exploration.

## Bioe3 Policy

**Context:** India introduced the bioe3 Policy to harness biotechnology for Economy, Environment, and Employment, positioning biotech as a key driver of sustainable and inclusive growth.

### Significance

- Focuses on biomanufacturing, bio-innovation, and bio-entrepreneurship.
- Promotes development of bio-based products in health, agriculture, energy, and environment.
- Aims to reduce dependence on fossil fuels through bio-based alternatives.
- Encourages startups, research institutions, and industry collaboration.
- Supports job creation in high-skill and future-ready sectors.
- Aligns with goals of Atmanirbhar Bharat and green growth.

### Conclusion

The bioe3 Policy reflects India's strategic shift towards a bio-based economy, balancing economic growth with environmental sustainability and employment generation.

## Disobind Tool

**Context:** Developed by researchers at the National Centre for Biological Sciences (NCBS), Tata Institute of Fundamental Research (TIFR), Bengaluru, Disobind is an open-source, deep-learning AI tool designed to predict how intrinsically disordered proteins (IDPs) interact with their binding partners.

### Key Details

- **Purpose:** Predicts inter-protein contact maps and interface residues for flexible, "shapeshifting" proteins (IDPs) and their partners based solely on their sequences.

- **Technology:** Uses protein language models (pLMs) trained on millions of protein sequences to understand and predict protein behaviour.
- **No Structural Data Needed:** Unlike conventional structural biology methods, it does not require prior knowledge of 3D structure or sequence alignments.
- **Performance:** Outperforms state-of-the-art tools like *AlphaFold-Multimer* and *AlphaFold3*, particularly when predicting interactions for previously unseen protein pairs.
- **Applications:** Primarily used in biological research for drug discovery, understanding cell signalling, and studying diseases like cancer and neurodegeneration.
- **Open Source:** Released as free software to the global research community.

### Conclusion

The Disobind Tool represents a significant advancement in computational biology, providing a high-accuracy, sequence-based method for mapping elusive protein-protein interactions (PPIs) involving flexible, disordered proteins.

## Greenwald Limit

**Context:** The Greenwald Limit has gained attention in discussions on nuclear fusion research, particularly in efforts to achieve stable and sustained fusion reactions for clean energy generation.

### Key Details

- A **fundamental physics limit** in magnetic confinement fusion devices such as **tokamaks**.
- Defines the **maximum plasma density that can be stably confined without disruption**.
- Exceeding this limit leads to plasma instability and loss of confinement.
- Named after physicist Martin Greenwald, who formulated the empirical relation.
- Crucial for designing efficient fusion reactors and improving energy output.
- Overcoming or optimising around this limit is key to making fusion energy commercially viable.

### Conclusion

The Greenwald Limit represents a critical scientific constraint in fusion research, shaping the design and future feasibility of fusion as a clean and sustainable energy source.

## ICE Cloud

**Context:** ICE Cloud has been discussed as a technology concept in the domain of cloud computing and digital governance, focusing on secure, interoperable, and scalable cloud-based service delivery.

### Technology Concept and Significance

- Refers to an integrated cloud environment enabling seamless data storage, processing, and service delivery.
- Emphasises interoperability, cybersecurity, and efficiency in handling large-scale digital operations.
- Supports real-time data access, analytics, and coordination across platforms.
- Useful for sectors such as governance, research, healthcare, and enterprise services.
- Aligns with the broader shift towards digital transformation and cloud-first strategies.

### Conclusion

ICE Cloud represents the growing reliance on advanced cloud infrastructure to enhance efficiency, security, and data-driven decision-making in modern systems.

## Path Gennie

**Context:** Path Gennie has gained attention as an **open-source software platform for drug discovery**, reflecting the increasing role of digital tools and collaboration in biomedical research.

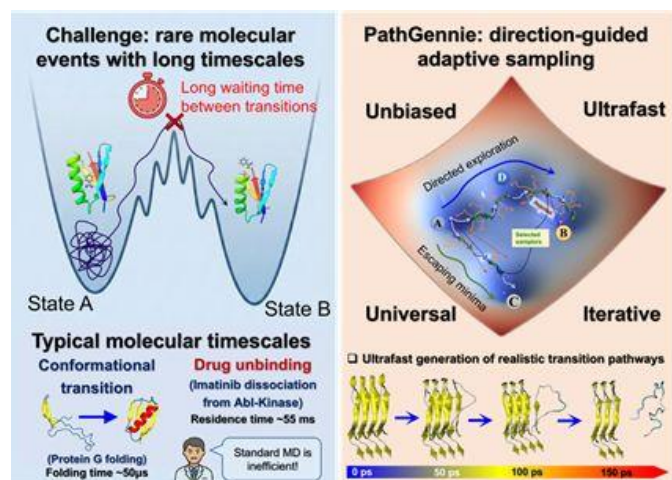


Figure 57: Path Gennie

### Role in Drug Discovery

- Open-source tool designed to accelerate early-stage drug discovery.
- Helps researchers analyse biological pathways and molecular interactions.
- Enables collaboration, transparency, and reproducibility in research.
- Reduces cost barriers by providing free access to advanced computational tools.
- Supports innovation in pharmaceutical research, especially for neglected and rare diseases.

### Conclusion

Path Gennie highlights the potential of open-source technology to democratise drug discovery, fostering innovation, collaboration, and faster development of new therapeutics.

## PSLV-C62 Mission



Figure 58: PSLV-C62 | Source: The Hindu

**Context:** The PSLV-C62 mission was successfully launched by ISRO, reaffirming India's reliability in polar satellite launch services and small-satellite deployment.

### Key Details

- Launched using the **Polar Satellite Launch Vehicle (PSLV)**, known for its high success rate.
- Placed satellites into precise low earth / sun-synchronous orbits.
- Demonstrated ISRO's capability in cost-effective and accurate launch services.
- Supports applications such as earth observation, communication, navigation, and research.
- Strengthens India's position in the global commercial launch market.

### Conclusion

The PSLV-C62 mission highlights ISRO's technological maturity and continued role in advancing space-based services and international confidence in Indian launch systems.

## Soft Matter

**Context:** Soft matter has gained attention in scientific research due to its applications in materials science, biotechnology, medicine, and industrial innovation.



Figure 58: Soft Matter | Source: NASA

### Scientific Concept and Significance

- Soft matter refers to materials that are easily deformable under small stress or thermal fluctuations.
- Includes substances such as **polymers, gels, colloids, foams, emulsions, and biological materials.**
- Properties lie between those of solid and liquid states.
- Behaviour governed by thermal energy, entropy, and weak intermolecular forces.
- **Widely applied in:**
  - Drug delivery systems and biomaterials.
  - Food processing and cosmetics.
  - Nanotechnology and smart materials.
- Helps bridge physics, chemistry, biology, and engineering.

### Conclusion

Soft matter science plays a crucial role in understanding complex materials and driving innovations across healthcare, industry, and advanced technology sectors.

## Ultracold Atom Physics

**Context:** Ultracold atom physics has gained prominence due to advances in quantum technologies, including quantum computing, precision measurement, and fundamental research on quantum matter.

### Scientific Field Details

- Studies atoms cooled to temperatures close to absolute zero (0 Kelvin).
- At such temperatures, atoms exhibit quantum mechanical behaviour on a macroscopic scale.
- Enables creation of exotic states of matter such as Bose–Einstein condensates (BECs).
- Allows precise control over atomic interactions using lasers and magnetic fields.
- Used to simulate complex quantum systems that are difficult to study directly.
- **Applications Include:**
  - Quantum computing and quantum simulation.
  - Ultra-precise atomic clocks.
  - Testing fundamental laws of physics.

## Water Accounting

**Context:** Water accounting has emerged as an important concept amid growing concerns over water scarcity, climate variability, and sustainable resource management, especially in agriculture and urban planning.

### Resource Management Concept

- Systematic assessment of water availability, use, losses, and returns within a defined area.
- Tracks water flows across sectors such as agriculture, industry, and households.
- Helps identify inefficiencies, over-extraction, and stress points in water systems.
- Supports evidence-based policymaking for water allocation and conservation.
- Widely used in river basin management, irrigation planning, and groundwater regulation.
- Aligns with integrated water resources management (IWRM) principles.

### Conclusion

Water accounting enables transparent and data-driven water governance, supporting sustainable use of a critical and finite natural resource.

# CULTURE & HERITAGE

## Sammakka–Saralamma Jatara



Figure 59: Sammakka- Saralamma Jatara

**Context:** Telangana is preparing to host the biennial Sammakka–Saralamma Jatara from 28 January 2026, along with a large-scale redevelopment of the sacred precinct at Medaram to manage unprecedented crowds and improve basic infrastructure for pilgrims.

### About Sammakka–Saralamma Jatara

#### What is the Jatara?

- A biennial tribal spiritual festival honouring Sammakka and Saralamma, ancestral goddesses of the Koya Adivasi community.
- Recognised as Asia's largest tribal festival and among the largest human congregations in the world.
- Observed during the full moon of the Hindu month of Magh.+

#### Place of Celebration

- Held at Medaram village in Mulugu district, Telangana.
- Located within the Eturnagaram Wildlife Sanctuary, part of the Dandakaranya forest belt, highlighting the deep forest–tribal linkage.

#### Historical and Cultural Origins

- Rooted in Koya tribal legends centered on Sammakka, a forest-born woman adopted by tribals, and her daughter Saralamma.
- As per oral tradition, they resisted tax oppression by Kakatiya rulers, attained martyrdom, and came to symbolise tribal resistance, sacrifice, and justice.
- Unlike mainstream Hindu practice, the deities do not reside permanently in temples; they are symbolically

brought from the forest to stay with devotees for a few sacred days.

#### Rituals and Unique Features

- Rituals conducted exclusively by Koya tribal priests, strictly following indigenous customs.
- Devotees offer “Bangaram” (jaggery) instead of gold or money, symbolising equality, simplicity, and agrarian life.
- Worship focuses on sacred trees, bamboo totems, flags (dalgudda), and clan symbols, not anthropomorphic idols.
- Attendance often exceeds one crore devotees, second only to the Kumbh Mela in scale within India.
- Recent arrangements include arches, platforms, and granite flooring to ensure crowd safety and smooth movement.

#### Significance

- Represents tribal identity, collective memory, and resistance against historical injustice.
- Preserves an animistic, kinship-based belief system, where deities are regarded as family members rather than distant gods.
- Highlights India's plural religious traditions beyond temple-centric worship.

#### Conclusion

The Sammakka–Saralamma Jatara is not merely a festival but a living assertion of tribal history, faith, and dignity. Its continued observance underscores the importance of culturally sensitive development that respects indigenous traditions while managing modern logistical challenges.

## Jharkhand's Megalithic Landscapes



Figure 60: Jharkhand Megaliths

**Context:** Jharkhand has initiated efforts to secure a UNESCO World Heritage tag for its extensive megalithic landscapes, with



the Chief Minister highlighting their global cultural value during international outreach at Davos and the UK.

### What are Jharkhand Megaliths?

- Megaliths are large stone structures such as menhirs (standing stones), dolmens (table-like tombs), burial slabs, cairns, and stone circles.
- Built for burials, ancestor memory, ritual practices, boundary marking, and in some cases solar observations.

### Spatial Spread and Regional Clusters

- Distributed across multiple districts, notably:
  - **Ranchi-Khunti belt** (e.g., Chokahatu)
  - **Hazaribagh region** (dense monolith clusters and alignments)
  - **Chatra-Ramgarh-Lohardaga-Gumla-Simdega**
  - **Singbhum region** (Ho tribal areas)
- Many villages maintain dedicated burial grounds locally called **Hargarhi / Hargarha**.

### Cultural and Historical Foundations

- Deeply embedded in **Adivasi lifeworlds**, especially of the **Munda, Ho, Oraon, and Asur** communities.
- Represents **layered landscapes**—ancient stones coexist with **new memorial stones**, reflecting intergenerational continuity rather than abandoned ruins.

### Distinctive Features

- **Living megalithism:** Some communities still erect memorial stones for ancestors—a globally rare cultural continuity.
- **Local typologies and names:**
  - *Sasandiri*: dolmen-type family burial structures
  - *Birdiri/Biridiri*: memorial standing stones (menhirs)
- **Astronomical linkages:** Certain sites show alignments with equinox/solstice sunrise or sunset, functioning as prehistoric calendars.
- **Multiple functions:** Not all stones are tombs—some served as commemorative markers, boundary stones, or observatory markers.

### Conclusion

Jharkhand's megalithic landscapes represent a living heritage of indigenous knowledge, memory, and cosmology. A UNESCO tag would aid global recognition while reinforcing the need for community-led conservation.

## Zehanpora Buddhist Stupa Complex

**Context:** The 2,000-year-old Buddhist stupas and monastic complex at Zehanpora in Baramulla, Kashmir, dating to the Kushan period, have been scientifically excavated, revealing a major centre of early Buddhism in the region.

### What is the Zehanpora Stupa Complex?

- A large **Kushan-era Buddhist complex** comprising:
  - Multiple **stupas**
  - **Apsidal chaityas** (prayer halls)
  - **Viharas** (monastic residences)
  - Urban-type habitations and artefacts
- Spread over **nearly 10 acres** in **Baramulla district, Jammu & Kashmir**.



*Figure 61: Zehanpora Stupa Complex*

### Location and Connectivity

- Situated at **Zehanpora village, North Kashmir**.
- Lies along the **ancient Silk Route corridor**, linking Kashmir with the **Gandhara region** (present-day Afghanistan–Pakistan), underscoring its trans-regional significance.

### Historical Background

- Dated to the **Kushan period (1st–3rd century CE)**.
- Kashmir emerged as a major Buddhist centre under rulers like **Kanishka and Huvishka**.
- Buddhism in Kashmir began earlier under **Ashoka (3rd century BCE)** and later became a hub of **Mahayana Buddhism**, influencing Central Asia and China.

### Broader Buddhist Network

- Zehanpora was likely part of the **Gandhara Buddhist network**—a system integrating **monasteries, trade routes, and learning centres**.
- Reflects the role of Kashmir as a **cultural and intellectual bridge** between South Asia and Central Asia.



## Conclusion

The Zehanpora excavations reaffirm Kashmir's role in **early Buddhist history and trans-Asian exchanges**. Scientific exploration and preservation of the site can significantly enrich India's **archaeological and civilisational narrative**.

## Heritage Conservation

**Context:** The Union Ministry of Culture initiated a landmark shift on January 12, 2026, by empanelling private heritage architects to undertake "core conservation" work, ending the century-old exclusive monopoly of the Archaeological Survey of India (ASI).

### The 2026 Strategic Shift

- **Core vs. Non-Core:** Unlike the previous "Adopt a Heritage" scheme, which limited private participation to visitor amenities (toilets, cafes), the 2026 model allows private agencies to perform actual structural restoration and material conservation for the first time.
- **National Culture Fund (NCF):** Donors contribute via the NCF (est. 1996) to receive 100% tax exemptions; they now have the autonomy to select their own empanelled architects and agencies to execute projects under ASI's regulatory supervision.

### Static Constitutional and Legal Framework

- **Seventh Schedule Jurisdictions: \* Union List (Entry 67):** National monuments (e.g., Taj Mahal, Red Fort) are the exclusive domain of the Union.
  - **State List (Entry 12):** State-protected monuments.
  - **Concurrent List (Entry 40):** General archaeological sites and remains.
- **Statutory Acts:** Conservation is strictly regulated by the AMASR Act, 1958 (Ancient Monuments and Archaeological Sites and Remains) and the Antiquities and Art Treasures Act, 1972.
- **Evolution of Role:** The ASI is transitioning from an "implementing agency" (doing the work) to a "regulatory body" (approving and auditing work done by others).

## Conclusion

The 2026 PPP model identified 250 priority monuments for private-led restoration, signaling a shift toward global best practices where the state regulates a professionalized private conservation sector.

## Bhojshala Complex



Figure 62: Bhojshala Complex

**Context:** Madhya Pradesh has been in the news due to renewed historical, archaeological, and legal discussions surrounding its origin and cultural significance. The site is traditionally associated with Raja Bhoja, the renowned Paramara ruler.

### Key Aspects

- Believed to have been built during the reign of **Raja Bhoja (11th century CE)**.
- Historically associated with **learning, Sanskrit education, and Saraswati worship**.
- Architectural remains indicate use as an educational and cultural centre.
- The site has layered historical significance due to subsequent alterations over centuries.
- Managed and protected under archaeological and legal frameworks.

## Conclusion

The Bhojshala Complex represents India's layered civilisational history, highlighting the need to balance heritage conservation, historical inquiry, and social harmony.

## Granth Kutir Initiative

**Context:** The Granth Kutir initiative has gained attention as part of efforts to preserve India's literary and knowledge heritage, especially in the face of digitisation and declining engagement with traditional texts.

### Key Aspects

- Initiative aimed at preserving, documenting, and promoting ancient manuscripts and literary works.
- Focuses on safeguarding texts written in classical and regional languages.
- Encourages digitisation, translation, and scholarly access to rare manuscripts.
- Supports intergenerational transmission of knowledge and cultural continuity.
- Aligns with broader cultural preservation and knowledge-sharing efforts.

### Conclusion

Granth Kutir plays a vital role in conserving India's literary legacy, ensuring that traditional knowledge systems remain accessible, relevant, and protected for future generations.

## Lambadi Tribe



Figure 63: Lambadi Tribe | Source: Chai Bisket

**Context:** The Lambadi (also known as Banjara) tribe has been in focus due to renewed discussions on tribal cultural preservation, language recognition, and inclusion in development policies. The community represents one of India's largest nomadic-origin tribal groups with a rich cultural legacy.

### Key Aspects

- **Origin and Identity:**
  - Traditionally nomadic traders and transporters during medieval times.
  - Known as **banjaras** in north India and *Lambadis* in parts of south India.
- **Geographical distribution:** Spread across Telangana, Andhra Pradesh, Karnataka, Maharashtra, Rajasthan, and Madhya Pradesh.

- **Language:** Speak *gor boli* (also called Lambadi), with influences from Rajasthani and Indo-Aryan languages.
- **Cultural Practices:**
  - Distinctive attire, especially colourful skirts, mirror work, silver jewellery, and elaborate embroidery.
  - Folk dances such as the **lambadi dance** are performed during festivals and social occasions.
  - Strong oral traditions, including folk songs and storytelling.
- **Social Structure:**
  - Organised into clans (**naiks**) with customary councils for dispute resolution.
  - Community life emphasises collective responsibility and honour.
- **Current Challenges:**
  - Erosion of traditional livelihoods.
  - Language decline among younger generations.
  - Need for better access to education, healthcare, and livelihood opportunities.

### Conclusion

The Lambadi tribe embodies India's cultural diversity and nomadic heritage. Preserving its language, art forms, and social institutions while ensuring socio-economic inclusion remains a key governance challenge.

## Twin Cities Partnership

**Context:** Madurai and Camberley entered into a Twin Cities partnership to promote cultural exchange, heritage conservation, and people-to-people ties, reflecting the growing role of cities in cultural diplomacy.

### Key Aspects

- **Purpose of the Partnership:**
  - Strengthen cultural and heritage cooperation.
  - Promote tourism, arts, and historical awareness.
  - Foster educational and community-level exchanges.
- **Cultural and Heritage Linkages:**
  - Madurai is one of India's oldest living cities, known for the **Meenakshi Amman Temple** and Tamil literary traditions.
  - Camberley represents British urban heritage with community-based cultural institutions.
- **Areas of Cooperation:**
  - Exchange programmes for artists, students, and cultural practitioners.
  - Joint heritage exhibitions and cultural festivals.

- Collaboration in museum practices, archives, and storytelling initiatives.

- **Soft Power and Urban Diplomacy:**

- Strengthens India–UK people-to-people relations.
- Highlights the role of cities as actors in international cultural engagement.
- Complements national-level diplomatic efforts through grassroots connections.

### Conclusion

The Madurai–Camberley Twin Cities partnership demonstrates how cultural diplomacy at the city level can preserve heritage, promote mutual understanding, and build lasting international relationships beyond formal state diplomacy.

## Ol Chiki Script

**Context:** The centenary celebrations of the Ol Chiki script were observed to mark **100 years since its creation**, highlighting efforts to preserve and promote the Santhali language, one of India's major tribal languages listed in the Eighth Schedule of the Constitution.



Figure 64: Ol Chiki Script | Source: Adivasi Lives Matter

### Key Aspects

- Ol Chiki script was devised in **1925** by **Pandit Raghunath Murmu**, a Santhali scholar and reformer.
- created to provide the Santhali language with its own indigenous writing system, distinct from Bengali, Odia, or Devanagari scripts.
- Consists of 30 letters, designed to reflect natural sounds and objects.
- Widely used across Santhali-speaking regions in Jharkhand, Odisha, West Bengal, Assam, and Bihar.
- **Plays a crucial role in:**
  - Preservation of tribal identity and cultural autonomy.

- Promotion of education and literacy among Santhal communities.
- Documentation of oral traditions, folklore, and indigenous knowledge.

### Conclusion

The centenary of the Ol Chiki script underscores the importance of linguistic diversity and indigenous knowledge systems, reinforcing constitutional values of cultural preservation and inclusion.

## Phulkari



Figure 65: Phulkari

**Context:** Phulkari, a traditional embroidery art from Punjab, has been in the news due to renewed efforts for heritage conservation, GI protection, and women-led livelihoods under cultural revival initiatives.

### Key Aspects

- Literally means “flower work”, characterised by vibrant floral and geometric patterns.
- Traditionally embroidered by women on khaddar (handspun cotton) fabric.
- Uses silk floss thread (*pat*) worked from the reverse side with long darn stitches.
- Motifs reflect everyday life, nature, folklore, and regional symbolism.
- **Cultural significance:**
  - Integral to Punjabi life-cycle rituals, especially weddings.
  - Symbol of community bonding, patience, and creativity.
- **Contemporary relevance:**
  - Revival through fashion, handicraft markets, and self-help groups.
  - Provides livelihood opportunities for rural women.

- Recognised with geographical indication (GI) tag for Punjab phulkari.

### Conclusion

Phulkari represents India's rich textile heritage, blending artistic expression with women's economic empowerment, and highlights the need to sustain traditional crafts in a globalised economy.

## Kushan Coins in Takshashila



Figure 66: Kushana Coins

**Context:** Archaeologists reported the discovery of rare Kushan-era coins and decorative stone objects at Takshashila, a UNESCO World Heritage Site, drawing attention to its rich historical and archaeological significance.

### Key Aspects

- Coins date back to the Kushan period (1st–3rd century CE)
- Associated with rulers such as Kanishka and his successors, reflecting political and economic activity.
- Findings highlight Takshashila's role as a major centre of trade, learning, and urban culture.
- Decorative stones indicate advanced craftsmanship and artistic traditions.
- Reinforces Takshashila's importance in understanding Indo-Central Asian interactions.

### Conclusion

The discovery of Kushan coins at Takshashila deepens historical understanding of ancient trade networks and cultural exchange, reaffirming the site's global archaeological and civilisational value.

## Program for Tribal Healers

**Context:** The Program for Tribal Healers has gained attention as part of efforts to formally recognise and integrate tribal

healers into India's public health ecosystem, especially in remote and forested regions where access to formal healthcare remains limited.

### Key Aspects

- Recognises the role of **tribal healers** as first points of contact for healthcare in tribal communities.
- Seeks to document and validate **indigenous medical knowledge**, including herbal remedies and traditional healing practices.
- Promotes collaboration between tribal healers and the **formal health system** for early detection, referral, and awareness.
- Enhances trust and cultural sensitivity in healthcare delivery.
- Supports preservation of **traditional knowledge systems** while ensuring safety and ethical standards.
- Aligns with community-based healthcare and inclusive public health approaches.

### Conclusion

The program bridges traditional wisdom and modern healthcare, strengthening last-mile health delivery while respecting cultural identity and community trust.

## Spice Routes Conference: Kochi

**Context:** The Spice Routes Conference was held in Kochi as an international initiative to revive awareness of ancient maritime trade networks and promote heritage tourism and cultural diplomacy.

### Key Aspects

- Focused on the historical **spice trade routes** that connected India with West Asia, Africa, and Europe.
- Highlighted Kochi's role as a historic hub in global maritime commerce.
- Brought together historians, archaeologists, tourism experts, and policymakers.
- Aimed to strengthen **heritage tourism**, museum networks, and cultural exchanges.
- Promoted collaboration between countries linked through historical spice routes.
- Supported India's soft power by showcasing shared civilisational links.



# ETHICAL LENS

## Lateral Entry 2.0

**Context:** Lateral Entry 2.0 has intensified the debate over whether private-sector expertise enhances administrative efficiency or undermines the constitutional promise of social representation.

### The Efficiency-Equity Dilemma

- **Competency Gap:** Inducting experts addresses "domain deficits" in specialized sectors like Cyber Security and Green Energy, which a generalist cadre may lack.
- **Representative Character:** Critics argue that bypassing traditional recruitment—which adheres to reservation policies—dilutes the "Representative Character" of the civil services, potentially excluding marginalized voices from the policy-making core.

### Ethical Dimensions of Merit and Justice

- **Merit vs. Inclusivity:** The ethical conflict pits "Technical Meritocracy" (choosing the best-fit for a specific task) against "Distributive Justice" (ensuring the bureaucracy mirrors the nation's diversity).
- **Probity and Conflict of Interest:** The "Revolving Door" phenomenon—where experts move between private firms and government—poses a risk to Administrative Neutrality, requiring strict codes of conduct to prevent corporate capture of policy.

### Impact on Institutional Integrity

- **Moral Hazard:** Short-term contracts may shift the administrative culture from a long-term "Welfare Orientation" to a short-term, "Outcome-Driven" corporate approach.
- **Public Trust:** To maintain Institutional Trust, lateral recruitment must be seen as an auxiliary tool rather than a replacement for the permanent civil service, ensuring it complements the spirit of Social Justice.

### Conclusion

Thus, lateral entry must balance professional efficiency with the mandate of inclusion, ensuring that specialized expertise does not erode the representative soul of the Indian bureaucracy.

## DBT 3.0

**Context:** As India transitions toward "DBT 3.0," utilizing AI to suo motu identify beneficiaries, the shift from human-led verification to algorithmic decision-making has raised urgent concerns regarding the **"Black Box"** nature of AI and its potential for systemic digital exclusion.

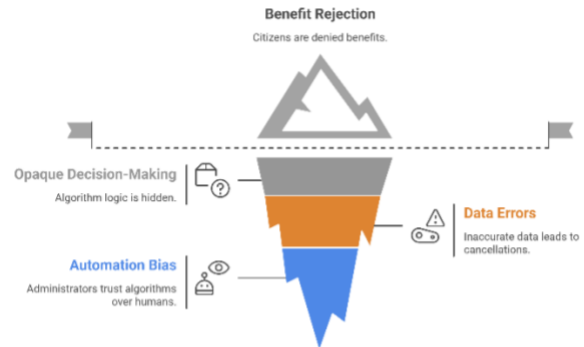


Figure 67: Digital Exclusion

### Ethical Dimensions: Fairness, Privacy, and Justice

- **Violation of Distributive Justice:** If an AI model is trained on biased or incomplete historical data, it may systematically exclude specific castes, religions, or linguistic groups, turning a tool for inclusion into a mechanism for "Structural Discrimination."
- **The Rights-based Conflict:** The use of predictive analytics for welfare tests the ethical boundary between State Efficiency and the Right to Livelihood. Unlike a private service, being "wrongfully excluded" from a food security scheme can have life-threatening consequences, as seen in the case of Santoshi Kumari (Jharkhand).
- **Privacy vs. Surveillance:** Aggregating personal data from various departments to profile citizens raises concerns about "Function Creep," where data collected for welfare is used for intrusive state surveillance without explicit consent or legislative guardrails.

### Building a Framework for Accountability

- **Legislative Safeguards:** The proposed AI Ethics and Accountability Bill, 2025 marks a shift toward enforceable accountability, suggesting penalties for systematic errors and bias in high-risk sectors like welfare.
- **Human-in-the-Loop (HITL):** Ethically, AI should only serve as a "recommendation engine." The final decision to exclude a beneficiary must remain with a human official who is empowered to override the algorithm based on ground realities.



- **Algorithmic Audits and Redressal:** Transparency requires regular third-party audits of source codes and the establishment of **"AI Grievance Cells."** Citizens must have a "Right to Explanation" to understand and appeal automated decisions in their local language.

### Conclusion

While AI-driven DBT promises to eliminate leakages, its success depends on moving from "Techno-Solutionism" to a human-centric model that prioritizes Algorithmic Fairness over mere administrative speed

## Compassionate Policing

**Context** In an era of social media-driven volatility and rapid urbanization, the traditional "command and control" style of law enforcement is facing a crisis of legitimacy. Integrating Emotional Intelligence (EI) into policing is no longer an elective skill but a core necessity to bridge the widening trust deficit between the state and the citizenry.

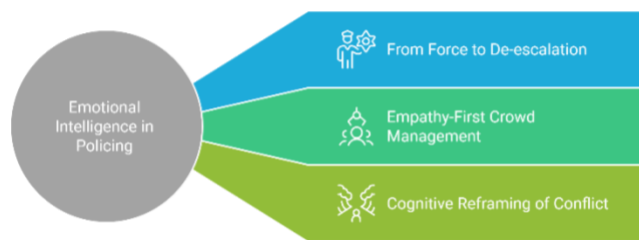


Figure 68: Multifaceted Impact of Emotional Intelligence in policing

### Ethical Dimensions: Power, Restraint, and Public Duty

- **The Ethics of Power and Restraint:** The core ethical challenge in policing is the disproportionate power held by the officer. EI acts as an internal check, ensuring that the use of authority is governed by **Self-Awareness** and the moral principle of "minimum necessary force."
- **Humanizing the "Uniform":** Compassionate policing challenges the "warrior" mindset, replacing it with a **"Guardian"** philosophy. This shift is essential for **Procedural Justice**, where the public's perception of fairness is based on how they are treated, not just the legal outcome.
- **Vulnerability and Moral Courage:** Officers often face "compassion fatigue." Promoting EI within the force encourages officers to seek mental health support, acknowledging that an emotionally exhausted officer is more likely to commit ethical lapses.

### Institutionalizing Compassion in Law Enforcement

- **Curriculum Reform in Police Academies:** Training must transition from purely legal and tactical drills to include **Scenario-based EI training**, where officers are graded on their ability to de-escalate tension through communication.
- **Community Policing 2.0:** Leveraging social media not just for surveillance but for **Active Listening**. By understanding local sentiment through digital empathy, police can preemptively address triggers of public unrest before they hit the streets.
- **The Goleman Framework in Performance Appraisals:** Promotion criteria should reward "Peace-making" and community trust-building scores as much as "Crime-solving" rates to incentivize a culture of **Administrative Integrity**.

### Conclusion

Compassionate policing is not a sign of administrative weakness but a strategic necessity. By placing **Emotional Intelligence** at the heart of law enforcement, the state can transform from a source of fear into a symbol of security and justice.

## Ethical Lobbying

**Context:** As India targets a \$30 trillion economy by 2047, the intersection of private corporate interests and public policy has intensified. This necessitates a clear ethical distinction between "Informed Advocacy" (Ethical Lobbying) and "Regulatory Capture" (Undue Influence).

### The Moral Boundary: Advocacy vs. Capture

- **Informed Policy-Making:** Ethical lobbying serves as a bridge, providing policymakers with technical data and industry insights that lead to practical and effective legislation.
- **Regulatory Capture:** This occurs when a regulatory agency, created to act in the public interest, instead advances the commercial or political concerns of special interest groups that dominate the industry.
- **The Ethical Cost:** When policy is "captured," it leads to Inequity in Influence, where large industrial houses gain an unfair advantage over smaller competitors and the general public.

### Ethical Dimensions: Integrity and the Common Good

- **Public Interest vs. Private Greed:** The core ethical challenge is the "Utilitarian Conflict"—ensuring that a

policy serves the "greatest good for the greatest number" rather than the "maximum profit for the few."

- **Transparency and Disclosure:** Probity in governance requires a "Decision-making Footprint," where all stakeholders involved in shaping a law are publicly disclosed to prevent covert influence.
- **The Revolving Door:** The movement of high-level officials between government and corporate boards raises risks of Conflict of Interest and the misuse of "confidential information" for private gain.

### Frameworks for Ethical Engagement

- **OECD Principles:** International standards advocate for a Level Playing Field, where all stakeholders, including NGOs and civil society, have equitable access to participate in policy development.
- **Institutionalized Consultations:** Moving from "handshakes to hashtags," digital transparency and mandatory Lobbying Registries can help citizens track who is influencing their government.
- **Corporate Stewardship:** Ethical companies must align their lobbying activities with their stated Sustainability Goals (ESG), ensuring they do not advocate against the public interest (e.g., climate protection) behind closed doors.

### Conclusion

Ethical lobbying is a legitimate pillar of a functioning democracy, provided it is anchored in Transparency and Accountability. Striking this balance is essential to maintain Institutional Trust in the governance of a modern economy.

## Non-Evaluative Curriculum

**Context:** Kerala introduced a non-evaluative curriculum framework to integrate value education into schooling, shifting the focus from marks-centric assessment to holistic ethical, emotional, and social development of students.

### Ethical Dimensions at the Individual Level

#### Ethics of Education and Character Formation

- Prioritises character building over rote learning and unhealthy competition
- Promotes core human values such as empathy, honesty, cooperation, respect, and responsibility
- Treats education as a means of moral development, not merely economic advancement



Figure 69: Benefits of Emotional Intelligence and Citizenship

### Ethical Dimensions at the Societal and Governance Level

#### Justice, Equity, and Inclusion

- Avoids labelling, ranking, and marginalisation of students based on academic scores.
- Supports substantive equality by recognising diverse learning abilities and backgrounds.
- Promotes inclusive education for students from different socio-economic and cultural contexts.

#### Ethics of Public Policy and Administration

- Reflects a child-centric and humane governance approach.
- Shifts state responsibility from performance measurement to well-being and ethical growth.
- Aligns with GS-IV principles of empathy, compassion, and public interest in policymaking.

#### Long-Term Social Impact

- Contributes to the creation of ethically conscious citizens rather than exam-oriented individuals.
- Strengthens social trust, cooperation, and democratic culture.
- Supports nation-building through value-driven human capital development.

### Conclusion

Kerala's non-evaluative curriculum represents an ethical reorientation of education policy, emphasising human values, emotional intelligence, and inclusive justice.

## Responsible Nations Index 2026

**Context:** India secured the **16th rank** in the Responsible Nations Index 2026, which assesses countries on parameters related to responsible governance, ethical state behaviour, and global responsibility.

### Ethical Dimensions

- **Ethics in Governance:**
  - Evaluates transparency, accountability, and rule-based administration.
  - Reflects ethical decision-making in public policy and institutions.
- **Global Responsibility:**
  - Measures contribution to global public goods such as climate action, peacekeeping, and humanitarian support.
  - Highlights moral obligations of states beyond national self-interest.
- **Sustainability and Intergenerational Ethics:**
  - Considers environmental responsibility and long-term societal welfare.
  - Links ethical governance with sustainable development.

- **Integrity and Public Trust:**

- Ranking underscores the role of ethical conduct in building domestic and international trust.
- Indicates areas where governance ethics require further strengthening.

### Conclusion

India's ranking in the Responsible Nations Index 2026 reinforces the GS-IV principle that ethical governance, responsibility, and integrity are as crucial as economic performance in shaping a nation's global standing.

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## PLACES IN NEWS

### Shaksgam Valley Dispute



Figure 69: Shaksgam Valley Map

**Context:** Recent satellite imagery has revealed significant infrastructure development by China in the Shaksgam Valley, a strategically sensitive region that is part of Indian territory but currently under illegal Chinese occupation.

#### Key Information

- **Geopolitical Status:** The Shaksgam Valley (over 5,000 sq km) is part of the Trans-Karakoram Tract; it was illegally ceded by Pakistan to China under the 1963 Sino-Pakistan Boundary Agreement, a pact India does not recognize.
- **Strategic Significance:** Located north of the Karakoram Range and near the Siachen Glacier, China's construction of all-weather roads in this valley poses a threat to India's northern defences by creating a potential pincer movement against Indian positions.

### Popocatépetl Volcano

**Context:** The Popocatépetl volcano, located in central Mexico, has recently shown signs of increased activity, with multiple eruptions of ash and gas prompting local authorities to issue safety alerts for nearby residents.

#### Key Information

- **Geographical and Geological Features:** Standing at 5,426 meters, it is Mexico's second-highest peak and one of the world's most monitored volcanoes due to its proximity to the densely populated Mexico City and Puebla regions.

- **Tectonic Setting:** It is a stratovolcano (composite volcano) situated within the Trans-Mexican Volcanic Belt, formed by the subduction of the Cocos plate beneath the North American plate.



Figure 70: Popocatépetl Volcano

### Muna Island

**Context:** Muna Island has gained international attention in January 2026 due to its rich biodiversity and the discovery of unique ecological features that highlight the environmental importance of the Southeast Asian archipelago.

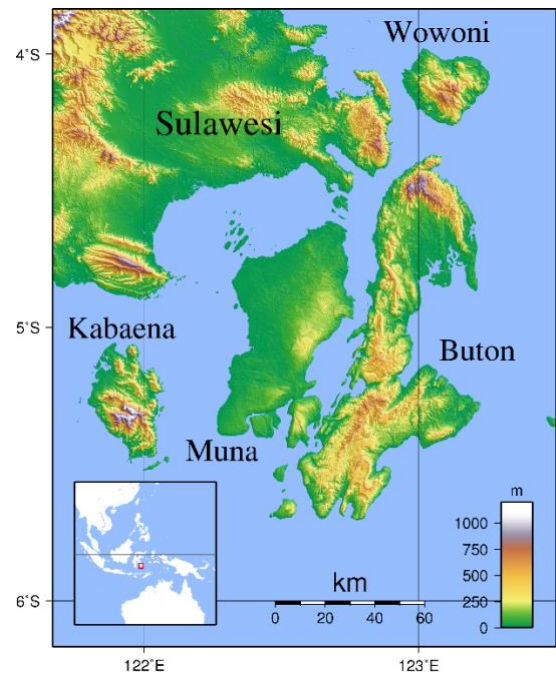


Figure 71: Muna Island | Source: Wikipedia

#### Key Information

- **Geographical Location:** Situated in the Southeast Sulawesi province of Indonesia, it is part of the Wallacea region, a zone known for high levels of species endemism.



due to its historical separation from both the Asian and Australian continental shelves.

- **Ecological and Cultural Value:** The island is characterized by its extensive karst landscapes and ancient cave systems, which contain prehistoric rock art and provide a critical habitat for rare species like the Anoa (dwarf buffalo) and various endemic megapode birds.

## Myanmar

**Context:** Myanmar remained a focal point of regional security discussions due to the escalating internal conflict between the military junta and ethnic armed organizations near international borders.



Figure 72: Myanmar and India border [Source: IE]

### Key Information

- **Geographical Significance:** Myanmar serves as a critical bridge between South and Southeast Asia, sharing land borders with India, China, Bangladesh, Laos, and Thailand, and providing access to the Bay of Bengal and the Andaman Sea.
- **Strategic Infrastructure:** The region is central to India's Act East Policy, hosting major connectivity projects like the Kaladan Multi-Modal Transit Transport Project and the India-Myanmar-Thailand Trilateral Highway, which are vital for Northeast India's development.

## Pituffik Space Base

**Context:** Emerged As a Major Geopolitical Flashpoint in January 2026 Due To Renewed U.S. Interest



Figure 73: Pituffik Space Base

### Key Highlights

- **Strategic Security Role:** Hosts Pituffik Space Base (Formerly Thule Air Base), A Key U.S. Installation For Ballistic Missile Early Warning and Space Surveillance
- **Naval Importance:** Anchors The GIUK Gap (Greenland-Iceland-UK), A Critical Chokepoint For Monitoring Arctic-Atlantic Naval Movements
- **Resource Significance:** Possesses World's Largest Untapped Rare Earth Element Reserves, Including Kvanefjeld Deposit
- **Trade And Connectivity:** Located Along Emerging Arctic Shipping Routes Like the Transpolar Sea Route Due To Melting Polar Ice
- **Geopolitical Status:** Transitioning From Remote Ice-Covered Region to Strategic Arctic Crossroads

## Caracas (Venezuela)

**Context:** The capital city was the site of Operation Absolute Resolve on January 3, 2026, a U.S. military raid.

- **Political Shift:** The operation led to the capture of President Nicolás Maduro, followed by the swearing-in of Delcy Rodríguez as interim president.
- **Economic Impact:** The change in leadership has prompted a major move toward reopening Venezuela's vast Orinoco Belt oil reserves to international investment.





Figure 74: Caracas

## Tawang & Eastern Sector

**Context:** In late January 2026, the Indian Army and ITBP conducted **Exercise Agni Pariksha** to test joint combat readiness in high-altitude terrain.

- **Geographical Context:** This region is characterized by the **McMahon Line**, which serves as the effective boundary between India and China; it is a high-altitude zone featuring rugged mountainous terrain.
- **Strategic Importance:** The exercise focused on "integrated battle groups" to ensure rapid mobilization near the Line of Actual Control (LAC), countering increasing Chinese infrastructure on the opposite side.



Figure 75: Tawang region Map| Source: BBC

## Vadodara

**Context:** The city is in focus as the primary hub for India's defence indigenization, with the first "Made in India" C-295 aircraft scheduled for rollout in 2026.



Figure 76: Vadodara | Source: Wikipedia

- **Industrial Role:** It hosts the **Airbus-Tata Final Assembly Line (FAL)**, the first private-sector aircraft assembly plant in India, marking a shift from reliance on public sector undertakings like HAL.
- **Strategic Partnership:** This facility is a cornerstone of the India-Spain strategic defence cooperation, aimed at replacing the Indian Air Force's aging Avro-748 transport fleet.

## Maputo

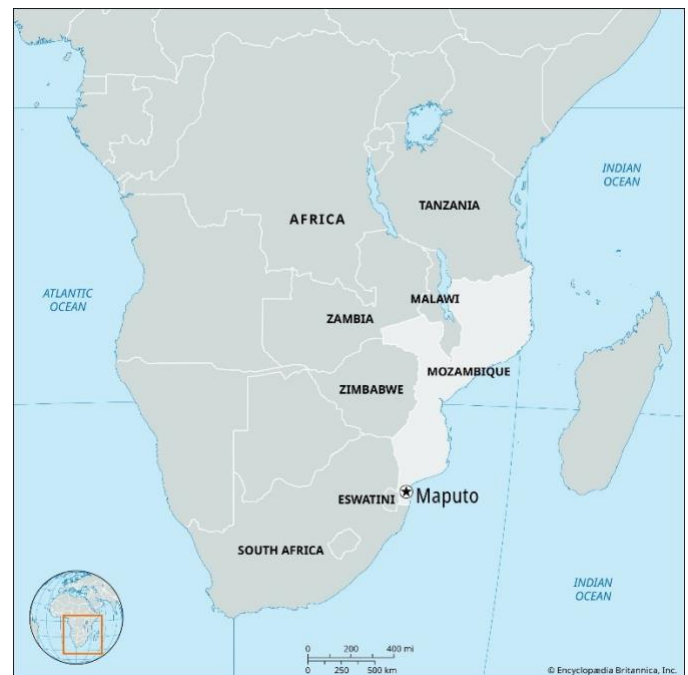


Figure 77: Maputo | Source: Britannica

**Context:** In January 2026, the Indian Navy's First Training Squadron (ITS), including INS Tir and INS Sujata, entered Maputo port as part of a long-range training deployment.

- **Maritime Cooperation:** Maputo is a key port on the Indian Ocean, and this visit underscores India's "SAGAR" (Security and Growth for All in the Region) initiative.
- **Regional Security:** The deployment focused on joint maritime surveillance and capacity building with the Mozambican Navy to tackle piracy and illicit trade in the Mozambique Channel.

## Ergneti



Figure 78: Ergneti is located at S. Ossetia border with Russia

**Context:** The 130th Incident Prevention and Response Mechanism (IPRM) meeting took place here on January 29, 2026, to discuss security along the Administrative Boundary Line (ABL).

- **Geopolitical Tension:** Ergneti is a critical village located on the boundary between Georgia and the Russian-occupied territory of South Ossetia.
- **Diplomatic Role:** These meetings, co-facilitated by the OSCE and the European Union Monitoring Mission (EUMM), are the only platform for direct dialogue to manage "borderization" issues and humanitarian crises in the region.

## Idukki

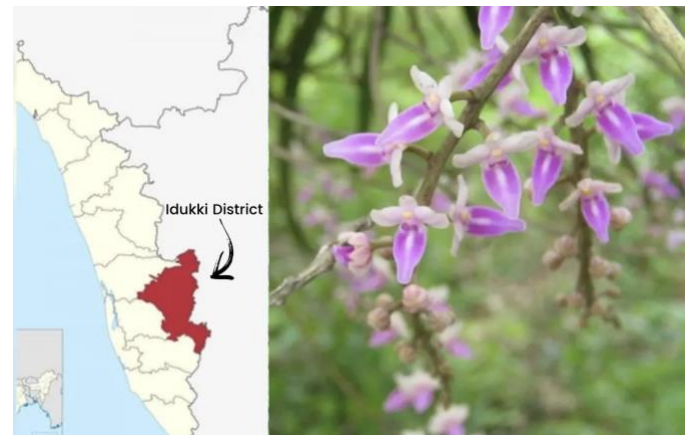


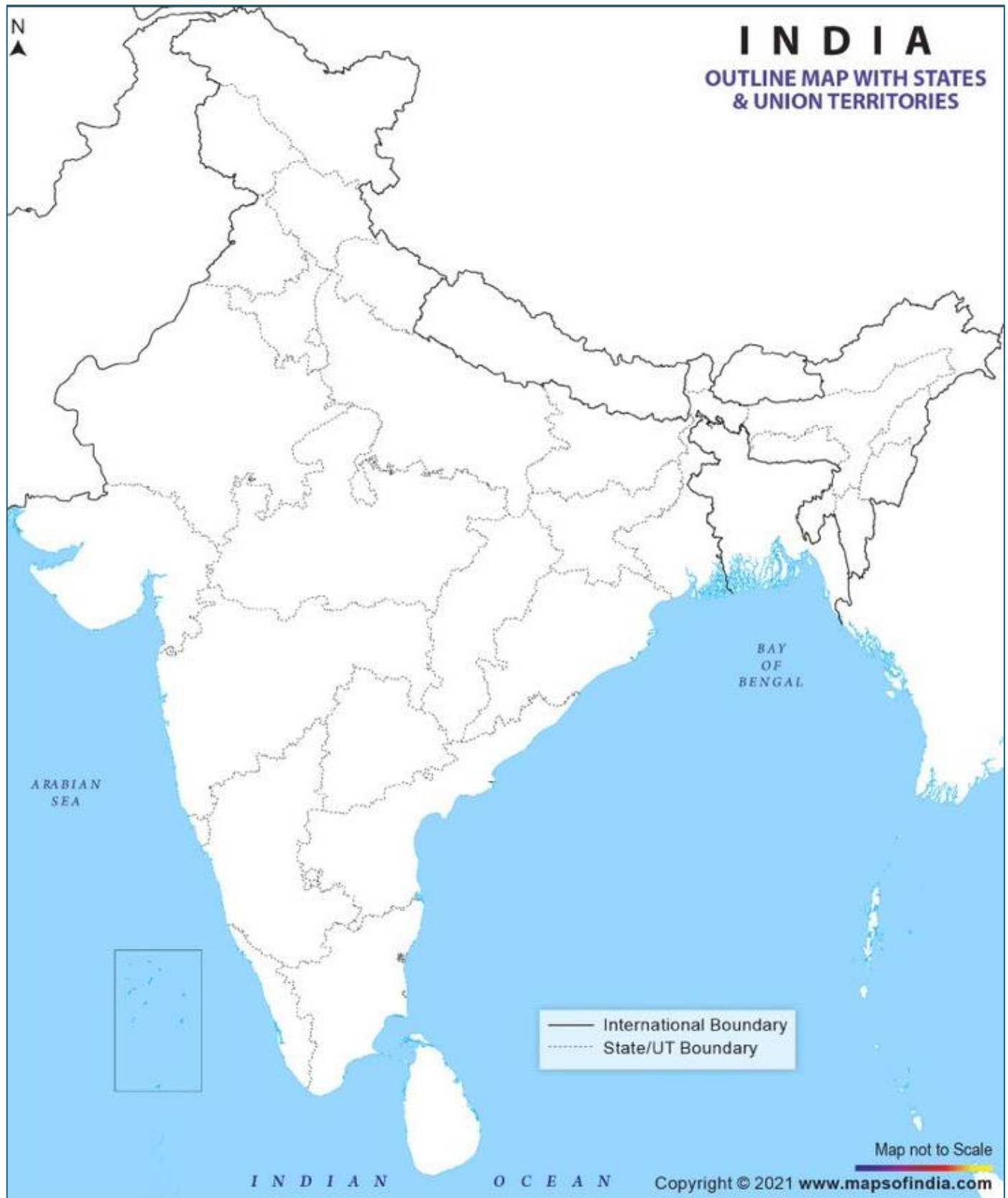
Figure 79: Idukki Map, New Orchid Species

**Context:** A new orchid species, *Diplocentrum papillosum*, was discovered in the high-altitude grasslands of the Marayoor region in January 2026.

- **Ecological Significance:** Idukki is a biodiversity hotspot in the **Western Ghats**, home to the Eravikulam National Park and the Periyar Tiger Reserve.
- **Conservation Value:** The discovery highlights the unique micro-climates of the Shola-grassland ecosystems, which are increasingly threatened by invasive species and climate-induced shifts.

## Exercise Maps

Mark the places mentioned in the previous section, on the map given below.





Mark the places mentioned in the previous section, on the map given below.



### EUROPE - POLITICAL

### यूरोप- राजनैतिक



Mark the places mentioned in the previous section, on the map given below

# PERSONALITIES IN NEWS

## Rani Velu Nachiyar



**Context:** On January 3, 2026, the Prime Minister paid tribute to Rani Velu Nachiyar on her 296th birth anniversary, honoring her as the first Indian queen to wage an organized armed struggle against the British East India Company.

### Key Contributions

- **Military Innovation:** She institutionalized women's participation in warfare by establishing the Udaiyaal battalion, one of the world's earliest all-women military units, and is credited with the first recorded use of a human bomb in Indian history through her commander, Kuyili.
- **Strategic Alliances:** During her eight-year exile, she demonstrated exceptional diplomatic acumen by forging a powerful alliance with Hyder Ali of Mysore, which provided the military support necessary to recapture her kingdom of Sivaganga in 1780.

### Conclusion

Rani Velu Nachiyar's legacy as "Veeramangai" (Brave Woman) serves as a foundational symbol of indigenous resistance and gender-inclusive leadership in India's anti-colonial history.

## Tantya Mama



**Context:** In January 2026, the Madhya Pradesh government announced the installation of a new metal statue of Tantya Mama, honoring his legacy as a symbol of tribal resistance against colonial rule.

### Historical Significance

- **The "Indian Robin Hood":** Tantya Bhil (Tantya Mama) was a revolutionary from the **Bhil community** who led an armed struggle against British exploitation and the oppressive landlord system between **1878 and 1889**, famously redistributing seized wealth to the needy.
- **The Bhil Resistance:** As India's largest tribal group, the Bhils have a history of organized defiance, including the **Bhagat Movement** led by Govind Guru and the **Eki**

**Andolan** under Motilal Tejawat, which protested high land revenue and forced labour.

### Cultural and Legal Context

- **Identity and Art:** The Bhil community is renowned for its Pithora paintings and vibrant festivals like Bhagoria; historically, they were unjustly labelled under the Criminal Tribes Act of 1871 by the British to suppress their nomadic and warrior lifestyle.
- **Administrative Presence:** Predominantly inhabiting the "Bhil Belt" across Madhya Pradesh, Gujarat, and Rajasthan, they represent approximately 38% of India's total Scheduled Tribe population as per traditional demographic records.

**Conclusion:** The commemoration of Tantya Mama underscores the growing recognition of tribal leaders who transformed local forest-based resistance into a broader challenge against British imperial authority.

## Lala Lajpat Rai



**Context:** On January 28, 2026, the nation commemorated the 161st birth anniversary of Lala Lajpat Rai, a pivotal leader of the Indian freedom struggle known as the "Punjab Kesari" (Lion of Punjab).

### Contributions to the Freedom Struggle

- **Lal-Bal-Pal Trio:** He was a key member of the extremist wing of the Indian National Congress, advocating for Swadeshi and the boycott of British goods alongside Bal Gangadhar Tilak and Bipin Chandra Pal.
- **Resistance to British Policy:** He famously led a non-violent protest against the Simon Commission in 1928, where he sustained fatal injuries from a police lathi charge, leading to his martyrdom.

### Social and Institutional Legacy

- **Education and Banking:** Beyond politics, he was deeply involved in the Arya Samaj movement and co-founded the Punjab National Bank (1894) and the Lakshmi Insurance Company to promote economic self-reliance.
- **Global Outreach:** During his exile in the United States, he founded the Indian Home Rule League of America (1917) in New York to mobilize international support for India's independence.

**Conclusion:** The observance highlights his dual legacy as a fiery nationalist and a social reformer who integrated political



agitation with institutional building to strengthen India's foundation.

## Subhash Chandra Bose



**Context:** The nation celebrated Parakram Diwas on January 23, 2026, marking the 129th birth anniversary of Netaji Subhash Chandra Bose. This day honors his immense contribution to India's freedom struggle and his indomitable spirit.

### Key Contributions

- **Political Leadership:** He was elected as the President of the Indian National Congress twice, at the Haripura Session (1938) and the Tripuri Session (1939). After resigning from Congress due to ideological differences with Mahatma Gandhi, he formed the Forward Bloc to unite radical elements.
- **Military Struggle:** Netaji led the Indian National Army (INA) or Azad Hind Fauj, which played a critical role in challenging British rule from outside India's borders. He raised the 'Free Indian Legion' in Germany and gave the famous call, "Give me blood, and I will give you freedom."

### Ideological Foundations

- **Influence:** He was deeply inspired by the teachings of Swami Vivekananda and Ramakrishna Paramhansa, blending spiritual values with radical nationalism.
- **Planning and Governance:** Bose advocated for a planned economy and established the National Planning Committee in 1938, which laid the conceptual groundwork for post-independence development.

### Conclusion

Netaji's legacy remains a cornerstone of Indian nationalism, representing a unique blend of socialist vision, military valor, and unwavering commitment to total independence.

## Rash Behari Bose



**Context:** The nation recently commemorated the birth anniversary of Rash Behari Bose, a master of revolutionary strategy and a key architect of the overseas movement for India's independence.

### Key Information

- **Revolutionary Activities:** He played a pivotal role in the Delhi Conspiracy Case (1912), where a bomb was thrown at

Viceroy Lord Hardinge, and was a primary organizer of the **Ghadar Mutiny of 1915**.

- **Role in Japan:** After fleeing to Japan in 1915, he founded the Indian Independence League and was instrumental in persuading the Japanese government to support the Indian cause.
- **Handover to Netaji:** He laid the groundwork for the Indian National Army (INA) and formally handed over its leadership to Subhash Chandra Bose in 1943, ensuring the movement's continuity.

### Conclusion

Rash Behari Bose remains a symbol of global revolutionary networking, bridging the gap between early militant nationalism and the organized military struggle of the INA.

## Parbati Giri



**Context:** The nation recently observed the birth centenary of Parbati Giri, a legendary freedom fighter from Odisha often referred to as the "Mother Teresa of Western Odisha" for her selfless service.

### Key Contributions

- **Freedom Struggle:** At the young age of 16, she was an active participant in the **Quit India Movement (1942)**, leading anti-British demonstrations that resulted in her imprisonment for two years.
- **Social Reconstruction:** Post-independence, she dedicated her life to the welfare of the marginalized, establishing the **Kasturba Gandhi Matruniketan** to provide shelter, healthcare, and education to orphans and rural women.

### Conclusion

Parbati Giri's life exemplifies the evolution from a fierce nationalist to a dedicated social reformer, securing her place as a vital figure in India's regional and social history.

## Savitribai Phule



**Context:** On January 3, 2026, the nation paid tribute to Savitribai Phule on her 195th birth anniversary, celebrating her legacy as India's first female teacher and a champion of intersectional social reform.

### Key Contributions

- **Educational Revolution:** In 1848, she co-founded India's first school for girls at **Bhide Wada, Pune**, alongside her husband Jyotirao Phule, specifically

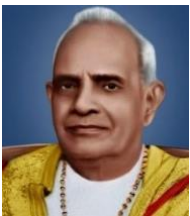
targeting the education of women and lower-caste communities.

- **Social Reform and Advocacy:** She played a lead role in the **Satyashodhak Samaj** (Truth Seekers' Society) and established the *Balhatya Pratibandhak Griha* to prevent infanticide and provide refuge to pregnant widows facing social stigma.

### Conclusion

Savitribai Phule's life remains a foundational force in Indian feminism, representing the historic shift toward universal education and the dismantling of caste-based social barriers.

## Mannathu Padmanabhan



**Context:** On January 2, 2026, the nation commemorated the 148th birth anniversary of Mannathu Padmanabhan, a pioneering social reformer from Kerala and the founder of the Nair Service Society (NSS).

### Key Contributions

- **Social Reform and NSS:** He founded the Nair Service Society (NSS) in 1914 to uplift the Nair community through education and modern institutional building, while simultaneously fighting against the evils of untouchability and rigid caste hierarchies.
- **Nationalist and Temple Entry Movements:** An active participant in the Vaikom Satyagraha (1924) and the Guruvayur Satyagraha (1931), he championed the right of lower castes to enter temples, significantly influencing Kerala's social landscape.

### Conclusion

Mannathu Padmanabhan is remembered as a visionary leader who successfully blended community development with broader national goals of social equality and justice.

## D. B. Venkatesh Varma



**Context:** D. B. Venkatesh Varma was nominated to chair the UN Advisory Board on Disarmament Matters, highlighting India's growing role in global disarmament and arms control diplomacy.

### Significance

- The advisory board provides expert guidance to the UN secretary-general on disarmament and international security.

- Focuses on nuclear disarmament, non-proliferation, conventional weapons, and emerging military technologies.
- Chairing the board places India at the centre of norm-setting and confidence-building discussions.
- Reinforces India's image as a responsible nuclear power committed to multilateralism and strategic stability.

### Conclusion

The nomination underscores India's diplomatic credibility and constructive engagement in shaping global disarmament discourse.

## Graca Machel



**Context:** Graça Machel was awarded the **Indira Gandhi Prize for Peace, Disarmament and Development** in recognition of her lifelong contribution to peace, human rights, and social justice.

### Significance

- Globally recognised for advocacy on women's rights, children affected by conflict, and humanitarian causes.
- **Former first lady of Mozambique** and a prominent international civil society leader.
- The award honours individuals who promote peaceful coexistence, development, and disarmament.
- Reflects India's commitment to Gandhian and Nehruvian ideals of peace and global cooperation.

### Conclusion

Honouring Graça Machel reinforces the universal values of peace, compassion, and human dignity that the Indira Gandhi Prize seeks to uphold.

## Justice Revati Mohite Dere



**Context:** Justice Revati Mohite Dere was appointed as the **first woman Chief Justice of the Bombay High Court**, marking a historic milestone in India's judicial history.

### Significance

- First woman to head one of India's oldest and most prestigious high courts.
- Known for landmark judgments on constitutional rights, criminal justice, and civil liberties.

- Her appointment strengthens gender representation and inclusivity in the higher judiciary.
- Reflects gradual progress towards breaking the glass ceiling in judicial leadership.

#### Conclusion

Justice Revati Mohite Dere's appointment represents a significant step towards gender equity in the judiciary and reinforces the principle of equal opportunity in constitutional institutions.

### Kaamya Karthikeyan



**Context:** Kaamya Karthikeyan became the youngest Indian to **ski to the South Pole**, achieving a rare feat in extreme adventure sports.

#### Significance

- Completed the expedition under harsh Antarctic conditions.
- Symbolises youth excellence, resilience, and determination.
- Highlights India's growing presence in global adventure and endurance sports.
- Serves as inspiration for young people, especially girls, to pursue unconventional goals.

#### Conclusion

Kaamya Karthikeyan's achievement showcases human perseverance and youthful courage, reinforcing the values of ambition, discipline, and breaking perceived limits.

### Warren Buffett



**Context:** Warren Buffett **retired as CEO** of Berkshire Hathaway, marking the end of an era in global investing and corporate leadership.

#### Significance

- One of the world's most influential investors, often called the **"Oracle of Omaha."**
- Led Berkshire Hathaway's transformation from a textile firm into a diversified conglomerate.
- Renowned for value investing, long-term thinking, and ethical corporate governance.
- Known for shareholder transparency, disciplined capital allocation, and philanthropy.
- His retirement highlights issues of succession planning and continuity in large corporations.

#### Conclusion

Warren Buffett's retirement signifies a historic transition in global finance, underscoring the lasting impact of principled leadership, long-term vision, and ethical capitalism.

# SPORTS

## Australian Open 2026



**Context:** The Australian Open 2026 drew global attention for historic individual milestones and record-breaking spectator turnout, reaffirming its status as one of the world's premier sporting events.

### Men's Singles Final:

- Carlos Alcaraz defeated Novak Djokovic in a four-set contest (2–6, 6–2, 6–3, 7–5).
- With this victory, Alcaraz won his first Australian Open title.
- At 22 years of age, he became the **youngest male player in history** to complete a Career Grand Slam, having won all four major titles.

**Women's Singles:** Elena Rybakina clinched her maiden Australian Open title, marking a significant milestone in her professional career.

**Tournament Record:** The 2026 edition recorded all-time highest attendance for a Grand Slam, with over 1.3 million spectators, reflecting the growing global popularity of tennis.

### Conclusion

The Australian Open 2026 was notable not only for crowning new champions but also for setting historic benchmarks in tennis achievements and fan engagement, making it a high-value current affairs topic for sports-related prelims and mains preparation.

## Novak Djokovic



**Context:** Novak Djokovic became the first player in tennis history to register **400 Grand Slam match wins**, setting a new benchmark for consistency and longevity at the highest level of the sport.

### Significance

- Achieved across **all four Grand Slam** tournaments.
- Reflects exceptional fitness, adaptability, and mental resilience.
- Surpasses records of previous tennis greats, reinforcing his all-time status.
- Highlights sustained excellence over nearly two decades in elite competition.

### Conclusion

Djokovic's 400 Grand Slam wins underline an unparalleled era of dominance in men's tennis, redefining standards of endurance and peak performance.

## Smriti Mandhana



**Context:** Smriti Mandhana **crossed 10,000 runs** in women's international cricket, marking a major milestone in her career and in Indian women's cricket.

### Significance

- Achieved across ODIs, T20Is, and Tests.
- Reflects consistency at the top level of international cricket.
- One of the fastest Indian women batters to reach the landmark.
- Symbolises the growing depth, professionalism, and visibility of women's cricket in India.

## India vs New Zealand T20I Series

**Context:** India concluded the India vs New Zealand T20I Series with a dominant performance, winning the five-match series 4–1, marking an important milestone in India's T20I preparations.

### Key Highlights

- India sealed the series with a **46-run victory** in the final match held at **Thiruvananthapuram**.
- The series highlighted India's depth in batting and bowling, with effective rotation of players and experimentation with team combinations.
- Young players were given opportunities, reflecting a long-term approach towards building a balanced T20 squad.
- Tactical focus remained on adaptability to different match situations and strengthening death-over strategies.

Notably, this was **India's final official T20 International assignment** before co-hosting the **ICC Men's T20 World Cup** in **February 2026**, along with **Sri Lanka**.

### Conclusion

The 4–1 series win against New Zealand provided India with confidence and strategic clarity, strengthening its readiness to host and compete in the 2026 ICC Men's T20 World Cup.

## Khelo India Winter Games 2026



**Context:** The 6th edition of the Khelo India Winter Games was held in 2026, drawing attention to India's efforts to institutionalise winter sports and expand the national sports

ecosystem in high-altitude regions.

### Key Highlights

- The Games were hosted at two prominent winter sports locations, selected for their natural climatic and geographical suitability:
  - Leh** in **Ladakh**, known for its extreme cold conditions and frozen surfaces
  - Gulmarg** in **Jammu and Kashmir**, one of Asia's premier skiing destinations
- The Games were conducted in a **two-chapter format**, optimising the use of terrain and weather conditions:
  - Ice sports**, including ice hockey and ice skating, were held in **Leh**, where prolonged sub-zero temperatures allow natural ice formation
  - Snow sports**, such as skiing and snowboarding, were organised in **Gulmarg**, which offers deep snow cover and suitable slopes

### The event seeks to:

- Identify and nurture young talent in winter sports from Himalayan states and union territories
- Develop local sports infrastructure and coaching capacity
- Promote sports tourism and regional economic activity
- Integrate remote and border regions into the national sports framework

### Conclusion

The Khelo India Winter Games 2026 reflect a strategic approach to sports development by leveraging India's unique geography, fostering winter sports culture, and strengthening regional inclusion through structured national-level competitions.

## Padma Awards for Sports (2026)

**Context:** The Padma Awards 2026 were announced, recognising outstanding contributions in the field of sports. The awards drew attention for honouring not only celebrated athletes but also coaches and sports ambassadors who have played a crucial role in strengthening India's sporting ecosystem, both nationally and internationally.



Figure 80: Padma Awards

### Key Highlights

- Padma Bhushan:** Conferred upon **Vijay Amritraj** for his distinguished service to tennis, including his role in promoting the sport globally and contributing to its long-term development in India.
- Padma Shri:** Awarded to prominent sportspersons for excellence and leadership in their respective disciplines:
  - Rohit Sharma** (Cricket) for consistent high-level performance and leadership in international cricket.
  - Harmanpreet Kaur** (Cricket) for her transformative contribution to Indian women's cricket.
  - Savita Punia** (Hockey) for her exceptional goalkeeping and leadership in Indian women's hockey.

**Vladimir Mestvirishvili** was posthumously awarded the **Padma Shri**, becoming the **first foreign coach** to receive this honour for his contribution to the development of Indian wrestling.

### Conclusion

The Padma Awards for Sports 2026 underline India's recognition of sustained excellence, leadership, and mentorship in sports, reinforcing the importance of both athletes and coaches in nation-building through sports.



# SCHEMES & INITIATIVES

## Atal Innovation Mission

**Context:** Flagship innovation and entrepreneurship mission, recently in the news due to the launch of AIM 2.0 and extension till 2028.

Ministry	Objectives	Key Features & Components	Recent Updates
NITI Aayog	Foster Innovation and Entrepreneurship Culture	Atal Tinkering Labs, Incubation Centres, New India Challenges, Mentor India, Community Innovation Centres	AIM has established <b>over 10,000 Atal Tinkering Labs</b> , engaging more than 1.1 crore students and <b>72 Atal Incubation Centres incubating over 3,500 startups</b> with 32,000+ jobs created, while plans are underway to set up <b>50,000 additional tinkering labs nationwide</b> to expand innovation and entrepreneurship.

## Atal Pension Yojana

**Context:** Social security pension scheme for unorganized workers, in the news due to rising enrolment and coverage expansion.

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Finance	Provide Social Security to Unorganised Workers	Guaranteed Pension, Government Co-Contribution, Voluntary and Low-Cost Scheme	<b>Atal Pension Yojana enrolments crossed about 8.45 crore subscribers</b> , with nearly <b>48 % women participants</b> , and the scheme's continuation has been approved by the Union Cabinet up to <b>FY 2030-31</b> with extended funding support.

## Beti Bachao Beti Padhao

**Context:** Girl child welfare scheme, in the news due to renewed focus on education outcomes and behavioral change.

Ministry	Objectives	Features & Components	Recent Update
Ministry Of Women and Child Development	Improve Child Sex Ratio and Promote Girl Child Education	Awareness Generation, Education Promotion, Multi-Sectoral Convergence	The scheme continues to focus on improving the child sex ratio and girls' education, contributing to a rise in the national sex ratio at birth from <b>918 (2014-15) to around 933</b> , alongside improved enrolment and retention of girls in schools.

## Deep Ocean Mission

**Context:** mission for indigenous deep-sea technologies, in the news due to progress under the Samudrayaan programme.

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Earth Sciences	Develop Technologies for Deep Ocean Exploration	Deep-Sea Mining, Manned Submersible, Ocean Climate Studies, Marine Biodiversity	India has successfully tested the <b>MATSYA-6000</b> human submersible to depths of about <b>5,000 meters</b> , advancing the mission's goal of deep-sea exploration, resource assessment, and indigenous ocean technologies.

## Design Linked Incentive Scheme

**Context:** Semiconductor design incentive scheme, in the news due to India's push for a domestic chip ecosystem.

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Electronics and Information Technology	Promote Domestic Semiconductor Design Ecosystem	Financial Incentives, Support for Fabless Companies, Design Infrastructure	With an outlay of <b>₹1,000 crore</b> , the scheme supports <b>100 domestic semiconductor design companies</b> through financial incentives and infrastructure support to strengthen India's chip design ecosystem and reduce import dependence.

## IndiaAI Mission

**Context:** National AI Ecosystem Mission, in the news due to cabinet approval and infrastructure funding.

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Electronics and Information Technology	Build a Robust AI Innovation and Governance Ecosystem	AI Compute Infrastructure, Data Platforms, Skill Development, Startup Support	The mission aims to build <b>10,000+ GPU compute capacity</b> , create IndiaAI Innovation Centres, a national datasets platform, and large-scale AI skilling to strengthen India's AI ecosystem.

## Lakhpati Didi Scheme

**Context:** Women economic empowerment initiative, in the news due to the expansion of Lakhpati Didi targets nationwide.

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Rural Development	Enhance Women's Economic Empowerment	Skill Training, Livelihood Diversification, SHG-Based Income Support	Over <b>1.48 crore SHG women</b> have achieved a <b>sustainable annual income of ₹1 lakh or more</b> through diversified livelihoods, skill training, credit access, and market linkages.

## Perform, Achieve and Trade (PAT) Scheme

**Context:** Market-based energy efficiency scheme, in the news due to the launch of New PAT cycles.

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Power	Improve Energy Efficiency In Energy-Intensive Industries	Market-Based Mechanism, Energy Saving Certificates, Target-Based Efficiency	The government is transitioning PAT into the <b>Carbon Credit Trading Scheme (CCTS)</b> to move from energy-efficiency targets to <b>emission-intensity reduction with tradable carbon credits</b> .

## Skill India Mission

**Context:** Umbrella Skill Development Mission, in the news due to focus on future and Industry 4.0 skills

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Skill Development and Entrepreneurship	Enhance Employability Through Skill Development	PMKVY, Skill Hubs, Industry-Aligned Training, Certification Framework	New initiatives like <b>BharatSkillNXT</b> and the <b>SOAR AI-skilling programme</b> were launched to expand future-ready and AI-focused training nationwide.

## UJALA Scheme

**Context:** Energy efficiency LED distribution scheme, in the news due to data on energy savings and emission reduction.

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Power	Promote Energy Efficiency and Reduce Electricity Consumption	Affordable LED Bulb Distribution, Reduced Carbon Emissions, Energy Savings	The UJALA scheme has surpassed <b>over 370 million LED bulbs distributed</b> nationwide, contributing to significant energy savings and reduced electricity demand as part of ongoing energy efficiency efforts.

## Womaniya Initiative

**Context:** Women entrepreneur support initiative on GeM, in the news due to increased women-led procurement participation.

Ministry	Objectives	Features & Components	Recent Updates
Ministry Of Commerce And Industry	Empower Women Entrepreneurs Through Digital Market Access	Dedicated GeM Portal, Women-Centric Procurement, Capacity Building	The Government e-Marketplace's <b>Womaniya Initiative</b> completed seven years in January 2026, <b>enabling over 2 lakh women-led MSEs</b> to secure government procurement orders well <b>above the mandated 3% target</b> .

# MAINS VALUE ADDITIONS

## GENERAL STUDIES PAPER – I *Indian Society | Social Issues | Culture | Secularism*

Topic/Issue	Strategic Content	Value Addition (Keywords/Data)
<b>Saurashtra Tamil Sangamam</b>	Celebrates the <b>"Civilizational Thread"</b> connecting Gujarat and Tamil Nadu (migration 1000 years ago).	<b>"Ek Bharat Shreshtha Bharat"</b> ; Reconnecting the <b>Somnath-Madurai</b> axis; Cultural Revivalism.
<b>Digital Divide 2.0</b>	Transition from "Access to Internet" to <b>"Quality of Connectivity"</b> as a new form of social stratification.	<b>55% rural users</b> ; Rural wireline density at <b>0.6%</b> ; Impact on the <b>Gig Economy</b> .
<b>Urban Heat Islands (UHI)</b>	India recorded <b>77 heatwave days</b> in 2024; UHI effect creates <b>"Thermal Inequity"</b> in unplanned cities.	<b>"Thermal Mapping"</b> ; 700+ heat deaths (2024); Need for <b>Climate-Resilient Urbanism</b> .
<b>Savitribai Phule</b>	Focus on <b>"Intersectional Subalternity"</b> —the convergence of gender and caste struggles.	<b>Bhida Wada (1848)</b> ; First indigenous girls' school; Author of <b>Kavya Phule</b> .

## GENERAL STUDIES PAPER – II *Governance | Social Justice | Policing | Welfare | Cooperative Federalism*

Topic/Issue	Strategic Content	Value Addition (Keywords/Data)
<b>Mission Karmayogi 2.0</b>	Shift from "Rule-based" to <b>"Competency-based"</b> learning via the <b>iGOT-Karmayogi</b> platform.	<b>"Karmayogi Competency Model"</b> ; 3 crore+ enrolments; <b>NSCSTI 2.0</b> accreditation.
<b>Lateral Entry 2.0</b>	Addressing the <b>"Domain Gap"</b> in generalist bureaucracy for technical sectors like Health & Space.	<b>2nd ARC Recommendation</b> ; ~63 experts inducted since 2019; <b>Institutionalizing Specialized Recruitment</b> .
<b>Constitutional (130th) Bill</b>	Proposed framework for the <b>Removal of Ministers</b> upon detention (Legal-Moral debate).	<b>Article 75/164</b> ; Balancing "Presumption of Innocence" with <b>Administrative Integrity</b> .
<b>PESA Act (Implementation)</b>	Despite the 1996 law, <b>"Functional Devolution"</b> remains stalled due to state-level rule-making delays.	<b>Bhuria Committee</b> ; <b>"Legal Pluralism"</b> ; Empowering the <b>Gram Sabha</b> as a primary authority.

## GENERAL STUDIES PAPER – III *Economy | Environment | Disaster Management | Agriculture | Infrastructure | S & T | Defence*

Topic/Issue	Strategic Content	Value Addition (Keywords/Data)
<b>Blue Economy 2.0</b>	Focus on <b>"Samudra Manthan"</b> —sustainable wealth extraction from India's 7,517 km coastline.	<b>Deep Ocean Mission (DOM)</b> ; <b>MATSYA-6000</b> submersible; Mining <b>Polymetallic Nodules</b> .
<b>Income Tax Act, 2025</b>	Replacing the 1961 Act to provide <b>"Structural Simplification"</b> and tax certainty.	Effective exemption up to <b>₹12.75 lakh</b> ; Elimination of the <b>"Assessment Year"</b> vs <b>"Previous Year"</b> confusion.
<b>Viksit Bharat (Gramin) Act</b>	Replacing MGNREGA with an <b>"Outcome-Driven"</b> framework integrating digital <b>PM Gati Shakti</b> .	<b>125 days guaranteed work</b> ; Focus on <b>"Climate-Resilient Assets"</b> ; Weekly wage payments.
<b>Next-Gen GST (GST 2.0)</b>	A move towards a <b>Two-slab structure (5% and 18%)</b> to reduce classification disputes.	Taxpayer base reached <b>1.5 crore</b> ; Focus on <b>"Ease of Doing Business"</b> and lower compliance.
<b>Nuclear Expansion (SHANTI)</b>	Utilizing <b>Small Modular Reactors (SMRs)</b> to decentralize carbon-free energy.	<b>SHANTI Act, 2025</b> ; Goal of <b>100 GW by 2047</b> ; Private sector collaboration

# PRACTICE QUESTIONS

## Prelims Practice MCQs

**Q1. With reference to the removal of a judge of a High Court in India, consider the following statements:**

1. The grounds for the removal of a High Court judge are the same as those for a judge of the Supreme Court.
2. A motion for removal can be introduced in either House of Parliament but must be signed by at least 100 members regardless of the House.
3. The Judges (Inquiry) Act, 1968, mandates that the inquiry committee must include at least one distinguished jurist.

Which of the statements given above is/are correct?

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

**Q2. Regarding the Prevention of Corruption Act (PC Act), 1988, as amended in 2018, consider the following statements:**

1. Section 17A mandates prior approval from the competent authority before a police officer can conduct an inquiry or investigation into an offense relatable to a public servant's official duties.
2. Section 19 of the Act provides a safeguard at the investigation stage, similar to Section 17A.
3. Under the 2018 amendment, the act of giving a bribe is now treated as a direct offense.

Which of the statements given above are correct?

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

**Q3. If a motion for the removal of a judge is admitted, which of the following describes the "Special Majority" required in each House of Parliament for its passage?**

- (a) A majority of 2/3rd of the total membership of the House.
- (b) (b) A majority of the total membership of the House and a majority of 2/3rd of the members present and voting.
- (c) (c) A simple majority of those present and voting provided it is more than 50% of the total strength.
- (d) A majority of not less than 2/3rd of the members present and voting only.

**Q4. With reference to the 'Big Five' of Kaziranga, which of the following species are included?**

1. Greater One-horned Rhinoceros
2. Royal Bengal Tiger
3. Asian Elephant
4. Wild Water Buffalo
5. Swamp Deer

Select the correct answer using the code given below:

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

**Q5. With reference to the archaeological site of Piprahwa and the relics discovered there, consider the following statements:**

1. The site is associated with the ancient Sakya capital of Kapilavastu, where an inscription on a steatite casket mentions the relics of the Buddha.
2. The Piprahwa relics are currently housed in the National Museum, New Delhi, following their discovery during excavations in the late 19th and early 20th centuries.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q6. With reference to the 'Board of Peace' (BoP) established in early 2026, consider the following statements:**

1. It was formally established as a transitional administration for Gaza following UN Security Council Resolution 2803.
2. The Board's charter restricts its mandate exclusively to the reconstruction and governance of the Gaza Strip.
3. Permanent membership in the Board can be secured by countries through a specific financial contribution to its trust fund.

How many of the statements above are correct?

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

**Q7. Consider the following statements regarding Coconut Root (Wilt) Disease (RWD), which is prevalent in several parts of India:**

1. The disease is caused by Phytoplasma (cell-wall-less bacteria) and is primarily transmitted by insect vectors like the lace wing bug and plant hoppers.
2. Characteristic symptoms include the flaccidity of leaflets and the abnormal bending of leaves, often leading to a significant reduction in nut yield.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q8. With reference to the 'Green Penalty' funds in India, consider the following statements:**

1. These are financial penalties imposed on project proponents for violating environmental conditions or carrying out illegal mining activities.
2. The Supreme Court of India has directed that these funds should be utilized for the restoration of the ecology and the welfare of people in affected areas.
3. These funds are primarily managed and audited by the National Green Tribunal (NGT) without any involvement from state-level agencies.

Which of the statements given above is/are correct?

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

**Q9. With reference to the 'EPFO 3.0' digitization and reform project, consider the following statements:**

1. It aims to implement a centralized IT system to replace the existing fragmented regional databases, enabling "Anywhere-Anytime" services for subscribers.
2. The reform includes the introduction of an individual-led 'Social Security Account Number' (SSAN) to ensure the seamless portability of provident fund accounts.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q10. With reference to the evolution of saltatorial (hopping) locomotion in macropods (kangaroos and wallabies), consider the following statements:**

1. The pentadactyl limb structure in ancestral marsupials evolved into the specialized syndactylous foot to enhance energy efficiency during high-speed travel.
2. The hopping mechanism utilizes elastic energy storage in the Achilles tendon, which significantly reduces the metabolic cost of transport as speed increases.
3. Fossil evidence suggests that large-bodied kangaroos originally evolved the ability to walk bi-pedally before transitioning to hopping as an adaptation to spreading arid grasslands.

Which of the statements given above is/are correct?

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

**Q11. With reference to the Draft National Electricity Policy (NEP) 2026 released by the Ministry of Power, consider the following statements:**

1. The policy targets an increase in per capita electricity consumption to 2,000 kWh by 2030 and over 4,000 kWh by 2047.
2. It introduces a mandate for the functional unbundling of State Transmission Utilities (STUs) to create independent state-level entities for load despatch operations.
3. For the first time, it allows for index-linked automatic annual tariff revisions if State Commissions fail to issue timely tariff orders.
4. The policy aligns with the SHANTI Act, 2025, to scale nuclear capacity to 100 GW by 2047 through private sector collaboration.

How many of the statements above are correct?

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

**Q12. With reference to Sammakka–Saralamma Jatara, consider the following statements:**

1. It is a biennial tribal spiritual festival associated with the Koya Adivasi community.
2. It is celebrated at Medaram village inside the Eturnagaram Wildlife Sanctuary during the full moon of Magh.
3. Devotees traditionally offer "Bangaram" (jaggery) instead of gold or money.

Which of the statements given above are correct?

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

**Q13. With reference to Jharkhand megalithic landscapes, consider the following statements:**

1. Jharkhand exhibits "living megalithism", where communities still place new memorial stones for ancestors.
2. "Sasandiri" refers to memorial standing stones (menhirs), while "Birdiri/Biridiri" refers to dolmen-type family burial structures.
3. Some megalith sites show deliberate alignment with equinox/solstice sunrise or sunset.

Which of the statements given above are correct?

- (a) 1 and 3 only
- (b) 1 and 2 only



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

**Q14. With reference to the Panchayat (Extension to Scheduled Areas) Act (PESA), 1996, consider the following statements:**

1. It extends Part IX of the Constitution to Fifth Schedule areas and recognises Gram Sabha as the primary authority.
2. It was enacted to operationalise tribal self-rule in Scheduled Areas across nine States including Jharkhand.
3. It mandates that land acquisition in Scheduled Areas can be done without consulting Gram Sabhas to ensure speedy development.

Which of the statements given above are correct?

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

**Q15. With reference to Nipah virus (NiV), consider the following statements:**

1. It is a zoonotic virus that can also spread between humans.
2. Fruit bats of the genus *Pteropus* are the primary reservoir.
3. The incubation period is always less than 14 days.

Which of the statements given above are correct?

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

**Q16. With reference to Vehicle-to-Vehicle (V2V) communication technology, consider the following statements:**

1. It enables vehicles to exchange data directly with nearby vehicles without relying on mobile networks.
2. It uses a dedicated radio frequency band (5.875–5.905 GHz) approved by the Department of Telecommunications.
3. It requires mobile internet connectivity to function because it is cloud-mediated.

Which of the statements given above are correct?

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

**Q17. With reference to Gandikota Canyon, consider the following statements:**

1. It is carved by the Penna (Pennar) River and lies within the Erramala Hills.
2. The geological formation primarily consists of basaltic lava flows.

3. Gandikota Fort was associated with both the Kakatiya dynasty and the Vijayanagara Empire.

Which of the statements given above is/are correct?

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

**Q18. The Baltic Sea is often described as geopolitically sensitive. Which of the following factors best explains this characterization?**

- (a) It is the deepest inland sea in the world and a major hydrocarbon zone.
- (b) It connects the Mediterranean Sea to the Arctic Ocean.
- (c) A large majority of its littoral states are members of NATO.
- (d) It is the primary route for global container shipping.

**Q19. With reference to the Red Sea, consider the following statements:**

1. It is formed due to continental rifting between the African and Arabian plates.
2. The Gulf of Aqaba is deeper and narrower than the Gulf of Suez.
3. It connects the Mediterranean Sea to the Arabian Sea through the Strait of Hormuz.

Which of the statements given above is/are correct?

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

**Q20. Consider the following statements regarding Suspension of Sentence in India:**

1. Suspension of sentence affects the punishment but not the conviction.
2. Long incarceration alone is considered sufficient ground for suspension in life imprisonment cases.
3. The power to suspend sentence during appeal is provided under Section 389 of the Code of Criminal Procedure (CrPC).

Which of the statements given above is/are correct?

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

**Q21. With reference to the distribution and classification of global oil reserves, consider the following statements:**

1. Venezuela holds the world's largest proven oil reserves, surpassing those of Saudi Arabia, primarily due to its vast deposits of extra-heavy crude in the Orinoco Belt.

2. 'Proven Reserves' (P1) refers to the quantity of energy sources that are estimated with at least a 50% profit probability under existing economic and operating conditions.
3. The OPEC+ group collectively controls more than 75% of the world's total proven crude oil reserves.

Which of the statements given above is/are correct?

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

**Q22. With reference to the Consumer Price Index (CPI) and the new 2024 base year series, consider the following statements:**

1. The weight of 'Food and Beverages' in the revised CPI basket has been significantly reduced to approximately 37% to reflect changing consumption patterns.
2. The new series increases the weight of 'Housing', particularly in the urban index, to capture the rising share of expenditure on house rents and utilities.
3. Under the current Flexible Inflation Targeting (FIT) framework, the Reserve Bank of India (RBI) is mandated to maintain headline inflation at 4% with a tolerance band of  $\pm 2\%$ .

Which of the statements given above is/are correct?

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

**Q23. With reference to Savitribai Phule, often regarded as the "mother of Indian feminism," consider the following statements:**

1. Along with Jyotirao Phule, she established India's first indigenously-run school for girls at Bhide Wada, Pune, in 1848.
2. She founded the *Mahila Seva Mandal* in 1852 to raise awareness about women's rights and protest against the practice of shaving the heads of widows.
3. She was the author of the Marathi poetry collections *Kavya Phule* and *Bavan Kashi Subodh Ratnakar*.
4. She served as the first woman president of the *Satyashodhak Samaj* annual session following the death of Jyotirao Phule.

How many of the statements above are correct?

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

**Q24. With reference to the Bactrian camels, consider the following statements:**

1. These are double-humped camels.

2. These are native to the high-altitude cold desert of Ladakh.
3. They can swim over long distances and feed on mangroves.
4. They are employed for logistics and patrol duties in the Siachen region.

How many of the statements given above are correct?

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

**Q25. With reference to the volcanoes, consider the following pairs:**

1. Mount Vesuvius – Italy
2. Mount Merapi – Philippines
3. Kilauea – Indonesia

How many of the pairs given above are correctly marked?

- (a) Only one pair
- (b) Only two pairs
- (c) All three pairs
- (d) None of the above pairs

## Mains Practice Questions

**Q1.** Analyse the importance of seasonal corridors in Kaziranga National Park for wildlife resilience during floods. Discuss the role of eco-bridges in mitigating human-wildlife conflict along NH-715.

**Q2.** Evaluate the archaeological significance of the Piprahwa relics in identifying the historical location of Kapilavastu and validating Buddhist scriptural traditions.

**Q3.** Examine how the 2024 revision of the CPI basket, particularly the reduced weight of food items, improves the accuracy of inflation targeting in India.

**Q4.** Discuss Savitribai Phule's contribution to "intersectional feminism" through her dual struggle against gender discrimination and the caste hierarchy.

**Q5.** Assess the Draft National Electricity Policy 2026's focus on nuclear energy and DISCOM privatization as a means to achieve India's Net Zero targets by 2070.

## MCQs Solutions

### Q1. (b) I and III only

- **Statement I is correct:** Under **Article 217**, a High Court judge is removed by the President on the same grounds (proved misbehaviour or incapacity) and through the same procedure as a Supreme Court judge (**Article 124**).
- **Statement II is incorrect:** While the motion can be introduced in either House, the signature requirement differs: at least **100 members** in the Lok Sabha or **50 members** in the Rajya Sabha.
- **Statement III is correct:** The **Judges (Inquiry) Act, 1968** requires a three-member committee: a Supreme Court judge, a Chief Justice of a High Court, and a **distinguished jurist**.

### Q2. (c) I and III only

- **Statement I is correct:** **Section 17A** was introduced to protect public servants from malicious investigations for decisions taken in the discharge of official duties, requiring prior sanction for inquiry/investigation.
- **Statement II is incorrect:** **Section 19** provides a safeguard at the **cognizance stage** (trial), whereas **Section 17A** provides a safeguard at the **enquiry/investigation stage**. They operate at different legal points.
- **Statement III is correct:** The 2018 amendment criminalized the **giving of a bribe** as a substantive offense, though it provides immunity if the person was compelled to give it and reports the matter within seven days.

### Q3. (b) A majority of the total membership of the House and a majority of 2/3rd of the members present and voting.

- The removal of a judge requires a "Special Majority" under **Article 124(4)**.
- This is a dual requirement:
  1. **Absolute Majority:** More than 50% of the total strength of the House.
  2. **Working Majority:** Not less than two-thirds of the members present and voting.
- This high threshold ensures judicial independence by preventing arbitrary removals by the executive or a simple legislative majority.

### Q4. (d) 1, 2, 3, 4, and 5

- The '**Big Five**' of Kaziranga National Park refers to the most iconic megafauna species found in the park.
- These include:
  1. **Rhino** (Greater One-horned Rhinoceros)

2. **Tiger** (Royal Bengal Tiger)
3. **Elephant** (Asian Elephant)
4. **Wild Water Buffalo**
5. **Swamp Deer** (Barasingha)

- Kaziranga is unique for holding significant global populations of all five of these species within a single protected area.

### Q5. (c) Both 1 and 2

- **Statement 1 is correct:** The discovery of an inscribed steatite casket at the Piprahwa stupa in 1898 provided the first archaeological link to the **Sakya clan** and the Buddha's relics, helping identify the site as **Kapilavastu**.
- **Statement 2 is correct:** While some early finds were sent to other locations, the primary bone fragments (relics) and the casket discovered during K.M. Srivastava's 1970s excavations are preserved in the **National Museum, New Delhi**.

### Q6. (a) Only one

- **Statement 1 is correct:** The **Board of Peace (BoP)** was established under **UNSC Resolution 2803** (January 2026) as a neutral transitional body to oversee the stabilization of Gaza.
- **Statement 2 is incorrect:** Its mandate is broader than just reconstruction; it includes civil administration, internal security coordination, and the facilitation of a "two-state" political roadmap.
- **Statement 3 is incorrect:** Membership is not determined by financial contributions. It is composed of a selected group of regional stakeholders (Arab states) and international monitors to ensure neutrality.

### Q7. (c) Both 1 and 2

- **Statement 1 is correct:** RWD is a non-lethal but debilitating disease caused by Phytoplasma. It is spread through sap-sucking insect vectors, specifically the lace wing bug (*Stephanitis typica*) and the plant hopper (*Proutista moesta*).
- **Statement 2 is correct:** The most reliable diagnostic symptom is flaccidity (curving/ribbing of leaflets). Other symptoms include foliar yellowing and marginal necrosis, which severely impacts the photosynthetic capacity and nut production of the palm.

### Q8. 1 and 2 only

- **Statement 1 is correct:** Green penalties (often called 'Environmental Compensation') are based on the Polluter Pays Principle. They are levied for illegal mining, forest land diversion without clearance, or violating Environmental Clearance (EC) norms.
- **Statement 2 is correct:** The Supreme Court (notably in the *Common Cause v. Union of India* case) has mandated that these funds be used

for ecological restoration and the socio-economic welfare of populations in affected mining zones.

- **Statement 3 is incorrect:** While the NGT often orders these penalties, the management involves various bodies. For example, mining-related penalties are often managed through Special Purpose Vehicles (SPVs) or state-level monitoring committees, and afforestation funds are managed via CAMPA (Compensatory Afforestation Fund Management and Planning Authority) at both National and State levels.

#### Q9. (c) Both 1 and 2

- **Statement 1 is correct:** The core of EPFO 3.0 is the **Centralized IT Enabled System (CITES)**. Currently, EPFO operates through over 120 regional servers. Moving to a centralized database allows for real-time processing and "Anywhere-Anytime" services.
- **Statement 2 is correct:** The reform introduces a unique **Social Security Account Number (SSAN)**. Unlike the UAN (Universal Account Number) which acts as an umbrella for multiple member IDs, the SSAN aims to be a single, permanent identifier that ensures true portability and eliminates the need for fund transfers when changing jobs.

#### Q10. (d) 1, 2, and 3

- **Statement 1 is correct:** Macropods evolved from arboreal (tree-dwelling) ancestors with five-fingered (pentadactyl) limbs. Their feet became **syndactylous** (fused digits) and elongated, which is an adaptation for high-speed saltatorial locomotion.
- **Statement 2 is correct:** Kangaroos use a "spring-like" mechanism. Their large **Achilles tendons** store elastic strain energy on landing and release it for the next hop. This makes them more efficient as they speed up, unlike humans who consume more oxygen the faster they run.
- **Statement 3 is correct:** Recent paleontological studies (e.g., *Stenurine* kangaroos) suggest that some large, extinct ancestors were specialized for **bipedal walking** (striding). Hopping became the dominant trait later as a response to the expansion of open, arid grasslands in Australia.

#### Q11. (d) All four

- **Statement 1 is correct:** The policy sets ambitious per capita consumption targets to support a **\$30 trillion economy** by 2047, aiming for 2,000 kWh by 2030 (up from ~1,300 kWh currently).
- **Statement 2 is correct:** To ensure grid neutrality, it proposes unbundling the **State Load Despatch Centres (SLDCs)** from STUs, making them independent "System Operators" to manage the influx of renewable energy.

- **Statement 3 is correct:** To address the financial crisis of DISCOMs, the policy allows for **automatic index-linked tariff hikes** if state regulators delay annual tariff orders, ensuring cost-reflective pricing.
- **Statement 4 is correct:** The SHANTI (Strategic Harnessing of Advanced Nuclear Technology for India) Act, 2025 is a key pillar of NEP 2026, targeting 100 GW of nuclear power by 2047 through Small Modular Reactors (SMRs) and private investment.

#### Q12. (d) 1, 2 and 3

- **Statement 1 is correct:** This is a biennial (once every two years) tribal festival held by the Koya community. It is widely considered the world's largest tribal congregation.
- **Statement 2 is correct:** It takes place in Medaram, Tadvai Mandal, which is located within the Eturnagaram Wildlife Sanctuary in Telangana. It commemorates the struggle of a mother and daughter against an unjust law.
- **Statement 3 is correct:** A unique feature of the Jatara is that devotees offer Jaggery, locally called "Bangaram" (Gold), equal to their own weight to the goddesses.

#### Q13. (a) 1 and 3 only

- **Statement 1 is correct:** Unlike many ancient megalithic sites, Jharkhand (particularly among the Munda and Ho tribes) practices "living megalithism," where traditional stone-placing rituals continue today.
- **Statement 2 is incorrect:** The terms are reversed. "**Sasandiri**" refers to the stone slabs covering burials (dolmens/burial stones), while "**Birdiri**" or "**Biridiri**" refers to the vertical memorial standing stones (menhirs).
- **Statement 3 is correct:** Archaeo-astronomical studies of sites like Pankri Barwadih show that specific stones were aligned to mark the Equinoxes and Solstices, indicating advanced astronomical knowledge in ancient tribal societies.

#### Q14. (a) 1 and 2 only

- **Statement 1 is correct:** PESA extends the provisions of **Part IX** (Panchayats) to the **Fifth Schedule areas**, empowering the **Gram Sabha** to protect tribal customs and manage local resources.
- **Statement 2 is correct:** The Act covers ten states with Fifth Schedule areas (Andhra Pradesh, Telangana, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, and Rajasthan).
- **Statement 3 is incorrect:** PESA explicitly mandates that the Gram Sabha or the Panchayats at the appropriate level shall be consulted before making the acquisition of land in the Scheduled Areas for development projects.

## Q15. (a) 1 and 2 only

- **Statement 1 is correct:** Nipah is a **zoonotic virus** (transmitted from animals to humans) and can also be transmitted through contaminated food or directly between people via close contact.
- **Statement 2 is correct:** The fruit bats of the **Pteropus genus** (Flying Foxes) are the natural reservoir hosts.
- **Statement 3 is incorrect:** While the typical incubation period ranges from 4 to 14 days, it is **not always** less than 14 days. Incubation periods as long as **45 days** have been reported in some instances.

## Q16. (b) 1 and 2 only

- **Statement 1 is correct:** V2V allows vehicles to wirelessly exchange information about their speed, location, and heading. This creates "360-degree awareness" to prevent collisions.
- **Statement 2 is correct:** It utilizes Dedicated Short-Range Communications (DSRC). In India, the DoT has identified the 5.9 GHz band (5.875–5.905 GHz) for Intelligent Transport Systems (ITS).
- **Statement 3 is incorrect:** V2V does **not** require a mobile network or cloud mediation to function. It is a direct, low-latency radio communication intended for immediate safety warnings (like emergency brake alerts) where cellular delays would be dangerous.

## Q17. (b) 1 and 3 only

- **Statement 1 is correct:** The canyon is formed by the **Penna River** cutting through the Erramala Hills in Andhra Pradesh.
- **Statement 2 is incorrect:** The formation consists of **sandstone** (sedimentary rock), characterized by beautiful red hues. It is not basaltic (igneous/volcanic).
- **Statement 3 is correct:** The fort was originally built in the 12th century by a Western Chalukya feudatory but saw significant influence and expansion under the **Kakatiyas, Vijayanagara** kings (under Pemmasani Nayakas), and later the Qutb Shahis.

## Q18. (c) A large majority of its littoral states are members of NATO.

- Following the recent accession of **Finland and Sweden**, the Baltic Sea is often colloquially referred to as a **"NATO Lake"**. All littoral countries except Russia are now NATO members.
- This is geopolitically sensitive because it surrounds Russia's **Kaliningrad exclave** and its major port at St. Petersburg, creating a strategic "bottleneck" for the Russian Baltic Fleet.
- Options (a) and (d) are incorrect; the Baltic is relatively shallow and, while important, is not the *primary* global container route compared to the Malacca Strait or Suez Canal.

## Q19. (a) 1 and 2 only

- **Statement 1 is correct:** The Red Sea is a classic example of a **divergent boundary** where the African and Arabian plates are pulling apart (rifting).
- **Statement 2 is correct:** The **Gulf of Aqaba** is a deep, narrow tectonic basin formed by the Dead Sea Transform fault. In contrast, the **Gulf of Suez** is a relatively shallow and wide rift basin.
- **Statement 3 is incorrect:** The Red Sea connects to the Arabian Sea (via the Gulf of Aden) through the **Bab-el-Mandeb Strait**. The **Strait of Hormuz** connects the Persian Gulf to the Gulf of Oman/Arabian Sea.

## Q20. (b) 1 and 3 only

- **Statement 1 is correct:** A "Suspension of Sentence" means the execution of the penalty is temporarily put on hold, but the **conviction** (the finding of guilt) remains active. This is different from a "Stay of Conviction."
- **Statement 2 is incorrect:** In cases of life imprisonment, courts have consistently held that **long incarceration alone is not enough**. There must be a prima facie case of infirmity in the conviction or other compelling circumstances to justify suspension.
- **Statement 3 is correct:** **Section 389 of the CrPC** (and its successor in the BNSS) empowers the appellate court to suspend the execution of the sentence pending an appeal.

## Q21. (b) 1 and 3 only

- **Statement 1 is correct:** **Venezuela** holds the world's largest proven oil reserves (approx. 300 billion barrels), largely found in the **Orinoco Belt**. Saudi Arabia follows in second place.
- **Statement 2 is incorrect:** 'Proven Reserves' (P1) are estimated with at least a **90% probability** of being commercially recoverable. A 50% probability refers to **'Probable Reserves' (P2)**.
- **Statement 3 is correct:** The **OPEC+** alliance (OPEC members plus Russia and others) controls roughly **80%** of the world's proven crude oil reserves, giving them significant market influence.

## Q22. (d) 1, 2, and 3

- **Statement 1 is correct:** Based on the Household Consumption Expenditure Survey (HCES), the food weight in the CPI was reduced from ~46% to ~37%. This shift accounts for the fact that as incomes rise, the percentage of spending on food tends to decrease.
- **Statement 2 is correct:** The 'Housing' and 'Services' (like healthcare and education) components saw an increase in weight to better represent modern urban expenditure.
- **Statement 3 is correct:** The RBI's legal mandate under the **RBI Act, 1934** is to target a CPI inflation of **4%**, with a lower limit of **2%** and an upper limit of **6%**.



**Q23. (d) All four**

- **Statement 1 is correct:** Bhide Wada in Pune (1848) is a landmark in Indian history as the first indigenous school for girls.
- **Statement 2 is correct:** The **Mahila Seva Mandal** worked on the intersection of gender and caste, specifically supporting widows.
- **Statement 3 is correct:** *Kavya Phule* (1854) and *Bavan Kashi Subodh Ratnakar* (1892) are her notable literary works.
- **Statement 4 is correct:** She provided leadership to the **Satyashodhak Samaj** after Jyotirao Phule's death in 1890, chairing its 1893 session.

**Q24. (c) Only three**

- **Statement 1 is correct:** Unlike the single-humped Dromedary, Bactrian camels are characterized by two humps.
- **Statement 2 is correct:** In India, they are found in the Nubra Valley of Ladakh.
- **Statement 3 is incorrect:** This description refers to the Kharai Camel of Kutch, Gujarat, which is known for its swimming ability and mangrove diet. Bactrian camels are cold-desert adapted.
- **Statement 4 is correct:** The Indian Army has successfully inducted double-humped camels for patrolling and carrying loads at altitudes exceeding 17,000 feet in Eastern Ladakh/Siachen.

**Q25. (a) Only one pair**

- **Pair 1 is correct:** Mount Vesuvius is a famous stratovolcano located in Italy, known for the destruction of Pompeii.
- **Pair 2 is incorrect:** Mount Merapi is the most active volcano in Indonesia, not the Philippines. (Note: Mount Mayon is in the Philippines).
- **Pair 3 is incorrect:** Kilauea is one of the world's most active volcanoes, located in Hawaii, USA, not Indonesia.

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