EDU- SAMIKSHA
FEBRUARY 2026

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1.1 Importance of CAPEX

In the **Union Budget 2026-27**, the Government of India has continued its aggressive "Public Investment-led" growth strategy. For the current fiscal year, the Central Capital Expenditure (Capex) has been increased by approximately **9% to ₹12.22 lakh crore**, reaching a historic high of **4.4% of GDP**.

Significance of Capex: The Engine of Growth

1. **The Multiplier Effect:** According to the National Institute of Public Finance and Policy (NIPFP), capex has a multiplier of 2.45, meaning every ₹1 spent adds ₹2.45 to the GDP. This is significantly higher than revenue expenditure (~0.99), which is spent on consumables like salaries and subsidies.
2. **Crowding-in Private Investment:** Large public projects reduce logistics costs and improve ease of doing business, which builds confidence for private players to start their own "Capex cycles."
3. **Counter-cyclical Fiscal Tool:** During periods of global economic volatility or "capital strikes," sustained government spending acts as a cushion, maintaining domestic demand and preventing an economic slowdown.

Making India "Future-Proof"

1. **Infrastructure Resilience:** Projects like the **Dedicated Freight Corridors (DFCs)** and the expansion of the **National Waterways** (e.g., NW-5 in Odisha) reduce the "logistics cost as a % of GDP," making Indian exports globally competitive.
2. **Energy Security & Climate Resilience:** The 2026 Budget's allocation for **Carbon Capture (CCUS)** and Green Hydrogen ensures that India's industrial growth is decoupled from carbon emissions, future-proofing the economy against global "Carbon Taxes" (like Europe's CBAM).
3. **Technological Sovereignty:** Focus on the **India Semiconductor Mission (ISM) 2.0** and AI-driven digital infrastructure ensures that India is a producer, not just a consumer, of 4th Industrial Revolution technologies.

Challenges in Enhancing Capex

1. **Low Private Participation:** While public capex is high, **private capex** remains "on the back foot" due to high borrowing costs and global uncertainty.

2. **Implementation Bottlenecks:** Structural issues like **land acquisition delays**, lack of skilled labor (e.g., in specialized engineering), and judicial delays in contract enforcement lead to cost and time overruns.
3. **States' Fiscal Constraints:** While the Centre has increased capex, many states are struggling with high **debt-to-GSDP ratios** and the rising burden of "committed expenditures" like pensions and interest payments.
4. **Absorptive Capacity:** Often, departments are allocated funds but lack the "shovel-ready" projects or administrative machinery to spend them efficiently within the fiscal year.
5. **High Social expenditure requirements.**

Way Forward:

1. **Infrastructure Risk Guarantee Fund:** The 2026 Budget proposal for a risk guarantee fund is a step in the right direction. It will provide credit guarantees to lenders during high-risk construction phases, enticing private banks to lend.
2. **Asset Monetization:** Aggressively pursuing the **National Monetization Pipeline (NMP)** to recycle "brownfield" assets (like existing roads) can generate capital for "greenfield" projects without increasing the fiscal deficit.
3. **Project Monitoring & De-bottlenecking:** Strengthening the **PM-GatiShakti** platform for integrated planning and using the **Project Monitoring Group (PMG)** to fast-track clearances will reduce the "incubation period" of projects.
4. **Fiscal Federalism:** The Centre should continue the **Special Assistance to States for Capital Investment** (long-term interest-free loans) while linking disbursements to specific outcomes like urban property tax reforms or power sector efficiency.

India's transition from a "Consumption-led" to an "Investment-led" economy is a fundamental shift toward sustainable development. While the Union government has provided the initial momentum, the long-term success of this strategy depends on structural reforms in land and labor markets and the successful "crowding-in" of private capital.

1.2 The Semiconductor Push

In the Union Budget 2026-27, the Government of India launched the **India Semiconductor Mission (ISM) 2.0** and the **Dedicated Rare Earth Corridors**, marking a shift from mere assembly to deep-tech manufacturing and resource security.

India Semiconductor Mission (ISM) 2.0: Key Provisions

Building on the foundation of ISM 1.0, the 2.0 version focuses on "Deep-Value Addition":

1. **Upstream Focus:** Moves beyond assembly to producing **semiconductor equipment and materials** (chemicals, gases, and wafers) domestically.
2. **Full-Stack Design & IP:** A dedicated push for **Indian Intellectual Property (IP)**, aiming to support 50+ fabless startups to create indigenous chips (the "One AMD/One Qualcomm" goal).
3. **Infrastructure & Skills:** Establishment of industry-led **research and training centers**

and a "Shakti" initiative (outlay of ₹10,000 crore) for ecosystem building.

4. Advanced Nodes: A roadmap to move toward 3nm and 2nm technology nodes, positioning India in the high-end computing market.

The Rare Earth Corridor: The Strategic Link

1. The Budget proposed dedicated rare earth corridors in
2. Odisha, Kerala, Andhra Pradesh, and Tamil Nadu.
3. The Nexus: Semiconductors cannot function without Rare Earth Elements (REEs) and Permanent Magnets (used in everything from smartphone vibration motors to fighter jet sensors).
4. Integrated Value Chain: These corridors link mining (beach sand monazite) to processing hubs and manufacturing units for sintered magnets.
5.
6. **Mineral Security:** By integrating the Rare Earth Corridor with ISM 2.0, India ensures that its semiconductor FABs have a steady, domestic supply of the critical minerals required for chip packaging and component manufacturing.

Breaking China's Dominance

Currently, China controls ~60% of REE mining and ~90% of processing/magnet production. The dual-scheme strategy counters this via:

1. **Weaponizing Resources:** China has previously used "mineral embargoes" (e.g., against Japan). India's corridors insulate domestic electronics from such supply shocks.
2. **Vertical Integration:** While China dominates "Legacy Chips," India is targeting the **"China Plus One"** strategy by offering a complete, transparent, and ESG-compliant supply chain from "Dust to Digital" (Mine to Chip).
3. **Strategic Autonomy:** By developing **Indian IP** and **domestic REE refining**, India reduces its "technological sub-servience" to foreign supply chains.

Challenges in Implementation

1. **Environmental & Social Costs:** Rare earth processing involves radioactive by-products (Thorium). Mining in coastal Kerala and Odisha faces stiff environmental and displacement-related resistance.
2. **Technology Gap:** India lacks the sophisticated **refining technology** for "Heavy" REEs and the extreme ultraviolet (EUV) lithography expertise required for advanced 2nm chips.
3. **Capital Intensity:** Semiconductor FABs have long "gestation periods." Sustaining the ₹40,000+ crore outlay year-after-year amidst fiscal deficit targets is a tightrope walk.
4. **Talent Crunch:** There is a projected shortfall of **2.5 to 3.5 lakh skilled workers** in hardware engineering by 2027.

Way Forward

1. **Critical Mineral Diplomacy:** Leverage the **Minerals Security Partnership (MSP)** and the **Quad Critical Minerals Initiative** to acquire technology for REE refining from partners like Australia and the US.
2. **Circular Economy:** Implement the proposed **₹1,500 crore E-waste recycling scheme**

to recover rare earths from old electronics, reducing the pressure on primary mining.

3. **Center-State Synergy:** Since land and mining are often state subjects, the **"Challenge Method"** for selecting states for Chemical Parks and Corridors ensures that only states with "speed of business" get the projects.
4. **Industry-Academia "Fab-Labs":** Transform engineering colleges into semiconductor training hubs to bridge the hardware talent gap immediately.

The combination of ISM 2.0 and the Rare Earth Corridor represents India's move toward **"Electronic Sovereignty."** By securing the raw materials and the manufacturing process simultaneously, India is not just participating in the global supply chain but is actively re-wiring it to bypass the traditional monopolies of the East.

1.3 India & Arab League

On January 31, 2026, India and the League of Arab States (LAS) adopted the **"New Delhi Declaration"** during the **2nd India-Arab Foreign Ministers' Meeting (IAFMM)**. This meeting, held after a 10-year hiatus, marks a significant "recalibration" of India's engagement with its extended neighborhood.

Brief of the Joint Statement (New Delhi Declaration 2026)

- **Political Core:** Called for a "sovereign, independent, and viable State of Palestine" based on the **1967 borders** with East Jerusalem as its capital, living side-by-side with Israel.
- **Conflict Resolution:** Welcomed the **2025 Sharm El-Sheikh Peace Summit** outcomes and the ceasefire in Gaza. It urged unimpeded humanitarian access and supported the Arab-Islamic recovery plan for Gaza.
- **Counter-Terrorism:** Reaffirmed **"Zero Tolerance"** towards terrorism. The Arab states explicitly condemned the recent **Pahalgam terror attack** in India.
- **Economic Target:** Set an ambitious bilateral trade target of **$500 billion by 2030** (up from the current ~$240 billion).
- **Maritime Security:** Condemned Houthi attacks on commercial shipping; emphasized that protecting the **Bab al-Mandab Strait** and the Red Sea is a shared international responsibility.

Significance & Outcomes

1. **Strategic Maturity:** The statement avoided explicit criticism of Israel while firmly backing Palestine, reflecting a balanced and pragmatic Indian diplomacy.
2. **Institutional Revival:** Revived the India-Arab Cooperation Forum (IACF) which had been dormant since 2016.

1. **Economic Integration:** Inauguration of the **India-Arab Countries Chambers of Commerce, Industry and Agriculture** to streamline private sector investments.
2. **Connectivity:** Aligned India's **Viksit Bharat 2047** with regional visions like **Saudi Vision 2030** and **UAE Centennial 2071**, specifically through the **IMEC (India-Middle East-Europe Economic Corridor)**.

Points of Convergence vs. Divergence

Mutual Convergence Points	Points of Divergence
Energy Security: Region provides ~60% of India's crude and 100% of strategic LNG.	**Relationship with Iran:** Arab states (especially the GCC) often view Iran as a regional threat, while India maintains strategic ties (Chabahar Port).
Counter-Terrorism: Mutual concern over cross-border terror and misuse of drones/tech by non-state actors.	**Internal Political Systems:** India's democratic framework vs. the monarchical/authoritarian nature of several Arab states.
Diaspora: Over 9 million Indians live in the region, acting as a "human bridge" and source of remittances ($40B+).	**Extra-Regional Alliances:** Arab states have deep security ties with the US/China; India pursues "Strategic Autonomy."
Global Governance: Shared call for UNSC Reform to include more representation for the Global South.	**Human Rights Rhetoric:** Occasional friction regarding treatment of minorities or domestic policies, though largely managed through "quiet diplomacy."

Way Forward

1. **Institutionalization:** Establish a permanent secretariat for the India-Arab Cooperation Forum to ensure biennial meetings.
2. **Digital Public Infrastructure (DPI):** Scale the adoption of **UPI and RuPay** across all 22 Arab nations to facilitate the diaspora.
3. **Defense Manufacturing:** Move from "Buyer-Seller" to "Co-production" of defense equipment (e.g., BrahMos, Tejas) under *Atmanirbhar Bharat*.
4. **Climate Action:** Collaborate on **Green Hydrogen** and the **International Solar Alliance (ISA)** as the region pivots away from oil.

The 2nd IAFMM (2026) signifies that India's "Link West" policy has matured from a transaction-based energy relationship into a **Comprehensive Strategic Partnership**. By co-chairing this summit with the UAE, India has signaled that its interests in West Asia are no longer limited to the "oil and diaspora" binary but extend to maritime security, high-tech manufacturing, and global peace mediation. The New Delhi Declaration acts as a bridge, aligning India's rise as a "Vishwa-Mitra" (Global Friend) with the Arab world's quest for economic diversification.

Prelims Pointers: Arab League (League of Arab States)

- **Established:** March 22, 1945 (Cairo, Egypt).
- **Members: 22 states** (includes Palestine; excludes Iran, Turkey, Israel).
- **Founding Members (6):** Egypt, Iraq, Jordan, Lebanon, Saudi Arabia, and Syria.
- **India's Status:** India is an **Observer State** (since 2007).
- **Headquarters:** Cairo, Egypt.

- **Key Document:** The **Alexandria Protocol (1944)** laid the foundation for the League's charter.
- **Decision Making:** Council decisions are binding only on those who vote for them (reflecting respect for state sovereignty).

1.4 Tweaking Fiscal Administration- 16th Finance Commission

Fiscal devolution is a cornerstone of India's federal structure, ensuring equitable distribution of resources between the Union and the States. The **16th Finance Commission (2026–31)** has been tasked with recalibrating the devolution framework in light of **post-pandemic fiscal stress, rising vertical imbalance, climate vulnerabilities, and demands for performance-linked federalism**.

Changes Made / Proposed by the 16th Finance Commission in Devolution Criteria

While retaining the constitutional mandate under **Article 280**, the 16th FC marks a shift in emphasis rather than a radical overhaul.

Table: Devolution Criteria – 15th FC vs. 16th FC

Criteria	15th FC Weight	16th FC Weight	Key Change
Income Distance	45%	42.5%	Slight reduction.
Population (2011)	15%	17.5%	Increased weight.
Demographic Performance	12.5%	10%	Redefined (uses pop. growth 1971-2011).
Area	15%	10%	Reduced weight.
Forest & Ecology	10%	10%	Now includes open forests & growth in forest cover.
Tax Effort	2.5%	0%	Dropped entirely.
Contribution to GDP	0%	10%	New parameter rewarding economic size.
Total	100%	100%	

1. **Refined Horizontal Devolution Criteria**

   Expected rationalisation of weights given to:
   - **Income distance** – likely retained as the core equity criterion
   - **Population** – continued use of 2011 Census, with moderated weight
   - **Area and Forest & Ecology** – greater recognition of ecological services
   - **Demographic performance** – continued incentives for population control
   - **Contribution to GDP** – stronger emphasis on performance

   Shift from *redistributive federalism alone* to **balanced equity + efficiency**.
2. **Greater Focus on Performance-Based Transfers**
   - Incentives for:
     - GST compliance and revenue mobilisation
     - Power sector reforms
     - Urban local body reforms
     - Climate-resilient spending and green budgeting

This aligns with the Union's push for **"competitive and cooperative federalism."**

3. **Re-examination of Vertical Devolution**
   - Review of the **41% share of States** (fixed by the 15th FC)
   - Consideration of:
     - Increased Union responsibilities (defence, disasters, climate finance)
     - Shrinking fiscal space of States due to cesses and surcharges
4. **Local Body and Disaster Finance Rationalisation**
   - Improved formula-based grants for:
     - Panchayats and Municipalities
     - Disaster Risk Reduction (DRR) instead of only post-disaster relief

Significance of This Rationalisation

1. **Enhances Equity Without Penalising Efficiency**
   - Addresses long-standing grievances of:
     - Demographically successful States
     - Resource-rich but revenue-poor States
2. **Improves Quality of Public Spending**
   - Performance-linked grants improve outcomes in:
     - Health
     - Education
     - Urban services
     - Environmental protection
3. **Supports Cooperative Federalism**
   - Reduces Centre–State trust deficit
   - Encourages policy innovation at the State level

Challenges That Remain in Fiscal Devolution

1. **Vertical Imbalance Persists**
   - Rising share of **cesses and surcharges** (non-shareable)
   - Limits States' fiscal autonomy
2. **One-Size-Fits-All Approach**
   - Uniform criteria fail to capture:
     - Regional vulnerabilities
     - Aspirational vs advanced States
     - Special category-like needs
3. **Weak Local Government Capacity**
   - Absorptive and administrative constraints
   - Dependence on tied grants
4. **GST-Related Uncertainties**

- Delayed compensation
- Limited taxation powers of States

Way Forward

1. **Reform Vertical Devolution Architecture**
   - Bring more cesses into the divisible pool
   - Institutionalise transparency in Union fiscal practices
2. **Dynamic Devolution Formula**
   - Periodic mid-term review of weights
   - Greater flexibility for State-specific needs
3. **Strengthen State and Local Capacities**

- Capacity-building grants
- Digitisation of public finance management

4. **Deepen Fiscal Federal Dialogue**
   - Regular Centre–State fiscal councils
   - Greater role for Inter-State Council

The 16th Finance Commission represents a **maturing phase of India's fiscal federalism**, balancing equity with efficiency and accountability. While rationalisation of devolution criteria is necessary in a complex economy, its success will ultimately depend on **trust, transparency, and cooperative governance between the Centre and States**.

1.5 India's Defense Spending

In the **Union Budget 2026-27**, India's defense sector received a landmark allocation of **₹7.85 lakh crore**, marking a 15.2% increase from the previous year. This reflects a strategic pivot towards a "modern, self-reliant, and expeditionary" military.

Brief Idea of Defense Spending (Recent Trends)

Historically, India's defense budget hovered around 1.8% to 1.9% of GDP. However, the **2026-27 Budget** has pushed this to **2% of GDP**.

Financial Year	Allocation (₹ Lakh Crore)	Growth Rate (%)	Key Focus
2024-25	6.21	~4.7%	Sustainment & Border Infra
2025-26	6.81	9.5%	Modernization & R&D
2026-27	**7.85**	**15.2%**	**Post-Operation Sindoor Capability & Deep Tech**

- **Capital vs. Revenue:** A significant trend is the rise in **Capital Outlay** (new hardware), which reached **₹2.19 lakh crore** in 2026, a 24% jump.
- **The Burden of Pensions:** Defense pensions still consume a massive chunk (~21.8%), though the *Agnipath* scheme is expected to mitigate this in the long term.

Significance of spending in India's Claim to Global Leadership

1. **Increasing defense** allocation is not just about security; it is a statement of strategic autonomy and hard power:

2. **Credible Deterrence:** Facing a "two-front" threat (China and Pakistan), a robust budget signals India's resolve to maintain a "Balance of Power" in the Indo-Pacific.

3. **Net Security Provider:** To lead the **Global South** and act as a maritime stabilizer (SAGAR vision), India needs expeditionary capabilities like aircraft carriers and long-range drones.
4. **Defense Exports as Soft Power:** India's defense exports touched **₹23,622 crore (2024-**

25). Exporting Tejas jets or BrahMos missiles to nations like Armenia and Philippines cements India's status as a reliable strategic partner.

Streamlining 'Atmanirbhar Bharat' with the Budget

1. **Earmarking for Domestic Procurement:** In 2026, **75% of the capital acquisition budget** (~₹1.39 lakh crore) is reserved for domestic industry.
2. **Positive Indigenization Lists:** The budget supports the phased ban on importing thousands of items, forcing the services to buy "Made in India."
3. **Innovation Ecosystem (iDEX & RDI):** The 2026 budget allocated significant funds to the **₹1 lakh crore R&D corpus** to encourage startups and MSMEs to develop "dual-use" technologies (AI, Space, Robotics).
4. **Defense Industrial Corridors:** Budgetary support for corridors in **UP and Tamil Nadu** has attracted over ₹9,000 crore in actual investment, creating a hub-and-spoke manufacturing model.

Challenges

1. **The "Teeth-to-Tail" Ratio:** A high percentage of the budget goes to **Revenue Expenditure** (salaries and pensions), leaving less for the "teeth" (modern weaponry).
2. **Slow Procurement Cycles:** Despite the **DAP 2020**, the time taken from "Necessity" (AoN) to "Contract" remains high (e.g., the Project 75I submarine deal).
3. **R&D Gap:** India spends less than **2%** of its defense budget on R&D, compared to 10-12% in the US or China.
4. **Currency Fluctuation:** As many critical components are still imported, the depreciation of the Rupee against the Dollar often eats into the "real" value of the allocation.

Way Forward: Making the Budget Effective

1. **Non-Lapsable Modernization Fund:** Establishing a rolling fund for capital acquisitions to ensure that unspent funds do not revert to the treasury at the end of the fiscal year.
2. **Civil-Military Integration:** Encouraging "Dual-Use" technology development (e.g., drones for both delivery and surveillance) to share the cost burden with the civilian sector.
3. **Incentivizing Private R&D:** Shifting from a "buyer-seller" relationship to a "partnership" model with the private sector through **Product Linked Incentives (PLI)** in defense.
4. **Outcome-Oriented Budgeting:** Moving away from "output" (buying 100 tanks) to "outcome" (achieving 90% operational readiness across a sector).

1.6 India USA Trade deal

In February 2026, the India-US economic relationship reached a historic milestone with the announcement of a comprehensive trade deal between Prime Minister Narendra Modi and President Donald Trump.

Key Highlights of the Deal

1. Tariff De-escalation: The US has slashed the effective tariff on Indian goods from a peak of 50% down to 18%. This includes:
    a) Reduction of the "Reciprocal" tariff from 25% to 18%.
    b) Removal of the 25% punitive duty imposed in 2025 due to India's Russian oil purchases.
2. **Energy Pivot:** India has reportedly agreed to significantly reduce or halt the purchase of **Russian crude oil**, pivoting instead toward US energy (Shale oil and LNG).
3. **The "$500 Billion Commitment":** The US claims India has committed to purchasing over **$500 billion** worth of American energy, technology, coal, and agricultural products over a specified period.
4. **Market Access:** India is expected to move toward "zero" tariffs on several US industrial and agricultural goods, though India maintains that "sensitive sectors" remain protected.

Strategic Significance

1. **Competitive Edge:** At 18%, India's tariff rate is now lower than regional rivals like **Vietnam (20%)**, **Bangladesh (20%)**, and **China (34%)**, making "Made in India" products more attractive in the US market.
2. **Economic Stability:** The deal ended a year-long trade war, stabilizing the Rupee and encouraging the return of **Foreign Institutional Investors (FIIs)**.
3. **Counterweight to China:** It reaffirms the India-US strategic partnership as the primary counterweight to Chinese influence in the Indo-Pacific.
4. **Boost to MSMEs:** Labor-intensive sectors like textiles, leather, and gems & jewelry are expected to see an immediate revival.

A Return to a Rule-Based Order?

- **Arguments for "Yes":** The deal represents a move away from unilateral punitive duties toward a negotiated bilateral framework. It uses established trade terminology and reciprocal commitments, suggesting a desire for a predictable trade environment.
- **Arguments for "No":** The deal is highly **transactional** ("Transactional Diplomacy"). It was announced via social media and relies heavily on personal chemistry between leaders rather than multilateral WTO-style institutionalism. It reflects a "Reciprocal" rather than a "Liberal" trade order.

Challenges for India

1. **The "Zero-Tariff" Trap:** If India truly moves to zero tariffs on US agricultural products, it could lead to **rural distress**. US agriculture is highly subsidized; allowing it duty-free access could outcompete Indian farmers in dairy and poultry.
2. **Energy Inflation:** Moving away from discounted Russian oil to more expensive US energy could impact India's **Current Account Deficit (CAD)** and lead to higher fuel prices for consumers.

3. **Strategic Autonomy:** The deal marks a significant shift in India's non-aligned stance by explicitly linking trade benefits to a change in energy/foreign policy (the Russia factor).
4. **Data and IPR:** There are concerns regarding US demands for easier access to Indian data for AI training and stricter Intellectual Property Rights (IPR) that could affect the generic pharma industry.

Way Forward

1. **Diversification:** India must use the breathing room provided by this deal to fast-track FTAs with the **EU, UK, and Gulf nations** to avoid over-dependence on the US market.
2. **From Assembly to Manufacturing:** The 18% tariff window should be used to transition from "assembling" in India to "deep manufacturing" to truly benefit from *friendshoring*.
3. **Institutionalizing the Deal:** India should push for a formal, legally binding document that outlines specific safeguards for the dairy and agriculture sectors to prevent future "tweet-based" trade shocks.
4. **Leveraging iCET:** Use the renewed proximity to gain high-end technology transfers in **Semiconductors, AI, and Space** under the *Initiative on Critical and Emerging Technology*.

1.7 Menstrual Health- From Welfare to Entitlement

In a landmark judgment (January 2026) in the case of ***Dr. Jaya Thakur v. Union of India***, the Supreme Court of India declared **Menstrual Health and Hygiene (MHH)** as a fundamental right under **Article 21** (Right to Life and Dignity). The Court ruled that menstruation is a biological reality that should not lead to structural exclusion or a "biological tax" on education.

Impact on the Growth of a Girl Child

1. **The ruling shifts the discourse from "welfare" to "entitlement."**
2. **Educational Continuity:** By addressing "menstrual poverty," the ruling prevents the loss of 2–5 school days per month. This reduces dropout rates, particularly at the transition from primary to secondary school.
3. **Psychological Well-being:** It dismantles the "culture of silence." Recognizing MHH as a right helps eliminate the shame and stigma that often leads to low self-esteem and social withdrawal during puberty.
4. **Health and Nutrition:** Proper MHM reduces the risk of Reproductive Tract Infections (RTIs). It ensures that a girl's physical development is not compromised by unhygienic traditional practices (e.g., using old rags).
5. **Substantive Equality (Article 14):** The SC noted that "formal equality" (treating boys and girls the same) is insufficient if biological differences are ignored. True equality requires the State to neutralize biological disadvantages.

Role of Centre and State: Substantiating the Right

To move beyond judicial pronouncements, the following institutional steps are required:

1. **Infrastructure Mandate:** States must ensure **functional, gender-segregated toilets** with consistent water supply and soap in all government and private schools.
2. **Free Distribution:** Mandating the provision of **free, oxo-biodegradable sanitary napkins** to all girl students (Class 6-12). The use of vending machines and "MHM Corners" in schools is now a binding requirement.
3. **Waste Management:** Integrating disposal mechanisms (like incinerators) into the **Solid Waste Management Rules** to handle the environmental impact of increased pad usage.
4. **Curriculum Reform:** NCERT and SCERTs must include age-appropriate menstrual education to sensitize both boys and girls, normalizing the biological process.
5. **Monitoring and Accountability:** District Education Officers must conduct annual audits. Non-compliance by private schools should lead to **derecognition**.

Other Barriers Faced by the Girl Child & Remedies

Barriers	Possible Remedies
Safety and Transport	"School-on-Wheels" or secure bicycle schemes (e.g., Bihar's *Mukhyamantri Balika Cycle Yojana*).
Domestic Burden	Promoting early childhood care (Anganwadis) to relieve girls of the burden of sibling care.
Digital Divide	Preferential distribution of tablets and digital literacy training to ensure girls aren't left behind in the "Digital India" era.
Early Marriage	Conditional Cash Transfers (e.g., *Sukanya Samriddhi Yojana*) tied to the completion of higher secondary education.
Nutrition Gap	Expanding the Mid-Day Meal scheme to include specialized nutritional supplements for adolescent girls (addressing anemia).

The Supreme Court's declaration is a watershed moment for **Gender Justice**. By linking menstrual hygiene to the Right to Life and the Right to Education, the judiciary has ensured that a girl's period is no longer a "full stop" to her aspirations. However, the success of this ruling lies in **"Positive Liberty"**—the active efforts by the State to provide the material conditions (pads, toilets, and awareness) necessary for a girl to exercise her rights with dignity.

1.8 Corporate Social Responsibility

In the Indian context, the evolution of **Corporate Governance (CG)** and **Corporate Social Responsibility (CSR)** has transitioned from "peripheral philanthropy" to a "core business imperative." With India being the first country to mandate CSR (2014), these two pillars have become instrumental in bridging the gap between economic wealth and social equity.

Significance of CSR

Significance	Effect on Society	Examples from Corporate India
National Development Goals	CSR acts as a multiplier for government schemes like *Swachh Bharat* and *Aspirational Districts*.	**Tata Power** and **Mahindra** have significantly scaled up watershed management and rural electrification, complementing the Jal Jeevan Mission.
Human Capital Augmentation	Strategic focus on "Soft Infrastructure"—skilling and healthcare—prepares a future-ready workforce.	**HUL's Project Shakti** has empowered over 100,000 rural women as micro-entrepreneurs, integrating social equity with a supply chain model.
Environmental Stewardship	Moving from mere "beautification" to "restoration," companies are adopting the **Circular Economy**.	**Wipro** and **ITC** are pioneers in "Water Neutrality" and "Zero Waste to Landfill," directly impacting local ecological resilience.
Investor Confidence & Ethics	Robust Corporate Governance attracts **Foreign Direct Investment (FDI)** and improves India's global ease of doing business.	The strict adherence to SEBI's **BRSR (Business Responsibility and Sustainability Reporting)** by firms like **Reliance** and **Infosys** has boosted ESG-led investments.
Crisis Resilience	Corporates act as "First Responders" during national emergencies.	During the COVID-19 pandemic and recent floods (2025), CSR funds were diverted for oxygen plants and immediate disaster relief under the "CCMP" framework.

Persistent Issues

Despite the growth, several systemic challenges undermine the impact:

1. **"Compliance over Conscience":** Many firms treat the 2% CSR mandate as a "Check-box" legal tax rather than a moral duty. This leads to last-minute fund disbursement without long-term strategy.
2. **Geographical Imbalance:** CSR funds are heavily concentrated in industrialized states like **Maharashtra, Gujarat, and Karnataka**. In contrast, Aspirational Districts in Eastern India (e.g., in Odisha and Bi har) often receive less than 5% of national spending.
3. **Greenwashing & Ethics:** Some companies report environmental expenditures that lack genuine ecological impact. Furthermore, the rising use of **AI in CSR** (for grant selection)

has been flagged for urban bias, inadvertently favoring tech-savvy urban NGOs over grassroots rural ones.

4. **Capacity Gaps in NGOs:** Many local implementation partners lack the technical skills (like Impact Reporting and GIS mapping) required by modern corporate donors, leading to a "trust deficit."

The Way Forward

To evolve from "Spending" to "Impact," the following steps are essential:

1. **Convergence with District Plans:** CSR should be partially mandated to align with **District Development Plans (DDPs)**. This prevents duplication of efforts and ensures that corporate funds fill the specific gaps in government service delivery.
2. **Social Stock Exchange (SSE):** Utilizing India's newly launched SSE to allow social enterprises to raise capital will bring transparency and market-like efficiency to the social sector.
3. **Incentivizing Rural Focus:** The government should provide "weighted credits" for CSR spending in **Aspirational Districts**, where 1 crore spent in a backward region counts as more than 1 crore in a metro city for compliance purposes.
4. **Outcome-Based Audits:** Shifting the regulatory focus from "Financial Audit" (how much was spent) to **"Social Audit"** (how many lives were transformed). This requires standardized **Social Return on Investment (SROI)** metrics.
5. **Human-in-the-Loop AI:** Ensuring that technology used for social impact is audited for bias, ensuring that marginalized voices are not filtered out by algorithms.

Corporate Governance and CSR are no longer "optional extras"; they are the **Social License to Operate** in 21st-century India. By moving from **"Check-book Philanthropy"** to **"Systemic Transformation,"** Corporate India can ensure that its growth story is not just about GDP numbers, but about the holistic well-being of the last person in the queue (*Antyodaya*).

1.9 Controversy Surrounding Environmental Clearances in India

In recent years, the Indian government has introduced a series of amendments to the **Environment Impact Assessment (EIA) Notification, 2006**, and other environmental laws to streamline development. This shift towards "expeditious clearances" has sparked a significant debate between economic growth and ecological conservation.

Recent Exemptions in Environmental Clearance (EC)

1. **Strategic & Defense Projects:** As of **September 2025**, the Ministry of Environment, Forest and Climate Change (MoEFCC) has exempted mining projects related to critical, strategic, and atomic minerals (like Lithium, REEs, and Thorium) from the mandatory "Public Consultation" stage, citing national security.

2. Linear Projects in Border Areas: All highway projects within 100 km of the International Border **or Line of Control (LoC)** are exempted from prior EC, subject to standard operating procedures. This is to fast-track infrastructure in sensitive zones like Ladakh and Arunachal Pradesh.

3. White Category Industries: In **late 2024**, "White Category" industries (least polluting) were completely exempted from the "Consent to Establish" (CTE) and "Consent to Operate" (CTO) mechanism under the Air and Water Acts.
4. Expansion of Projects: Modernization or expansion of existing projects (up to 50% increase in capacity) can now often bypass full-scale EIA studies if they meet certain criteria for "clean technology."
5. Construction Thresholds: Efforts were made (though partially struck down by the Supreme Court in **early 2025**) to exempt large industrial sheds and educational institutions with a built-up area up to 1,50,000 sq. m. from the EC process.

Rationale Behind the Exemptions

1. **Ease of Doing Business:** Reducing the "compliance burden" and duplication of approvals (e.g., merging CTE/CTO with EC) to attract investment.
2. **National Security:** Fast-tracking projects in border areas and securing a domestic supply of critical minerals essential for defense and high-tech sectors.
3. **Energy Security:** Accelerating mining of minerals like Uranium and Thorium to meet India's **Three-Stage Nuclear Power Programme** and "Net Zero 2070" goals.
4. **Economic Impetus:** Removing bottlenecks for "linear projects" (roads, pipelines) which are backbone for economic connectivity.

Constitutional Provisions for Environment Protection

1. **Article 48A (DPSP):** Directs the State to endeavor to protect and improve the environment and safeguard the forests and wildlife.
2. **Article 51A(g) (Fundamental Duty):** Imposes a duty on every citizen to protect and improve the natural environment, including forests, lakes, rivers, and wildlife.
3. **Article 21 (Fundamental Right):** The Supreme Court has expanded the **Right to Life** to include the **Right to a Wholesome/Healthy Environment** (*Subhash Kumar vs. State of Bihar*).
4. **Public Trust Doctrine:** Enshrined by the Judiciary, it mandates that the State is a "trustee" of natural resources, which must be protected for public use rather than private interest.

Why It Is a Talking Point & Threats to Ecology

The trend of exemptions is a major talking point because it represents a **paradigm shift from "Precaution" to "Expediency."**

1. **Dilution of Public Consultation:** Public hearings are the only democratic check where local communities (especially tribals) can voice concerns. Exempting strategic projects silences these vulnerable groups.
2. **Threat to Eco-Fragile Zones:** Many border projects fall in the Himalayas. Fast-tracking without site-specific EIAs increases risks of **landslides, flash floods, and loss of biodiversity**, as seen in recent disasters in Joshimath and Himachal Pradesh.

3. **Post-Facto Clearances:** Allowing projects to start and then "regularize" violations later undermines the **Precautionary Principle**, essentially treating environmental damage as a fine-able offense rather than a preventable disaster.
4. **Cumulative Impact:** While a single exempt project might seem small, the **cumulative impact** of multiple exemptions can lead to irreversible habitat fragmentation and groundwater depletion.

The tug-of-war between "Environment" and "Development" is not a zero-sum game. While India's strategic and economic needs are undeniable, environmental safeguards are not "roadblocks"—they are insurance against future ecological bankruptcy. The recent trend of executive-led exemptions must be balanced with the **Doctrine of Non-Regression**, which posits that environmental laws should only be made more stringent, never diluted. A sustainable India requires a "Regulatory Ease" that does not come at the cost of "Regulatory Dilution."

1.10 Organized Crimes

The recent reports of kidnapping surges in Delhi have reignited the debate on the proliferation of organized crime in urban centers. In early 2026, concerns were raised regarding missing persons cases, particularly involving adolescent girls and children, pointing toward a more systematic and sinister underlying network.

What is Organized Crime and How is it Carried Out?
Organized Crime is defined as a systematic and illegal activity conducted by a structured group of persons (syndicates) for monetary or material gain. Unlike conventional crime, it is a **business of crime** characterized by continuity and hierarchy.

- **How it is Carried Out:**
  - **Structure:** It operates through a clear chain of command (Boss -> Lieutenants ->Foot soldiers).
  - **Modus Operandi:** Use of violence, intimidation, and sophisticated technology.
  - **Functional Specialization:** Specific units for recruitment, execution, money laundering, and legal protection.
  - **The Nexus:** Often thrives on a **crime-terror-politics nexus**, where illicit funds are used to gain political patronage or fund insurgencies.
  - **Specific to Kidnapping:** Modern syndicates use "Digital Luring" (via Instagram/social media) for honey-trapping or fake job offers, moving victims through well-greased logistical "safe houses."

Reasons and Influences

1. **Socio-Economic Factors:** High urban-rural divide, unemployment, and the lure of "easy money" attract marginalized youth into gangs.
2. **Technological Shift:** The rise of encrypted communication (Signal/Telegram) and dark web transactions makes it difficult for traditional surveillance to track "handlers."
3. **Geographic Vulnerability:** High-density clusters (slums) with poor CCTV coverage (dark spots) and complex lane systems provide perfect

cover for hideouts.

4. **Legal Lacunae:** The absence of a dedicated central law for organized crime forces police to use multiple scattered acts (IPC/BNS), leading to lower conviction rates.
5. **Globalization:** Porous borders and ease of digital payments have turned domestic kidnapping into a precursor for transnational human trafficking or cyber-slavery.

Breaking the Backbone of such crimes: The Way Forward

Breaking the backbone of organized crime requires a **multi-dimensional approach** involving legal, technical, and social interventions.

1. **Government & Agencies (The "Hard" Approach)**
    a. **Legislative Strengthening:** While Delhi uses **MCOCA** (extended from Maharashtra), there is a need for a uniform **National Organized Crime Control Act** to ensure synergy across state borders.
    b. **Operation Milap 2.0:** Scaling up initiatives like Delhi Police's *Operation Milap* which uses **AI-based Facial Recognition Systems (FRS)** to match missing children with those found in shelters.
    c. **Financial Disruption:** Using the **Prevention of Money Laundering Act (PMLA)** to seize assets of kingpins, effectively cutting the "blood supply" of the syndicate.
    d. **Inter-Agency Grid:** Establishing a "Joint Command Center" involving the **National Investigation Agency (NIA)**, State Police, and Intelligence Bureau (IB) for real-time data sharing.
2. **Societal Involvement (The "Soft" Approach)**
    a. **Community Policing:** Best practices like **"Eyes and Ears Scheme"** (Delhi) or **"Janamaithri"** (Kerala), where locals like street vendors and rickshaw drivers act as the first line of intelligence.
    b. **Vulnerability Mapping:** Identifying "at-risk" youth in slums and providing skill development to prevent their recruitment into gangs.
    c. **Digital Literacy:** Educating parents and teenagers about "social media luring" and phishing scams that lead to physical abductions.

Best Practices (Global & Local)

1. **The "Mafia-Style" Takedown (Italy):** Using **Witness Protection Programs** and "pentito" (informant) laws to break the *Omerta* (code of silence).
2. **Amber Alerts (USA):** An instant notification system for missing children that leverages radio, television, and mobile networks within minutes of a reported abduction.
3. **Project CAVE (India):** Specialized "Cave and Forest warfare" tactics used recently in **Operation Kiya** (Udhampur) can be adapted for urban "concrete jungles" where gangs hide in dense illegal colonies.

Organized crime is a direct threat to the **Internal Security** and **Rule of Law**. In a megacity like Delhi, kidnapping is often the "front-end" of a much larger criminal industry involving human trafficking and organ trade. To dismantle these syndicates, the State must move beyond "reactive policing" toward **"Predictive Intelligence."** By combining the **MCOCA's stringent legal provisions** with **AI-driven surveillance** and **Community-led vigilance**, India can ensure that the "capital of the nation" does not become the "capital of crime." The goal must be to transform the police from a "force" to a "service" that is digitally superior and socially integrated.

1.11 Responsibilities of Opposition

In a parliamentary democracy, the government and the opposition are the two wheels of the same chariot. While the government is responsible for governance, the opposition is the "government-in-waiting," tasked with ensuring accountability through deliberation. However, the 19-hour disruption in the current **Budget Session (February 2026)**—which led to the unprecedented passage of the **Motion of Thanks** without the Prime Minister's reply—signals a deep-seated malaise in India's legislative culture.

Impact on the Basic Framework of Parliamentary Government

1. **Erosion of Executive Accountability:** The primary role of the legislature is to hold the executive accountable through Question Hour and debates. Continuous disruptions allow the government to bypass scrutiny, essentially giving the executive a "free pass" on critical policy failures.
2. **Legislative Paralysis and 'Guillotine':** When the House is stalled, bills are often passed without discussion using the "guillotine" or via the din. This transforms the Parliament from a deliberative body into a mere rubber stamp for the executive's agenda.
3. **Usurpation of Power (Judicial/Executive Overreach):** When the legislature fails to function, a "vacuum" is created. This leads to the **Judiciary** stepping into policy-making (Judicial Activism) and the **Executive** increasingly relying on the **Ordinance Raj** to bypass the House.
4. **Wastage of Public Exchequer:** Parliament costs approximately **₹25 lakh per hour** to operate. Wasting 19 hours translates to a direct financial loss of nearly **₹4.75 crore**, but the indirect loss of "legislative time" for public welfare bills is immeasurable.

Why the Indian Opposition is Becoming More Destructive

1. **The "Shadow Cabinet" Deficit:** Unlike the UK, India lacks a formal "Shadow Cabinet" where opposition leaders are assigned specific portfolios to track. This results in the opposition reacting to events rather than proposing alternative policies.
2. **Incentives for Grandstanding:** With the **live telecast** of proceedings, MPs often feel that "shouting" gets more media traction and voter visibility than "debating." Disruption has become a tool for **electoral branding**.
3. **Executive Dominance:** When the ruling party has a brute majority, the opposition often feels "unheard." This sense of marginalization leads to the belief that the "Well of the House" is the only place left to register a protest.
4. **Weaponization of Rules:** Frequent use of **suspensions** and the rejection of adjournment motions on technical grounds often provoke the opposition into more aggressive retaliatory tactics.
5. **Fragmented Federalism:** Regional parties often use the floor of the Parliament to highlight state-specific grievances, leading to localized disruptions that derail the national legislative agenda.

Measures to Restore Constructive Parliamentary Culture

To shift from a "politics of protest" to a "politics of policy," several reforms are necessary:

1. **Implementation of 'Opposition Days':** Adopt the British model where specific days in a session are reserved entirely for the opposition to set the agenda and choose the topics for debate.
2. **Institutionalizing a Shadow Cabinet:** Formally recognizing shadow ministers would force the opposition to conduct deep research and offer "alternative budgets" or "alternative bills," making their criticism more technical and less rhetorical.
3. **Productivity Linked Incentives:** There have been suggestions (like the **Vice President's 2021 lecture**) to link MP salaries or "allowances" to the productivity of the House, or to automatically extend the session by the number of hours lost to disruptions.
4. **The 'Code of Conduct' Enforcement:** Strengthening the powers of the Speaker to take non-partisan, swift action against repeat offenders, coupled with an **Ethics Committee** that reviews disruptive behavior more stringently.
5. **Strengthening Committee Systems:** More bills should be mandatorily referred to **Departmentally Related Standing Committees (DRSCs)**, where members from all parties work in a less polarized, closed-door environment to refine legislation.

The Speaker's lament over the 19 lost hours is a warning for Indian democracy. A destructive opposition does not just harm the ruling party; it devalues the institution of Parliament itself. For India to realize its **"Viksit Bharat"** goals by 2047, the legislature must return to being a "temple of debate" where disagreement leads to better laws, not just louder slogans.

1.12 Illegal Mining

Illegal mining in India, particularly in the ecologically sensitive North East, is a multi-dimensional crisis that pits economic survival against environmental and human safety. The persistent issue of "Rat-hole" mining in Meghalaya, despite a 2014 NGT ban, highlights the deep-rooted nature of this challenge.

Crises of Illegal Mining
In Pan-India Context:

- Aravalli Range (Rajasthan/Haryana): Illegal stone and sand mining have led to the disappearance of entire hills, causing the loss of natural barriers against the Thar desert's expansion and depleting groundwater.
- River Sand Mining (UP, Bihar, Tamil Nadu): Unregulated extraction from riverbeds (the "Sand Mafia") has led to bank erosion, altered river courses, and the collapse of bridge infrastructures.
- **Iron Ore Crisis (Goa/Karnataka):** Historically, excessive illegal extraction has led to

massive ecological degradation and significant revenue loss to the state exchequer.

In North East India:

- **The Rat-Hole Tragedy (Meghalaya):** Small, narrow tunnels (3–4 feet high) are dug by hand. In 2018 (Ksan) and 2021, dozens of miners were trapped and killed when these tunnels flooded with acidic water.
- **Environmental Acidification:** Coal mining in the Jaintia Hills has turned rivers like the **Lukha** and **Myntdu** bright blue or orange due to **Acid Mine Drainage (AMD)**, making them toxic to aquatic life.
- **Land Subsidence & Deforestation:** In Assam's **Dihing Patkai** (the "Amazon of the East"), illegal coal mining threatens the biodiversity of the elephant reserve.

Why Illegal Mining Persists: Dimensions of the Crisis

Dimension	Reasons for Prevalence
Social	**Lack of Livelihood:** In the North East, coal mining is often the only source of income for impoverished local communities and migrant laborers. The "labor-intensive" nature of rat-hole mining provides immediate cash.
Economic	**High Demand-Low Cost:** Illegal mining bypasses environmental clearances, safety equipment, and labor laws, making the mineral significantly cheaper. It feeds the insatiable demand of local brick kilns and cement plants.
Political	**Nexus & Patronage:** Mining "Sirdars" or local elites often hold significant political sway. In the North East, the Sixth Schedule's protection of community land rights is often misinterpreted to bypass central environmental laws.
Administrative	**Poor Monitoring:** Difficult terrain (dense jungles, hills) makes physical policing nearly impossible. Furthermore, there is a lack of specialized "Mineral Police" and a shortage of personnel in State Directorates of Geology and Mining.

The Way Forward: A Holistic Strategy

To transition from illegal extraction to sustainable mineral management, a four-pronged approach is required:

1. **Technological Oversight:**
   - **Satellite Mapping:** Use of **ISRO's Bhvan** portal and **GIS mapping** to detect changes in land use and illegal pit-head formations in real-time.
   - **Drone Surveillance:** Deploying drones for regular monitoring of "dark zones" where physical access is limited.
2. **Administrative Reform:**
   - **Strict Implementation of MMDR Act:** Strengthening the *Mines and Minerals (Development and Regulation) Act* to ensure mandatory "Star Rating" of all mines and severe penalties for non-compliance.
   - **Integrated Check Posts:** Digital tracking of mineral transport using **QR-coded transit passes** to prevent the movement of illegally mined ore.
3. **Socio-Economic Transition:**
   - **Alternative Livelihoods:** Utilizing the **District Mineral Foundation (DMF)** funds to create skill-development programs in agriculture, horticulture, and eco-tourism for former miners.
   - **Scientific Mining:** Training local communities in "high-wall" or "long-wall" mining techniques that are safer and more efficient than rat-hole methods.
4. **Legal Clarity:** Balancing the **Sixth Schedule** (Land Rights) with the **National Green Tribunal (NGT)** mandates. Community ownership of land should not equate to an exemption

from the **Environment Protection Act, 1986**.

Illegal mining is a "resource curse" that trades long-term ecological security for short-term private gain. The solution lies not just in bans, but in providing a **Just Transition** for the workers and leveraging technology to make "dark mining" visible to the law.

1.13 India-Malaysia Ties

The relationship between India and Malaysia has witnessed a transformative shift, evolving from historical cultural linkages to a "Comprehensive Strategic Partnership." Following the visit of the Malaysian Prime Minister to India in late 2024 and subsequent high-level engagements in 2025-26, the bilateral ties have entered a robust phase of "re-set" and expansion.

Historical Relation & Timeline of Evolution

India and Malaysia share a relationship rooted in the **Look East** (1991) and **Act East** (2014) policies, bolstered by a large Indian diaspora in Malaysia.

- **1957:** Diplomatic ties established upon Malaysia's independence.
- **2010:** Elevation to **Strategic Partnership** during PM Manmohan Singh's visit.
- **2015:** Elevation to **Enhanced Strategic Partnership** during PM Modi's visit.
- **2019-2020 (The Friction Point):** Ties hit a nadir due to comments by the then-Malaysian leadership on Article 370 and the CAA, leading to a "palm oil war."
- **2024-2026 (The Re-set):** Under PM Anwar Ibrahim, both nations have moved to a **Comprehensive Strategic Partnership**, focusing on digital economy, defense, and semiconductor supply chains.

Significance and Objectives of Recent Pacts

The recent strategic pacts signed in 2025-2026 are aimed at diversifying the relationship beyond traditional trade in palm oil and petroleum.

1. **Semiconductor Collaboration:** Leveraging Malaysia's strength as a global chip packaging hub to support India's **India Semiconductor Mission (ISM)**.
2. **Defense Cooperation:** Focus on the "Make in India" initiative, with Malaysia showing interest in India's **LCA Tejas** and maintenance contracts for Su-30 MKM aircraft.
3. **Local Currency Trade:** Moving toward settlement of trade in **INR and Ringgit** to bypass the USD, facilitating easier transactions for SMEs.
4. **Digital Transformation:** Pacts on **UPI-PayNet** linkage for cross-border real-time payments and cooperation in Cybersecurity and AI.
5. **Food Security:** Ensuring a stable supply of Indian non-basmati rice to Malaysia in exchange for consistent palm oil trade terms.

Challenges that Remain

1. **The China Factor:** Malaysia maintains a deep economic reliance on China and is a part of the **RCEP**, which India has opted out of. Malaysia's "neutrality" in the South China Sea often contrasts with India's more vocal stance on a "Free and Open Indo-Pacific."
2. **Trade Imbalance:** Trade remains heavily skewed in favor of Malaysia due to India's massive imports of palm oil and electronic goods.
3. **Extradition Issues:** The long-standing issue of fugitive Zakir Naik continues to be a minor but persistent diplomatic irritant.
4. **Palm Oil Sensitivity:** Environmental concerns and EU regulations on palm oil often lead to market volatility, affecting bilateral trade stability.

Way Forward

1. **Institutionalizing the "Re-set":** Regularize the **Foreign Ministers' Framework Dialogue** to ensure political disagreements do not spill over into economic ties again.
2. **The "M-I-M" Corridor:** Strengthening the **Malaysia-India-Myanmar** link through the Trilateral Highway to enhance physical connectivity.
3. **Diversification:** Shifting from a "Commodities-based relationship" (Palm oil/Oil) to a "Knowledge-based relationship" (FinTech, Space, and Green Hydrogen).
4. **ASEAN Centrality:** As Malaysia takes on leadership roles within ASEAN, India should use this partnership to deepen its footprint in the wider Indo-Pacific maritime architecture.

The Big Picture: India-Malaysia ties represent a classic case of **"Middle Power Diplomacy."** In a bipolar world (US-China), both nations find common ground in strategic autonomy. For India, Malaysia is the "pivot" to Southeast Asia; for Malaysia, India is the "counter-balance" and a massive market for its emerging tech services.

1.14 India's Fight Against Naxalism

Naxalism (or Left-Wing Extremism - LWE) remains one of India's most significant internal security challenges. While the movement has shrunk geographically, the underlying causes remain a blend of socio-economic and structural issues.

The Development-Naxalism Link: A Paradox

Naxalism is deeply intertwined with development—specifically, the **absence** or **mismanagement** of it.

1. **The Development Deficit:** Naxalism thrives in "pockets of neglect." Lack of basic infrastructure (roads, schools, healthcare) creates a vacuum of state presence, which Maoists fill by providing primitive justice and security.
2. **Displacement & Alienation:** Industrialization and mining in the "Red Corridor" often lead to the displacement of tribal populations. When tribes lose their land (their only asset) without adequate compensation, it breeds resentment.
3. **Resource Curse:** Areas richest in minerals (Chhattisgarh, Odisha) are often the poorest in human development. Maoists exploit this "relative deprivation," arguing that the state is "extracting" wealth while leaving the locals in poverty.

Other Influencing Factors

Beyond development, Naxalism is fueled by:

1. **Identity & Dignity:** Historical exploitation of Adivasis and Dalits by upper-caste landlords (Zamindari remnants).
2. **Governance Failure:** Poor implementation of the Fifth Schedule and PESA Act, leading to the denial of traditional forest rights.
3. **Ideological Pull:** The Maoist ideology of "Protracted People's War" to overthrow the state via armed struggle appeals to the youth who feel the system is rigged.
4. **Geographical Advantage:** The "cut-off" nature of the **Abujhmad** forest and hilly terrains provides perfect guerrilla hideouts.

Statistical Snapshot: Clipping the Wings of LWE

India has seen a drastic decline in LWE influence over the last decade:

- **Geographical Shrinkage:** From over 120 districts in 2010, the "heavily affected" districts have come down to approximately **25–30** in 2026.
- **Violence Levels:** Incidents of LWE violence have dropped by over **70%** compared to 2010 highs.
- **Security Success:** In 2024-25, record numbers of high-ranking Maoist cadres surrendered or were neutralized in the **Bastar** region.
- **Vacuum Filling:** More than **5,000 km** of roads and **2,500+** mobile towers have been constructed in formerly "no-go" zones.

Government Strategies: The "SAMADHAN" Doctrine

The Ministry of Home Affairs uses the **SAMADHAN** strategy:

- **S** - Smart Leadership.
- **A** - Aggressive Strategy.
- **M** - Motivation and Training.
- **A** - Actionable Intelligence.
- **D** - Dashboard-based KPIs.
- **H** - Harnessing Technology (Drones, PTT).
- **A** - Action Plan for each theatre.
- **N** - No access to Financing.

Key Government Schemes

- **Aspirational Districts Programme:** Targets the 112 most backward districts (many LWE-affected) to improve health and education.
- **Special Central Assistance (SCA):** Funding for "gap-filling" in infrastructure (e.g., small bridges, primary schools).
- **ROSHNI Scheme:** A specialized placement-linked skill development scheme for rural youth in LWE districts.
- **Eklavya Model Residential Schools (EMRS):** Providing quality education to tribal students to prevent radicalization.
- **Greyhounds & CoBRA:** Specialized elite police units for jungle warfare and tactical operations.

The Way Forward: What more can be done?

1. **Winning the "Heart and Mind":** Move from "Security-first" to "Governance-first." The state must not just enter with boots, but with services.
2. **Implementation of Forest Rights Act (FRA):** Ensure land titles are actually handed to tribals to remove the primary grievance used by Maoists.
3. **Surrender & Rehabilitation:** The policy must be more lucrative and safer, ensuring surrendered Maoists aren't targeted by their former comrades.
4. **Counter-Ideology:** Using local dialects and community radio to debunk Maoist propaganda and showcase the benefits of the democratic process.

"The Iron Fist and the Velvet Glove"
The strategy against Naxalism is often described as the **"Dual-track Approach."** The **Iron Fist** (Specialized forces like CoBRA) is used to neutralize armed insurgents, while the **Velvet Glove** (Development schemes like PMGSY and ROSHNI) is used to win back the trust of the marginalized population. Success lies in the perfect balance of both.

1.15 India-Seychelles Partnership

In early February 2026, India and Seychelles significantly upgraded their bilateral relationship during the state visit of President Patrick Herminie to New Delhi. This visit, marking the 50th anniversary of Seychelles' independence and diplomatic ties with India, culminated in the adoption of a landmark roadmap titled **SESEL** (Sustainability, Economic Growth, and Security through Enhanced Linkages).

Key Facts of the 2026 Pact

1. **The SESEL Joint Vision:** A comprehensive framework fo cusing on sustainability, blue economy, and maritime security.
2. **Special Economic Package:** India announced a $175 million package, comprising a $125 million rupee-denominated Line of Credit and $50 million in grants.
3. Digital Public Infrastructure (DPI): India will help Seychelles digitize its governance and payment systems (like UPI) to promote financial inclusion.
4. **Healthcare Support:** India donated 10 advanced ambulances and agreed to recognize the **Indian Pharmacopoeia**, allowing Seychelles to procure affordable, high-quality Indian medicines.
5. **Maritime Assets:** India committed to the refit of a Seychelles Coast Guard patrol vessel and the transfer of Laser Radial class boats.
6. **Food Security:** A donation of 1,000 metric tons of grains was provided to help lower local food costs.

Strategic Significance: Engaging Small Islands

India's "Island Diplomacy" is no longer just a peripheral policy; it is a central pillar of its **Vision MAHASAGAR** (Mutual and Holistic Advancement for Security and Growth Across Regions).

Aspect	Significance & Impact
Strategic	Small islands act as "stationary aircraft carriers." By securing access and influence in Seychelles, India counters the "String of Pearls" (Chinese naval presence) in the Western Indian Ocean.
Military	Enhances **Maritime Domain Awareness (MDA)**. Joint surveillance of Exclusive Economic Zones (EEZ) helps combat piracy, illegal fishing, and narcotics smuggling.
Economic	Focuses on the **Blue Economy**. Cooperation in marine research, sustainable fishing, and deep-sea mining provides future resources while promoting trade in local currencies.
Diplomatic	Each island state has an equal vote in international forums (UN, IMO). By being a "First Responder" during crises, India gains loyal allies who support its bid for a permanent UNSC seat.
Digital	Exporting India's "Tech Stack" (DPI) creates a soft-power dependency on Indian technology standards rather than Western or Chinese alternatives.

Cornerstone of the Global South

India's engagement with Seychelles is a blueprint for its leadership of the **Global South**:

1. **Asymmetric Partnership:** Unlike the "debt-trap diplomacy" often associated with large powers, India's model is demand-driven and based on the island nation's own priorities (e.g., social housing and e-mobility).
2. **The "Vishwa Bandhu" Role:** By championing the specific vulnerabilities of Small Island Developing States (SIDS)—such as sea-level rise and climate finance—India proves it can represent those whose voices are often drowned out in the G20 or COP summits.

What India Needs to Do More

While the 2026 pact is a leap forward, India must address specific gaps to maintain its edge:

1. **Project Execution Speed:** Historically, Indian projects have faced delays. To compete with China, India must ensure the $175M package translates into "ground-breaking" within months, not years.
2. **Climate Resilience Hub:** India should establish a regional **Disaster Management Center** in Victoria, leveraging its satellite capabilities to provide real-time weather and cyclone data to the entire island chain.
3. **Connectivity & Tourism:** Beyond government-to-government pacts, India needs better direct flight connectivity and visa-free regimes to encourage Indian private investment in the Seychellois tourism sector.
4. **Security Integration:** India should push for Seychelles to take an even more active role in the **Colombo Security Conclave**, moving from an observer to a primary operational partner in naval drills.

1.16 India-Africa Trade, Concerns and Way Ahead

In recent years, India's engagement with Africa has transitioned from "historical solidarity" to "strategic economic partnership." As of early 2026, Africa has solidified its position as India's fourth-largest trading partner, with bilateral trade approaching the **$100 billion** mark.

The Growth Trajectory (Key Stats)

India-Africa trade has seen a remarkable surge, moving beyond traditional sectors into high-value manufacturing and digital services.

1. **Trade Volume:** Bilateral trade reached approximately **$100 billion in 2025**, a significant jump from $70 billion in 2018-19.
2. **Export Composition:** Indian exports reached **$38.17 billion (FY24)** and continue to grow. Key drivers include **Petroleum Products** (India's largest export), **Pharmaceuticals** (India provides 20% of Africa's generics), and **Engineering Goods**.
3. **Import Trends:** India's imports from Africa are dominated by crude oil, gold, and critical minerals (copper, lithium, cobalt), which are vital for India's green energy transition.
4. **Investment:** India is one of the top five investors in Africa, with a cumulative investment of over **$75 billion** in sectors like telecommunications, energy, and automobiles.

Replacing the "Dragon": Indian Products vs. Chinese Goods

A notable shift is occurring in African markets where Indian products are gaining an edge over Chinese alternatives.

Product Category	Example/Trend	Why India is Winning
Automobiles	**Tata, Mahindra, Bajaj, TVS**	Indian vehicles are perceived as "sturdy" and better suited for African terrain. Superior after-sales service and spare part availability contrast with "disposable" Chinese imports.
Pharmaceuticals	Generic drugs and vaccines (e.g., **Serum Institute**).	Indian medicines are the "Pharmacy of the World." They are seen as high-quality yet affordable, whereas Chinese medical supplies faced trust issues during the pandemic.
Digital Services	**Unified Payments Interface (UPI)** & **Digital ID**.	India's "Digital Public Infrastructure" (DPI) model is open-source and inclusive, unlike China's closed-loop, surveillance-heavy tech ecosystems.
Agri-Machinery	**Sonalika** & **Escorts** tractors.	Indian technology is "appropriate technology"—simple to maintain for rural African farmers compared to high-tech, expensive Western or Chinese machines.

The "Why": India's model is **demand-driven** (building local capacity) versus China's **resource-driven** (extractive) model. Africa increasingly views India as a "shareholder" in its growth rather than just a "stakeholder."

The Tariff Challenge: A New Barrier

Despite the growth, a "tariff wall" is emerging. For example, in **January 2026**, South Africa initiated a review to impose up to **50% tariffs on vehicles** from India and China to protect its domestic

automotive industry.

- **Protectionism:** African nations, under the **AfCFTA (African Continental Free Trade Area)**, are trying to boost "Made in Africa" products by taxing finished imports.
- **Trade Imbalance:** Concerns over "import surges" in entry-level segments are leading to anti-dumping duties and higher Most Favored Nation (MFN) rates.

Possible Course of Action for India

To navigate these barriers and cement its role as the **Voice of the Global South**, India should:

1. **Shift from "Exporting" to "Manufacturing":** Instead of shipping finished cars or drugs, Indian firms (like the PLI-backed manufacturers) should set up **Assembly & Transformation Hubs** within Africa. This bypasses tariffs and aligns with the "local value addition" goals of AfCFTA.
2. **Institutionalize Trade Finance:** Increase the use of **Local Currency Settlement** (as seen with the UAE and Nigeria) to mitigate the dollar shortage in African economies.
3. **Negotiate an India-AfCFTA FTA:** Rather than piecemeal bilateral deals, India should negotiate a comprehensive trade agreement with the AfCFTA secretariat to ensure predictable, lower-tariff access across all 54 signatory nations.
4. **Focus on Critical Minerals:** Secure long-term supply chains for lithium and cobalt through "Infrastructure-for-Resources" deals that focus on building African processing plants rather than just exporting raw ores.

India's Africa strategy must evolve from a "Mercantile Model" to a "Collaborative Ecosystem." By integrating Indian MSMEs into African value chains and leveraging Digital Public Infrastructure (DPI), India can offer a development model that is more sustainable and transparent than the "Belt and Road" alternative. The success of this partnership will be the ultimate litmus test for India's leadership in the Global South.

1.17. Digital Services Tax

Digital Services Tax (DST), often referred to in India as the **Equalisation Levy** or "Google Tax," is a tax aimed at ensuring that non-resident digital giants (like Google, Amazon, and Meta) pay their fair share of taxes on revenues generated from the domestic market, even if they lack a physical "brick-and-mortar" presence.

Significance of DST for India

For the Indian government and the broader economic landscape, the DST/Equalisation Levy serves three primary functions:

1. **Revenue Generation & Tax Base Expansion:** In a digitalized economy, value is created through user participation and data. Since traditional tax laws require a "physical nexus," many tech giants avoided local corporate taxes. DST allows India to tap into this massive revenue stream.

2. **Level Playing Field:** It prevents foreign e-commerce and digital service providers from having an unfair price advantage over domestic companies that are subject to the standard

30% corporate tax and other local regulations.

3. **Strategic Leverage in Global Negotiations:** By implementing a unilateral tax, India gained a seat at the table in OECD/G20 "Pillar One" negotiations, pushing for a fairer distribution of taxing rights for "market jurisdictions" (countries where the customers are located).

The India-US Agreement and the "Abolition": In **February 2026**, following high-level trade negotiations between the US and India (under the Trump and Modi administrations), a breakthrough was reached. India committed to **removing its unilateral Digital Services Taxes** in exchange for significant trade concessions.

The Consequences

1. **Trade Gains:** India secured **zero-duty access** for nearly **$44 billion** worth of goods (half of its merchandise exports to the US), which could lead to a massive boost in the manufacturing and textile sectors.
2. **Revenue Loss:** Scrapping the 6% (advertising) and 2% (e-commerce) levies results in a direct loss of tax revenue from Big Tech.
3. **Reduced Compliance for Tech:** For US-based firms, this removes a "discriminatory" and complex tax hurdle, potentially lowering the costs of digital services for Indian consumers if companies pass on the savings.
4. **Shift to Multilateralism:** This signals India's transition from "unilateral" taxes to the **OECD Pillar One** framework, where taxing rights are reallocated based on global consensus rather than individual country laws.

The Way Forward: The Transition from Unilateralism to Multilateral Consensus

The recent decision to phase out the Equalisation Levy marks a paradigm shift in India's digital diplomacy. While the levy was an essential "interim measure" to prevent tax leakage, the move toward a **Bilateral Trade Agreement** with the US and the **OECD's Two-Pillar Solution** represents a more sustainable long-term strategy.

Strategic Roadmap:

1. **Implementation of Pillar One:** India must now ensure that the global **Amount A** (the portion of residual profits reallocated to market countries) effectively compensates for the revenue lost by abolishing the Equalisation Levy.
2. **Expanding Significant Economic Presence (SEP):** Since the DST is being removed, India will likely rely more on the **SEP** concept within the Income Tax Act to define a "Digital Permanent Establishment," ensuring that digital profits are still captured under regular corporate tax frameworks.
3. **Focus on "Digital Trade Rules":** As part of the US-India deal, New Delhi will negotiate rules on cross-border data flows and customs duties on electronic transmissions. The way forward involves balancing **sovereign data protection** with the need for **frictionless digital trade**.

The abolition of the DST is not a retreat but a calculated trade-off. By trading a "narrow" tax for "broad" market access, India is positioning itself as a global manufacturing hub while betting on a more equitable international tax regime to handle the tech giants.

1.18 Shadow of Geoeconomics on Geopolitics

In the contemporary "New World Order," the traditional boundary between **Geopolitics** (power) and **Geoeconomics** (wealth) has blurred. Economic policy is no longer just a tool for domestic prosperity; it is a primary instrument of **Economic Statecraft** used to project power, influence behavior, and secure strategic interests.

Economic Policy as Foreign Policy: Key Examples

1. **Weaponization of Supply Chains:**
   - **China's Rare Earths:** China has historically restricted the export of rare earth minerals (essential for high-tech electronics and defense) to Japan and the US during diplomatic spats to exert leverage.
   - **Semiconductor Wars:** The US **CHIPS and Science Act** and export controls on advanced AI chips to China are economic policies designed specifically to prevent a rival from gaining a military-technological edge.
2. **Trade as a Tool of Coercion (and Reward):**
   - **Sanctions on Russia:** Following the Ukraine conflict, the freezing of Russian central bank reserves and the SWIFT ban turned financial policy into a "non-kinetic" weapon of war.
   - **Friend-Shoring:** The US and its allies are shifting trade toward "trusted partners" (like India and Vietnam) to reduce dependency on adversarial nations, making trade a litmus test for diplomatic alignment.
3. **Infrastructure & Debt Diplomacy:**
   - **Belt and Road Initiative (BRI):** China's massive loans for infrastructure in developing nations (e.g., Hambantota Port in Sri Lanka) serve the foreign policy goal of expanding its strategic footprint.
   - **IMEC (India-Middle East-Europe Corridor):** A counter-strategy where economic connectivity is used to build a "stable, integrated" alternative to the BRI.

Pros and Cons

Pros	Cons
Avoidance of Hot War: Economic tools allow states to compete and pressure rivals without resorting to direct military conflict.	**Global Inflation:** Trade wars and tariffs (e.g., US-China) disrupt supply chains, raising costs for consumers worldwide.
Leverage for Small Powers: Strategic resources (like oil or lithium) allow smaller	**Market Distortions:** Efficiency is sacrificed for "security." Subsidies and protectionism slow

nations to punch above their weight in global affairs.	down global innovation and growth.
Goal Alignment: Can be used to enforce global norms (e.g., climate goals through "Carbon Border Taxes" or human rights through sanctions).	**Inequality:** Developing nations often get caught in the "crossfire" of trade wars or trapped in "debt-trap diplomacy."

- **Result: Stretching of Conflicts and Reduced Order**

This shift has indeed led to **"Geo-economic Fragmentation."**

1. **Reduced Multilateralism:** Institutions like the **WTO** are becoming paralyzed because trade rules are being bypassed in the name of "National Security."
2. **Extended Conflict Cycles:** Since economic warfare is less "visible" than military war, it tends to drag on for decades (e.g., the 40-year US sanctions on Iran), making reconciliation harder.
3. **Bifurcation of the World:** We are seeing a "Digital Iron Curtain" where the world may split into two separate technological and financial ecosystems (One led by the US/West, the other by China/Russia).

The Way Forward:

To prevent the total collapse of the rules-based order, a **"New Multilateralism"** is required:

1. **Reform the WTO:** Update trade laws to clearly define "National Security" exceptions, preventing countries from using this as a blanket excuse for protectionism.
2. **Inclusive Supply Chains:** Move from "Friend-shoring" to **"Multi-shoring."** Instead of creating blocs, diversify supply chains across various neutral geographies to ensure resilience without exclusion.
3. **Re-empowering Global Governance:** The **G20** should act as a mediator to set "Rules of the Road" for economic statecraft, ensuring that competition in tech and trade doesn't spill over into systemic instability.
4. **Strategic Autonomy (India's Model):** India's approach—pursuing "Atmanirbharta" (self-reliance) while remaining open to global partnerships—offers a middle path that prioritizes national security without completely decoupling from the global economy.

The "Weaponization of Interdependence" signifies that the era of "pure globalization" is over. In the current age, a nation's **Foreign Policy** is only as strong as its **Economic Resilience**. However, for a stable world order, economic competition must be managed within a **rules-based framework**. If geoeconomics continues to operate in a "jungle-law" environment of unilateral sanctions and tech-blockades, the global commons—climate, health, and poverty—will remain the ultimate casualties.

1.19 Amendment of IT Act

Ministry of Electronics and Information Technology (MeitY) notified significant amendments to the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules**. These changes primarily target the unregulated proliferation of Artificial Intelligence (AI) and the rising threat of "synthetic misinformation."

Key Changes Incorporated

1. **Mandatory Labeling of AI-Generated Content:** Intermediaries must now ensure that any AI-generated or "synthetically modified" content (Deepfakes) is embedded with a persistent, non-removable **metadata watermark** to notify users of its origin.
2. **Model Registration and Testing:** Large-scale AI models (foundational models) must undergo "safety testing" before being released for public use in India. For "unreliable" or "under-testing" models, a specific **statutory warning** must be displayed to users regarding potential biases or hallucinations.

3. **Strict Timelines for Takedowns:** In the age of viral content, 36 hours was considered an eternity. The new rules require warp-speed action:
    a) **3 Hours:** For content deemed illegal by a court or the government.
    b) **2 Hours:** For the most sensitive violations, like non-consensual deepfake nudity, where every minute of exposure causes trauma.
4. **Due Diligence for "Deepfake" Tools:** Platforms providing AI-generation services (like face-swapping or voice-cloning) are now categorized as "Significant Intermediaries" with stricter KYC (Know Your Customer) requirements for their users.
5. **Law Enforcement Coordination:** This amendment bridges the gap between digital policy and criminal justice.
    a) **BNS Integration:** References are now aligned with the **Bharatiya Nyaya Sanhita (BNS), 2023**, replacing the old IPC.
    b) **Identity Disclosure:** If a crime is committed via AI, platforms must reveal the creator's identity to the police. This is designed to end the anonymity shield that often protects deepfake creators.
6. **Safe Harbour Clarification:** This is the Carrot and Stick approach for Big Tech.
    a) **Section 79 Protection:** Platforms generally aren't sued for what users post (Safe Harbour).
    b) **The Condition:** Under the 2026 rules, if a platform fails to label AI or misses a 3-hour takedown window, they **lose this protection**. They can then be sued as if *they* were the ones who created the illegal content.

Significance of the Amendment

1. **Protection of Information Integrity:** By mandating watermarks, the rules empower citizens to distinguish between "organic" and "synthetic" truth, vital for maintaining the sanctity of elections and public discourse.
2. **Safety by Design:** Shifting the burden of proof to AI developers ensures that safety is an "upstream" concern rather than an "afterthought."

3. **Curbing Non-Consensual Deepfakes:** The rules provide a robust legal framework to protect individuals, especially women and celebrities, from digital identity theft and deepfake pornography.
4. **Accountability of Big Tech:** It ends the "Safe Harbour" protection for platforms that fail to act proactively against identified AI harms.
5. **Alignment with New Criminal Laws**: The rules replace references to the IPC with the Bharatiya Nyaya Sanhita (BNS), 2023, streamlining the legal process.
6. **Ensuring Electoral Integrity:** Guards against the use of AI influencers or morphed videos to sway voters during the sensitive Model Code of Conduct period.

Pain Points Yet to be Addressed

1. **Technological Lag:** Metadata watermarking is currently easy to strip away using advanced editing software, making the "labeling" rule difficult to enforce technically.
2. **Impact on Innovation:** Critics argue that mandatory "safety testing" and government clearances for AI models may create a "License Raj" for software, stifling the Indian AI startup ecosystem.
3. **Definition of "Bias":** The rules penalize "biased" AI outputs, but "bias" remains a subjective term that is difficult to define legally without infringing on free speech.
4. **Enforcement on Decentralized Models:** The rules are effective against centralized entities (like Google or OpenAI) but remain largely toothless against open-source, decentralized AI models hosted outside India.

Way Forward

1. **The "Human-in-the-Loop" Approach:** Regulation should not just be about takedowns but about ensuring human oversight in AI-driven decision-making processes.
2. **Global Harmonization:** India should lead a "Global Accord on AI Ethics" (possibly through a permanent G20 secretariat) to ensure that AI-generated content can be tracked across borders.
3. **Digital Literacy:** Legislation must be complemented by mass awareness campaigns to teach citizens "digital hygiene"—the ability to verify content before sharing.
4. **Standardized Watermarking:** Collaborate with global tech consortiums to develop a "universal, unstrippable digital signature" for AI content.

While the IT Rules Amendment 2026 is a proactive step toward a "Safe and Trusted Internet," the government must balance the scales between **preventing digital harm** and **fostering technological frontier growth**.

1.20 India-Greece Momentum

The bilateral relationship between India and Greece has transitioned from "historic ties" to a **Strategic Partnership** (elevated in 2023). In 2026, this partnership is being viewed as a cornerstone of India's Mediterranean outreach and its broader "Act West" policy.

Recent Initiatives (2025–2026)

1. **IMEC Activation:** Greece has officially emerged as a primary European landing point for the **India-Middle East-Europe Economic Corridor (IMEC)**, with the **Port of Piraeus** and **Port of Alexandroupolis** being integrated into the maritime-rail link.
2. **Defense Co-production:** Following the 2026 Defense Dialogue, the two nations initiated joint manufacturing of UAV components and maintenance of Greek Mirage and Rafale fleets by Indian technicians.
3. **Migration and Mobility Pact:** A formal agreement was operationalized in early 2026 to facilitate the legal movement of Indian skilled professi onals (especially in construction and agriculture) to Greece.
4. **Strategic Connectivity:** Direct flight connectivity between New Delhi and Athens was restored in 2025 to boost tourism and business exchange.

Greece as India's Gateway to Europe

Greece is uniquely positioned to be India's "Entry Point" into the European Union (EU) for several reasons:

1. **Geographic Proximity:** It is the closest European maritime neighbor to the Suez Canal.
2. **The "Piraeus" Factor:** The Port of Piraeus is one of the fastest-growing ports in the world. Indian goods landing here can reach Central Europe via rail in significantly less time than through the North Sea ports (Rotterdam/Hamburg).
3. **Strategic Diversification:** As India looks to reduce reliance on traditional hubs like the UK (post-Brexit), Greece offers a stable, pro-India alternative within the EU single market.

Convergence Points

1. **Trade Growth:** Bilateral trade, which hovered around **$1.3 billion in 2022-23**, has surged to approximately **$2.8 billion in 2025**, with an aim to double it again by 2030.
2. **Defense Synergy:** Both nations share concerns over **maritime security** and international law (UNCLOS). Greece's tension in the Eastern Mediterranean mirrors India's challenges in the South China Sea.
3. **Diaspora & Investment:** Over **15,000 Indians** reside in Greece. Indian firms (like GMR) are already investing heavily in Greek infrastructure (e.g., the **Kastelli Airport** in Crete).

Challenges

1. **The "Turkey" Factor:** Turkey's close ties with Pakistan often put Greece and India on the same side of the geopolitical fence, but India must balance its Mediterranean interests without permanently alienating other regional players.
2. **Chinese Footprint:** China's COSCO owns a majority stake in the Port of Piraeus. India faces the challenge of building infrastructure (like the Port of Alexandroupolis) that remains free of Chinese strategic influence.
3. **EU Bureaucracy:** Trade is often hindered by the slow progress of the **India-EU Free Trade**

Agreement (FTA), which governs Greek-Indian commerce.

Way Forward

1. **Operationalizing IMEC:** India must fast-track the development of the "Greek link" of IMEC to ensure it remains a viable alternative to China's Belt and Road Initiative (BRI).
2. **Maritime Security Cooperation:** Regularizing **joint naval exercises** in the Mediterranean and the Indian Ocean to ensure "Freedom of Navigation."
3. **Energy Partnership:** Collaborating on the **Green Hydrogen** corridor, leveraging Greece's solar/wind potential and India's mission-mode production.
4. **Space Collaboration:** Utilizing India's ISRO for Greek satellite launches, creating a high-tech pillar in the relationship.

Conclusion: For India, Greece is no longer just a civilizational cousin; it is a **geopolitical anchor** in the Mediterranean. A strong Athens-Delhi axis provides India with a reliable voice within the EU and a secure corridor for its global trade ambitions.

1.21 New CPI

The Ministry of Statistics and Programme Implementation (MoSPI) officially rolled out the much-awaited **revamped Consumer Price Index (CPI)**. This reform marks a structural shift in how India measures inflation, moving away from an outdated 2012 base year to reflect the consumption patterns of a modern, post-pandemic economy.

Key Changes in the New CPI

The primary objective of the reform was to address the "lag" in reflecting real-world spending habits.

1. **Updated Base Year:** The base year has been shifted from **2012 to 2023-24**, aligning it with the latest Household Consumption Expenditure Survey (HCES).
2. **Revised Item Basket:** Over **100 new items** have been added to the basket, including high-tech gadgets (smartwatches, tablets), streaming service subscriptions (OTT), and modern health supplements. Obsolete items like VCRs and certain coarse grains have been removed.
3. **Weightage Rebalancing:** * **Food and Beverages:** The weightage of food has been reduced from approximately **45.86% to 39.5%**, reflecting Engel's Law (as incomes rise, the proportion of income spent on food decreases).
    a. **Services and Discretionary Spending:** Weightage for education, health, transport, and communication has been significantly increased.

4. **Geometric Mean Method:** Transitioning from the Arithmetic Mean to the **Geometric Mean** for calculating price relatives to better handle price volatility and substitution effects.

Significance and Consumer Perspective

The reform provides a more "human-centric" view of inflation rather than a purely statistical one:

1. **Reflecting Modern Aspirations:** By including services like internet data and gym memberships, the index now captures the cost of living of the "new middle class" rather than just basic survival.
2. **Mitigating the "Food-Heavy" Bias:** Previously, a spike in tomato or onion prices would disproportionately skew the headline inflation. The new weights ensure that core inflation (non-food, non-fuel) gives a truer picture of long-term economic stability.
3. **Better Policy Signaling:** For the RBI's Monetary Policy Committee (MPC), the new CPI provides a more accurate "real interest rate" calculation, ensuring that rate hikes or cuts are based on what consumers actually feel in their pockets.

Persistent Issues

1. **Digital Divide in Data:** While the basket includes digital services, data collection in rural areas still relies on physical price reporting, which may not capture the nuances of e-commerce discounts.
2. **The "Housing" Dilemma:** The calculation of "Imputed Rent" for self-owned houses remains a complex and often debated metric that may not fully reflect the urban real estate surge.
3. **Lag in Real-Time Dynamics:** Even with a 2023-24 base, the rapid shift in consumer behavior (like the sudden rise in Quick Commerce/Blinkit-style shopping) can make the basket feel dated within a few years.

Way Forward

To ensure the CPI remains a "living" indicator of the Indian economy:

1. **Dynamic Weighting:** India should consider a **Chain-Weighted Index** (like many advanced economies) where weights are updated annually or biennially rather than once a decade.
2. **Integration of Big Data:** Incorporating web-scraping and point-of-sale (PoS) data from major retailers can provide real-time inflation tracking, reducing the time lag in reporting.
3. **Regional Specificity:** Strengthening state-level CPIs to account for the vast disparity in consumption patterns between a state like Kerala and a state like Bihar.

The transition to the new CPI is not merely a statistical recalibration but an administrative imperative for **evidence-based policymaking**. By aligning the "inflation lens" with the actual consumption of 1.4 billion people, the government has moved closer to achieving the goal of **"Ease of Living."** However, for the CPI to truly be a barometer of economic health, it must evolve from a static decadal exercise into a dynamic, tech-driven feedback loop.

1.22 Artificial Intelligence in Education

The integration of Artificial Intelligence (AI) into the education sector represents a shift from "standardized learning" to "personalized mastery." As India moves toward the goals of the **National Education Policy (NEP) 2020**, AI acts as a force multiplier in achieving **SDG 4 (Quality Education)**.

AI Integration: Personalizing the Educational Journey

AI transitions the classroom from a one-size-fits-all model to an **Individualized Education Program (IEP)** at scale.

1. **Adaptive Learning Pathways:** AI platforms (like **Khan Academy's Khanmigo**) analyze a student's pace, strengths, and gaps in real-time. If a student struggles with "Triangles," the AI redirects them to foundational "Angles" before moving forward, ensuring no "learning debt" is accumulated.
2. **Intelligent Tutoring Systems (ITS):** 24/7 AI tutors provide instant feedback. For example, **Georgia Tech's "Jill Watson,"** an AI teaching assistant, handled thousands of student queries with a 97% accuracy rate, freeing human educators for high-level mentoring.
3. **Automated Administrative Tasks:** AI can automate grading and attendance. Statistics show teachers spend nearly **20-30% of their time** on administrative tasks; automating this allows for more "human-in-the-loop" interaction.
4. **Inclusive Education:** For Divyangjan (specially-abled) students, AI-powered speech-to-text and image recognition tools (like **Microsoft's Seeing AI**) provide real-time assistance, making mainstream curriculum accessible.

Challenges in Incorporating AI

The "Digital Divide" and ethical concerns remain significant hurdles:

1. **The Infrastructure Gap:** In India, while internet penetration is rising, only about **41% of rural households** have access to the internet (NFHS-5). Implementing high-end AI in "last-mile" schools remains a fiscal and logistical challenge.
2. **Algorithmic Bias & Privacy:** AI models trained on Western datasets may carry socio-cultural biases. Furthermore, the collection of "biometric and behavioral data" of minors raises massive data privacy concerns under the **DPDP Act 2023**.
3. **Erosion of Critical Thinking:** Over-reliance on Generative AI (like ChatGPT) for assignments can lead to **"Cognitive Atrophy,"** where students lose the ability to

synthesize information independently.

4. **Teacher Displacement Anxiety:** There is a persistent fear that AI might replace teachers, whereas the real challenge is "upskilling" the existing workforce to use AI as a tool.

Global Best Practices

1. **Singapore's "AI Companion":** Singapore has integrated AI into its national **Student Learning Space (SLS)**, providing students with AI feedback on English and Mathematics.
2. **China's "Squirrel AI":** A leader in large-scale adaptive learning, utilizing over 10,000 "knowledge points" to map a student's brain like a GPS.
3. **Estonia's "Education 4.0":** Fully digitized curriculum where AI helps identify students at risk of dropping out by analyzing attendance and performance patterns.

Way Forward for India

To harness AI effectively, India must adopt a **"Human-Centric AI"** approach:

1. **Digital Infrastructure (PM-eVidya):** Expansion of high-speed 5G connectivity to rural schools to support AI-driven "Virtual Labs."
2. **Teacher-as-a-Facilitator:** Shift teacher training from "content delivery" to "AI-aided mentorship." Teachers should be trained to use AI for **Learning Analytics**.
3. **Ethical AI Framework:** Develop an "AI in Education" ethical code that mandates data anonymization and prevents "black-box" decision-making in student grading.
4. **Public-Private Partnership (PPP):** Collaborative efforts with Indian startups like **Sarvam AI** to develop local-language AI models (e.g., using **Bulbul V3** for oral language assessments in rural schools).

AI is not a silver bullet but a **pedagogical catalyst**. The future of Indian education lies in **"Blended Learning,"** where the efficiency of AI meets the empathy and moral guidance of a human teacher. As we progress through **Amrit Kaal**, the goal must be to ensure that AI reduces the educational divide rather than widening it, turning every classroom into a "Seva Teerth" of knowledge.

1.23 Democracy Returns in Bangladesh

The recent transition in Bangladesh, marked by a return to democratic stability and the **Bangladesh Nationalist Party (BNP)** assuming power through a free and fair election, represents a watershed moment in South Asian geopolitics.

Significance of the Election: Domestic & Regional

The conduct of a transparent election following a period of civil unrest and political volatility holds deep implications:

1. **Democratic Legitimacy:** It restores the social contract between the state and its citizens, potentially ending the cycle of street protests and "hartals" that crippled the economy.

2. **Economic Restoration:** Political stability is a prerequisite for Bangladesh to maintain its trajectory as a garment export powerhouse and its transition from a Least Developed Country (LDC) to a Developing Country status.
3. **Regional Security:** A stable Bangladesh prevents a "power vacuum" that could be exploited by radical elements or transnational insurgent groups (like ULFA or NLFT), which directly impacts India's internal security in the Northeast.
4. **Countering Authoritarianism:** It serves as a democratic template for the "Global South," demonstrating that popular movements can successfully lead to institutionalized democratic outcomes.

Convergence Points & The Opportunity to "Reset"

The change in leadership provides a unique window to transition from a "leader-to-leader" relationship to a "state-to-state" institutional relationship.

Convergence Points:

1. **Connectivity:** Both nations benefit from the **BBIN (Bangladesh-Bhutan-India-Nepal)** MVA and the use of Chittagong and Mongla ports for India's landlocked Northeast.
2. **Energy Cooperation:** The **India-Bangladesh Friendship Pipeline** and cross-border electricity trade remain vital for Bangladesh's industrial growth.
3. **Counter-Terrorism:** Shared interest in neutralizing religious extremism and ensuring the Bay of Bengal remains a zone of peace.

The "Reset" Opportunity:

1. **Broad-Basing Ties:** India has the chance to engage with a wider political spectrum in Bangladesh, moving away from the perception of being partisan toward a single political entity.
2. **Public Diplomacy:** By supporting a democratically elected BNP government, India can mitigate "Anti-India" sentiments often used as political fodder during election cycles.

Indo - Bangla Friction Points Requiring Deliberation

Historically, ties with the BNP have seen challenges that require proactive diplomacy:

1. **Teesta Water Sharing:** The long-pending treaty remains the biggest "psychological" and "ecological" hurdle in bilateral relations.
2. **Border Management:** The issue of "Border Killings" remains a sensitive emotive topic in Bangladesh, fueling nationalist rhetoric.
3. **Minority Security:** Concerns regarding the safety of the Hindu minority in Bangladesh often impact domestic politics in India.
4. **The China Factor:** Bangladesh's "Indo-Pacific Outlook" vs. its deep economic/defense ties with China (part of the Belt and Road Initiative) requires a delicate balancing act by New Delhi.

The Way Forward

To ensure long-term stability and partnership, the following steps are recommended:

1. **Water Diplomacy:** India must move toward a permanent solution on the Teesta, perhaps through a "Basin Management" approach or by involving the state of West Bengal in a more constructive dialogue.
2. **Economic Integration:** Fast-tracking the **Comprehensive Economic Partnership Agreement (CEPA)** to address the trade deficit and boost Bangladesh's exports.
3. **Non-Interference:** Adopting a policy of "Benign Neutrality," where India supports the democratic process and institutional capacity building without being seen as an arbiter of domestic politics.
4. **Connectivity as a Multiplier:** Treating the "Akhaura-Agartala" rail link and other transit projects as shared economic assets rather than just strategic concessions.

A "Free and Fair" election in Bangladesh is not just an internal victory for its people; it is a strategic asset for India's **"Neighborhood First"** policy. By treating the BNP-led government as a partner in progress, New Delhi can ensure that the "Shonali Adhyay" (Golden Chapter) of ties transcends political personalities and becomes a structural reality.

1.24 Reforming Governance

On **February 13, 2026**, Prime Minister Narendra Modi inaugurated the **Seva Teerth** and **Kartavya Bhavan** complexes. This marks a paradigm shift in India's administrative geography, moving the highest offices of the land from colonial-era structures to a modern, integrated, and sustainable workspace.

Seva Teerth is the new official address and building complex housing the **Prime Minister's Office (PMO)**, the **National Security Council Secretariat (NSCS)**, and the **Cabinet Secretariat**.

- **Location:** Part of the redeveloped Central Vista in New Delhi.
- **Philosophy:** The name reflects the transition from "authority" (symbolized by the South Block) to **"Service" (Seva)**.
- **Infrastructure:** It is a 4-Star GRIHA-rated green building, digitally integrated, and designed to foster inter-departmental collaboration by bringing key decision-making bodies under one roof.

Issues Faced by the Public in Governance

Despite digital advancements, the "common man" often faces structural hurdles in interacting with the state:

1. **Red Tapism:** Excessive adherence to formal rules and a "multi-layered" approval process leads to significant delays in service delivery.
2. **Lack of Accountability:** Difficulty in identifying the specific official responsible for a delay or grievance.
3. **Information Asymmetry:** Citizens are often unaware of their rights, the status of their

applications, or the criteria for welfare eligibility.

4. **Digital Divide:** While services have moved online, a large section of the rural and elderly population lacks the digital literacy to access them.
5. **Corrupt Practices:** "Speed money" or middleman interference still persists in local-level governance.
6. **Fragmented Grievance Redressal:** Public grievances often get bounced between departments with no time-bound resolution.
7. **Language Barriers:** Official communications and portals are often not available in regional languages, alienating non-Hindi/English speakers.

Reasons for Governance Failures

The underlying causes of these issues are rooted in both history and institutional design:

1. **Colonial Legacy:** The administrative structure was originally designed for "Revenue Collection and Control," not "Citizen Service and Development."
2. **Centralization of Power:** Decisions are often made at the top with little autonomy given to local-level frontline workers (Gram Panchayats/ULBs).
3. **Inadequate Infrastructure:** Older government offices operated from fragmented locations (like the old PMO and Ministries), leading to "siloed" functioning and coordination gaps.
4. **Attitudinal Issues:** A "ruler" mindset rather than a "servant" mindset among some sections of the bureaucracy.
5. **Weak Civil Society:** A lack of proactive participation by citizens in social audits and holding local officials accountable.
6. **Low Human Resource Capacity:** Lack of regular training in modern technology, emotional intelligence, and citizen-centric behavior.
7. **Complex Legal Frameworks:** Overlapping laws and archaic rules create confusion for both the administrator and the citizen.

Way Forward

To move toward **Viksit Bharat @ 2047**, the following reforms are essential:

1. **Institutional Consolidation:** The **Seva Teerth** model of consolidating ministries should be replicated at the State and District levels to reduce physical and operational silos.
2. **Citizen Charters with Teeth:** Making "Citizen Charters" legally enforceable, ensuring that officials face penalties for failing to meet service deadlines (as recommended by the **2nd ARC**).
3. **Bottom-Up Planning:** Empowering Local Self-Governments (Panchayats) with more financial and administrative autonomy to bridge the "reality gap" in schemes.
4. **Digital Literacy Missions:** Scaling up programs like **PMGDISHA** to ensure that digital governance does not lead to social exclusion.
5. **Behavioral Change (Mission Karmayogi):** Continuous training for civil servants to shift their orientation from "Rule-based" to "Role-based" and "Citizen-first."
6. **Social Audits:** Mandating social audits for all major welfare schemes to ensure transparency and community ownership.

The inauguration of Seva Teerth is a symbolic and structural "Reset." However, the true success of governance will lie in ensuring that the spirit of "Seva" (Service) trickles down from the high halls of the PMO to the last mile of the village administration.

1.25 Great Nicobar Island (GNI) Project

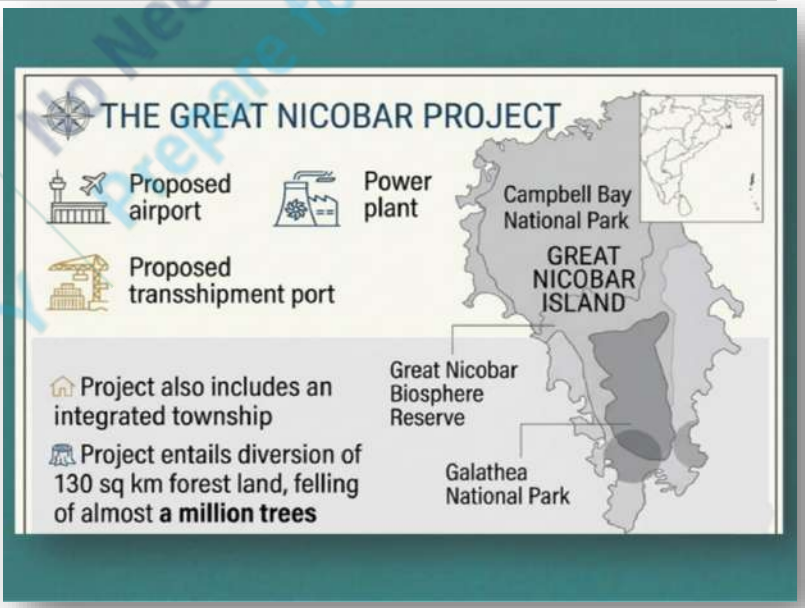
The **Great Nicobar Island (GNI) Project**, officially known as the "Holistic Development of Great Nicobar Island," has recently received a significant legal nod from the National Green Tribunal (NGT) in **February 2026**. The tribunal cleared the ₹92,000 crore mega-infrastructure project, citing its strategic importance while mandating strict adherence to environmental safeguards.

Project Overview

Spearheaded by **NITI Aayog** and implemented by the **Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO)**, the project aims to transform the southernmost island of the archipelago into a global maritime and economic hub.

1. **International Container Transshipment Terminal (ICTT):** A deep-sea port at **Galathea Bay** designed to handle ultra-large cargo ships.
2. **Greenfield International Airport:** A dual-use facility (civil and military) to support tourism and defense.
3. **Integrated Township:** A modern urban center to support the expected population influx.
4. **Power Plant:** A 450 MVA gas and solar-based power plant to provide sustainable energy.

Strategic Importance



From the Indian perspective, the project is viewed as a **"national asset"** with critical geopolitical implications:

1. **Proximity to Malacca Strait:** GNI is located just 90 nautical miles from the entrance of the Malacca Strait, a global chokepoint through which ~40% of world trade and 80% of China's oil imports pass.
2. **Countering the "String of Pearls":** By enhancing its military footprint at the southern tip of the Bay of Bengal, India can better monitor foreign naval movements in the Indian Ocean Region (IOR).
3. **Maritime Autonomy:** The ICTT aims to reduce India's dependence on foreign transshipment hubs like **Colombo** and **Singapore**, which currently handle a significant portion of Indian cargo.
4. **Act East Policy:** It serves as a gateway to Southeast Asia, strengthening India's presence in the Indo-Pacific.
5. **Energy & Connectivity Security:** Located near major oil and LNG shipping routes. Provides strategic depth in case of blockade scenarios.

Key Concerns

Despite the NGT clearance, several environmental and social "red flags" remain:

1. **Ecological Fragility:** The island is a global biodiversity hotspot. The project involves diverting ~130 sq. km of forest and felling nearly **1 million trees**, threatening endemic species like the **Nicobar Megapode** and the **Leatherback Sea Turtle** (Galathea Bay is a major nesting site).
2. **Tribal Rights:** The island is home to the **Shompen** (a Particularly Vulnerable Tribal Group - PVTG) and the **Nicobarese**. Concerns exist regarding the displacement of these tribes and the violation of the **Forest Rights Act (FRA), 2006**.
3. **Seismic Vulnerability:** Located in a high-risk seismic zone (Zone V), the island saw 15 feet of subsidence during the 2004 Tsunami, raising questions about the safety of massive infrastructure.

Way Forward: Avoiding Future Controversies

To ensure that "Strategic Development" does not come at the cost of "Ecological Destruction," a balanced approach is needed:

1. **Integrated Carrying Capacity Assessment:** Future projects should begin with an independent study on the island's "carrying capacity" before finalizing infrastructure blueprints.
2. **Institutionalizing Tribal Consent:** Ensuring **Free, Prior, and Informed Consent (FPIC)** from Tribal Councils through transparent Gram Sabhas to avoid legal friction over land rights.
3. **Translocation vs. Preservation:** Instead of relying solely on coral translocation (which has low success rates), project designs should prioritize "avoidance" of critical habitats over "mitigation."
4. **Independent Oversight Body:** Establishing a permanent, multi-disciplinary committee (including independent ecologists and tribal representatives) to monitor the 30-year implementation phase in real-time.
5. **Strategic Transparency:** While national security is paramount, releasing non-sensitive environmental data can build public trust and reduce "transparency deficits."

1.26 Financial Worries of ULBs and Reforms

Urban governance in India is at a critical juncture. While cities are the "engines of growth," contributing over 60% of India's GDP, the administrative and financial structures supporting them remain rooted in a colonial-era "grant-dependency" model.

Why Urban Administration in India lags unlike Developed Nations

Unlike developed nations where cities act as autonomous, self-governing economic units, Indian urban administration suffers from several systemic flaws:

1. **Political vs. Administrative Power:** In developed nations (e.g., USA, UK), the **"Strong Mayor"** system prevails, where the Mayor is the chief executive with financial and administrative powers. In India, power is bifurcated: the elected Mayor is often a figurehead, while a state-appointed **Municipal Commissioner** (an IAS officer) holds real executive power.

2. **Parastatals vs. ULBs:** Many core urban functions (water, transport, housing) are managed by state-level Development Authorities (like DDA, BDA) rather than the Urban Local Bodies (ULBs). This creates a "dual-governance" structure that hampers accountability.
3. **Lack of Master Planning:** Only about 40% of Indian cities have active Master Plans. In developed countries, spatial planning is the bedrock of infrastructure and revenue generation.
4. **Weak Democratic Decentralization:** Despite the **74th Constitutional Amendment (1992)**, the "3Fs" (Functions, Funds, and Functionaries) have not been fully devolved by states to the local level.

Reasons for Financial Constraints of ULBs

The financial health of Indian municipalities is precarious, with their own-tax revenue staying stagnant at around **1% of GDP** (compared to 8-10% in developed nations).

1. **Poor Property Tax Realization:** Property tax is the "bread and butter" of global cities. In India, it is plagued by outdated records, low tax rates, and poor collection efficiency (often below 30-40%).
2. **The "GST Void":** The introduction of GST abolished local taxes like **Octroi** and **Entry Tax**, which were once the most buoyant revenue sources for cities. ULBs now rely on state compensations, which are often delayed.
3. **Pricing of Utilities:** Water and sanitation are heavily subsidized. ULBs are often politically discouraged from charging **User Fees** that cover even the Operation and Maintenance (O&M) costs.
4. **2nd Category Leadership:** This is a critical sociological and political bottleneck.
    - Since Mayoral positions are often short-tenured (sometimes just 1 year) or reserved for specific categories, the "best and brightest" political talent targets State or National politics.
    - ULBs often become training grounds for "2nd category" or entry-level politicians, leading to a **vision deficit** and a lack of professional management in municipal affairs.
5. **Low Creditworthiness:** Due to poor accounting (non-accrual based), most ULBs cannot provide the transparency needed to borrow from the market.

Urban Challenge Fund (UCF): A "Pill for All Ills"?

The government's recently approved ₹1 lakh crore **Urban Challenge Fund** introduces a **25-50-25** funding model, requiring cities to raise 50% from the market.

Is it a Panacea?

- **The Positives:** It instills **fiscal discipline**. For the first time, cities are incentivized to fix their balance sheets to become "bankable." The ₹5,000 crore credit guarantee is a significant "hand-holding" for smaller cities to enter the bond market.
- **The Limitations:**
    - **The "Inequality Trap":** Larger, richer cities (like Mumbai or Ahmedabad) will find it easier to access the fund, while smaller, financially stressed ULBs may fall further behind because they cannot raise the initial 50% from the market.
    - **Bankability vs. Social Goals:** There is a risk that ULBs will prioritize "monetizable

assets" (like luxury malls or parking lots) over essential but non-profitable social infrastructure (like slum redevelopment or public health) to ensure loan repayment.

- **Debt Risk:** Forcing debt-distressed ULBs to borrow could lead to a local-level debt trap if the projects do not generate the expected revenue.

Way Forward: Beyond the Challenge Fund

To enhance the flow of finance and enable ULBs to function effectively, the government must adopt a **Multi-Pronged Reform Strategy**:

1. **Direct Fiscal Devolution:** State Finance Commissions (SFCs) must be as empowered as the Central Finance Commission. A fixed percentage of State GST (SGST) should be constitutionally earmarked for ULBs.
2. **Professionalizing Management:** Create a specialized **"Municipal Service"** cadre to replace the generalist bureaucracy. Professional city managers can bring the technical expertise required for bond issuances and PPPs.
3. **Land Value Capture (LVC):** Since public infrastructure (like Metros) increases land prices, cities should use LVC tools (like Betterment Levies) to capture a share of this increased value to fund further development.
4. **Digitization of Assets:** Implementing **GIS-based property tax mapping** can double the revenue of most Indian cities overnight by identifying unassessed properties.
5. **Empowered Leadership:** Move toward a **Directly Elected Mayor** with a fixed 5-year tenure to ensure continuity, political accountability, and long-term planning.

The Urban Challenge Fund is a bold step towards **Self-Reliant Cities**, but it must be complemented by deeper constitutional and administrative reforms. The goal should be to turn ULBs from "subsidiaries of the State" into "vibrant local governments."

1.27 Regulating Divisive Speeches by Political Leaders

The Supreme Court of India, particularly in its observations has voiced serious concern over the "toxic" nature of public discourse. The Court emphasized that **"fraternity"** is a foundational pillar of the Constitution that is being eroded by communal and divisive rhetoric from various sides.

Reasons for the Growth of Divisive Rhetoric

The rise in hate speech is rarely an accidental outburst; it is increasingly becoming a structural feature of modern politics.

1. **Tactical Voter Mobilization:** Political parties often use communal "polarization" as a tool for electoral gains. By creating an "us vs. them" narrative, they consolidate their core vote banks.
2. **The "Outrage Economy" of Social Media:** Algorithms prioritize high-engagement content. Inflammatory and divisive speeches go viral more quickly than moderate ones, providing leaders with instant visibility and "digital clout."

3. **Normalization of Fringe Elements:** What was once considered "fringe" has entered the mainstream. High-ranking constitutional office-holders are occasionally seen engaging in rhetoric that targets specific communities, giving a "top-down" sanction to such behavior.
4. **Echo Chambers:** Technology has enabled the creation of digital silos where citizens only hear one-sided narratives, making them more susceptible to divisive political messaging.

Shortcomings in the Existing Setup

Despite numerous laws, the legal and administrative machinery often fails to curb hate speech due to several "gaps":

1. **Legal Ambiguity:** India lacks a specific, unified definition of "Hate Speech." Currently, it is dealt with under scattered provisions of the **Bharatiya Nyaya Sanhita (BNS)**—formerly IPC Sections 153A, 153B, 295A, and 505. The lack of a clear threshold often leads to either over-regulation (targeting dissent) or under-regulation (ignoring genuine hate).
2. **Implementation & "Political Patronage":** In many cases, the police are hesitant to register *suo motu* FIRs against powerful political figures. Although the SC in the *Shaheen Abdulla* case directed states to act without waiting for a complaint, enforcement remains patchy.
3. **Regulatory Lag:** The **Election Commission of India (ECI)** can issue notices and temporary bans under the **Model Code of Conduct (MCC)**, but it lacks the power to deregister parties or permanently disqualify candidates for hate speech.
4. **Low Conviction Rates:** Judicial delays mean that cases against leaders drag on for decades. By the time a verdict is reached, the political objective of the speech (winning an election) has already been achieved.

The Case for a "Code of Principles"

There is a growing demand for a mandatory **Code of Constitutional Morality** for political leaders:

1. **Heightened Responsibility:** Unlike ordinary citizens, a leader's words have the "imprimatur of the State." A code would remind them that their primary duty is to the Constitution, not just their party.
2. **Accountability:** Such a code could include sanctions like "automatic suspension" from the house or "debarment from campaigning" if a quasi-judicial body finds the speech to be communally divisive.
3. **Counter-argument:** Critics argue that such a code could be weaponized by the government of the day to silence the opposition. Hence, its enforcement must be with an independent body like the ECI or an Ethics Committee.

Way Forward: Enhancing Fraternity

To move beyond "judicial distance" and foster real social harmony, a multi-pronged approach is needed:

1. **Legislative Reform:** Implement the **267th Law Commission Report** recommendations to insert specific sections (**Section 153C and 505A**) into the criminal code that specifically define and punish "incitement to hatred."

2. **Empowering the ECI:** Grant the Election Commission "teeth" to take punitive action, including the power to cancel the candidature of repeat offenders.
3. **The "Rabat Plan of Action" Test:** Adopt the UN's six-part threshold test (context, speaker, intent, content, extent, and likelihood of harm) to distinguish between protected free speech and punishable hate speech.
4. **Digital Responsibility:** Tech platforms must be held accountable for the "algorithmic amplification" of hate. The **Digital India Act** should mandate stricter "takedown" timelines for inflammatory content.
5. **Civil Society Intervention:** Promoting **"Fraternity Projects"** at the grassroots level—inter-faith dialogues and constitutional literacy campaigns—to build societal immunity against divisive rhetoric.

1.28 India-France Cooperation

The Indo-French relationship has evolved from a traditional "buyer-seller" dynamic into a deep, resilient **Strategic Partnership** (established in 1998). In 2026, as both nations celebrate nearly three decades of this bond, the partnership is often described as India's "most trusted" western alliance, free from the historical baggage or "preachiness" sometimes associated with other Western powers.

Significance of the Partnership

The deal, especially the recent Horizon 2047 Roadmap, holds immense geopolitical and technological weight:

1. **Strategic Autonomy:** Both nations value independent foreign policies. France acts as India's "gateway to Europe," while India is France's "anchor in the Indo-Pacific."
2. **Technological Sovereignty:** Unlike other nations, France offers **100% Transfer of Technology (ToT)** in critical areas like jet engines (Safran) and nuclear energy.
3. **Diversification of Defense:** It reduces India's historical over-dependence on Russia and provides a high-tech alternative to American hardware.
4. **Stable Multilateralism:** In a bipolar world (US-China), the Indo-French axis provides a "Third Way" for middle powers and the Global South.
5. **Maritime Security:** With French territories in the Indian Ocean (Reunion Island), the partnership is vital for monitoring sea lines of communication (SLOCs).

Recent Initiatives:

1. **The H125 Helicopter Final Assembly Line (FAL)-** Formally inaugurated at **Vemagal, Karnataka**, this is a partnership between **Airbus Helicopters and Tata Advanced Systems Ltd (TASL)**. It is India's **first private-sector** final assembly line for helicopters
2. **The "Shakti-26" Aero-Engine Roadmap-** A binding agreement between India's **DRDO (GTRE)** and France's **Safran** to co-develop a high-thrust (110-130 kN) engine for the **AMCA Mk2** (Advanced Medium Combat Aircraft). This includes **100% Transfer of Technology (ToT)**.
3. **Digital Public Infrastructure (DPI) Partnership-** A Memorandum of Understanding (MoU) to integrate India's **UPI** further into the French retail ecosystem and explore the

interoperability of **CBDCs** (Central Bank Digital Currencies) for cross-border trade.

4. **Blue Economy and Maritime Roadmap 2.0-** Both nations signed a protocol for **Joint Hydrographic Surveys** in the South-West Indian Ocean.
5. **"India-France Solar-Plus" Initiative-** An expansion of the International Solar Alliance (ISA) to include **Green Hydrogen** supply chains.

Convergence Points Across Domains

1. **Defense & Aerospace:** Collaboration on **Scorpene submarines (Project-75)**, **Rafale-M** for the Navy, and the co-development of **6th Generation Aero Engines**.
2. **Space Technology:** Joint missions like **TRISHNA** (thermal infrared imaging) and the maritime domain awareness satellite constellation for the Indian Ocean.
3. **Civil Nuclear Energy:** Progress on the **Jaitapur Nuclear Power Project** (9.6 GW) and cooperation in Small Modular Reactors (SMRs).
4. **Climate & Green Energy:** Co-founders of the **International Solar Alliance (ISA)** and the **India-France Star-up Network** for green hydrogen.
5. **Indo-Pacific Geography:** Implementation of the **"Joint Strategic Vision for the Indian Ocean Region,"** including reciprocal logistics support between their armed forces.

Shaping the Global Order

1. **Reforming Global Governance:** France consistently supports India's permanent membership in the **UN Security Council (UNSC)** and the Nuclear Suppliers Group (NSG).
2. **Digital Sovereignty:** Setting global standards for **AI Ethics** and data privacy, countering the digital hegemony of "Big Tech" from the US and China.
3. **Maritime Order:** Championing a "Free, Open, and Inclusive Indo-Pacific" (FOIIP) that resists "debt-trap diplomacy" and unilateral expansionism.
4. **Global South Leadership:** Working together on "Triangular Development Cooperation" to fund infrastructure projects in Africa and the Pacific Islands.
5. **Counter-Terrorism:** Strong alignment in the **No Money for Terror (NMFT)** initiative and targeting cross-border terrorism at the Financial Action Task Force (FATF).

Friction Points

1. **Jaitapur Delays:** The nuclear project has faced over a decade of delays due to issues with **Civil Nuclear Liability** laws and techno-commercial pricing.
2. **Economic Imbalance:** Despite strong defense ties, bilateral trade in non-defense sectors (like agriculture or services) remains below potential compared to India-Germany or India-USA.
3. **EU Regulations:** India's concerns over the EU's **Carbon Border Adjustment Mechanism (CBAM)** and strict "Deforestation Regulations" sometimes put Paris and Delhi at odds.
4. **Ukraine Conflict Nuances:** While both seek peace, France's position as a NATO member and India's "neutrality" regarding Russia have occasionally created diplomatic friction.
5. **Visa & Migration:** Issues regarding the mobility of Indian professionals and students, despite the "Young Professionals Scheme," remain a point of negotiation.

Way Forward

1. **"Make in India" for the World:** Shift from "buying French" to "building with France" for global exports, using the **H125 FAL** in Karnataka as a blueprint.
2. **Cyber & AI Roadmap:** Deepen the 2026 agreement on **Cybersecurity and Supercomputing** to secure critical national infrastructure.
3. **Blue Economy:** Finalize the **Blue Economy and Ocean Governance** roadmap to sustainably manage deep-sea mining and marine resources.

4. **People-to-People Ties:** Aim for the target of **30,000 Indian students** in France by 2030 to build a long-term "intellectual bridge."
5. **Institutionalizing the "2+2" Dialogue:** Regularize the Foreign and Defense Minister meetings to ensure the partnership remains insulated from political changes in either capital.

1.29 India Introduces Home Grown LLMs

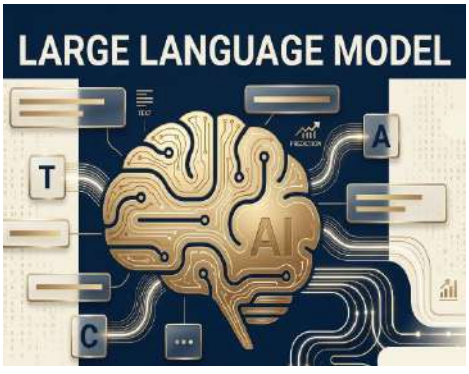
Large Language Models (LLMs) represent a foundational shift in how human intelligence interacts with machines. In the 2026 landscape, they have evolved from mere chatbots to "agentic" systems capable of complex reasoning and real-world action.

Brief on LLMs

Large Language Models are advanced Artificial Intelligence systems trained on astronomical volumes of data to understand, generate, and predict human language.

- **Transformer Architecture:** Most LLMs use "Transformers," which employ a **Self-Attention mechanism** to weigh the significance of different words in a sentence, regardless of their distance from each other.
- **Neural Networks:** They are essentially "deep" neural networks that learn patterns, grammar, and even logic from raw text.
- **Parameters:** These represent the model's "internal variables." A higher parameter count (e.g., 105 Billion in Sarvam-105B) generally indicates a more nuanced understanding of context.
- **Generative Nature:** Unlike traditional AI that only classifies data, LLMs are *generative*, meaning they can create entirely new content (essays, code, poetry).
- **Zero-Shot Learning:** They can often perform tasks they weren't specifically trained for (like translating a rare dialect) based on their general understanding of language structure.

Significance of LLMs



1. **Productivity Multiplier:** LLMs automate repetitive tasks in coding, legal drafting, and customer service, significantly boosting economic efficiency.
2. **Democratizing Expertise:** They lower the barrier for non-experts to perform complex tasks like data analysis or professional writing using natural language.
3. **Linguistic Bridging:** Multilingual LLMs act as real-time translators, enabling cross-cultural communication at an unprecedented scale.
4. **Personalized Education & Health:** They serve as "tutors in every pocket" or "preliminary diagnostic tools," especially in areas with low human-resource density.
5. **Strategic Asset:** In a "data-driven" world, the ability to process and synthesize information is a core component of national power and security.

India's Indigenous LLMs (Sarvam-105B and BharatGen)

1. **Sarvam-105B:** A massive 105-billion parameter model optimized for "agentic" workflows (executing tasks like booking flights or analyzing balance sheets).
2. **BharatGen (Param 2):** A government-funded, 17-billion parameter multimodal model designed specifically for the 22 scheduled Indian languages.

Significance for India:

1. **Sovereign AI:** Reduces dependence on Western (OpenAI/Google) or Chinese (DeepSeek) systems, ensuring critical digital infrastructure remains under Indian control.
2. **Linguistic Inclusion:** Global models often fail at the nuances of Indic languages. These models are trained specifically on "India-centric" data, respecting local cultural and linguistic contexts.
3. **Data Privacy:** By hosting and training models locally, India ensures that sensitive citizen data does not migrate to foreign servers.
4. **Cost Efficiency:** Indigenous models like Sarvam-105B use **Mixture-of-Experts (MoE)** architecture, making them significantly cheaper to run (inference) compared to global giants.
5. **Application in Governance:** These models are being integrated into the **Bhashini** platform and **CPGRAMS** to make government grievance redressal and services accessible via voice in any regional dialect.

Challenges Faced by Indian LLMs

1. **Compute Scarcity:** India still faces a deficit in high-end **GPUs** (Graphics Processing Units) required for massive training, though the IndiaAI Mission is currently subsidizing this.
2. **Data Quality:** While India has vast amounts of data, much of it is "unstructured" or unavailable in digital formats for rare dialects, leading to "data deserts."
3. **Brain Drain:** Attracting and retaining top-tier AI researchers remains difficult as global giants offer significantly higher compensation.
4. **R&D Expenditure:** India's R&D spend (~0.6% of GDP) is lower than that of China (~2.6%) or the US, limiting long-term foundational research.
5. **Energy Consumption:** Maintaining massive data centers for LLMs requires consistent, high-capacity green energy, which is still a work in progress in the Indian grid.

The "Uphill Battle" Against Global Rivals (US & China)- India faces a "Late Mover" disadvantage in an arena where the US and China have a decade-long head start.

1. **The Resource Gap:** US firms (Microsoft/OpenAI) have access to trillions of dollars in private capital. China benefits from a state-led "scale and security" model with centralized data access.
2. **Ecosystem Lock-in:** Many Indian startups already use "wrappers" (building on top of GPT-4), making it hard to switch them to indigenous models.
3. **Hardware Monopoly:** The global semiconductor supply chain is heavily skewed toward the US and its allies, potentially creating bottlenecks for India's AI scaling.

4. **Aggressive Pricing:** Chinese models like **DeepSeek** often enter the market with extremely low pricing to capture the "Global South," challenging the commercial viability of Indian startups.

Way Forward

1. **Focus on Vertical AI:** Instead of competing for a "General" AI, India should build "Vertical" LLMs—specialized models for Agriculture, Law, and Healthcare.
2. **Strengthening the GPU Grid:** Rapidly expanding the **IndiaAI Common Compute** facility to provide 10,000+ GPUs to startups at subsidized rates.
3. **Data Sovereignty Legislation:** Implementing the **DPDP Act** effectively while creating "Data Sandboxes" for Indian innovators to access anonymized public datasets.
4. **Application-Led Innovation:** Leveraging India's **Digital Public Infrastructure (DPI)** (like UPI and ONDC) to embed AI directly into daily transactions and services.
5. **Global South Leadership:** Exporting India's "AI for Social Good" models to other developing nations, creating a "Third Way" of AI that is ethical, inclusive, and affordable.

1.30 Racial Slurs as Hate Crime

In February 2026, the Supreme Court of India addressed a critical Public Interest Litigation (PIL) filed in the wake of the tragic death of **Anjel Chakma**, a 24-year-old student from Tripura. Chakma was brutally assaulted and stabbed in Dehradun after he resisted racial slurs regarding his physical appearance.

While the court directed the Union Government and the Attorney General to consider the plea, it also expressed caution against "pigeonholing" crimes by identity, which it feared could fuel societal polarization.

Understanding Racial Slurs and Hate Speech

- **Racial Slurs:** These are derogatory terms or insults used to demean, dehumanize, or stereotype individuals based on their race, ethnicity, or physical characteristics.
- **Are they Hate Speech?**
  - **Legally:** Under the **Bharatiya Nyaya Sanhita (BNS)** (specifically Section 196, formerly 153A IPC), acts that promote enmity on grounds of race, residence, or place of birth are punishable.
  - **Conceptually:** Racial slurs are the most common form of hate speech. They are not merely "offensive words" but tools used to assert superiority and marginalize groups.
  - **SC Observation:** The Court has previously noted that for a slur to be "hate speech," it must have the potential to incite violence or disrupt public order.

Argument: Should Racial Slurs be a "Hate Crime"?

A "Hate Crime" differs from "Hate Speech" as it involves a criminal act (assault, murder) motivated by prejudice.

Arguments in Favor:

1. **Intent vs. Outcome:** Currently, racially motivated murders are often treated as "ordinary" crimes. Recognizing "racial motivation" as an aggravating factor ensures the law addresses the **root cause** rather than just the physical act.
2. **Constitutional Gravity:** Racial slurs against citizens from the North-East or frontier regions violate **Articles 14 (Equality), 15 (Non-discrimination), and 21 (Dignity)**.
3. **Ending Impunity:** A specific classification would force police to record racial bias in the FIR stage, preventing the "dilution" of the case during the trial.

Arguments Against (The Court's Caution):

1. **Fueling Polarization:** Chief Justice Surya Kant observed that classifying crimes based on the victim's identity might "run the danger of dividing society" by emphasizing differences rather than common citizenship.
2. **Sufficiency of Existing Law:** Critics argue that current sections (Section 196 BNS) and the **SC/ST Act** already cover identity-based violence; adding more categories could lead to legislative over-complexity.

The Way Forward: Cultivating a Culture of Fraternity

The Preamble of the Indian Constitution emphasizes **Fraternity**, which Dr. B.R. Ambedkar defined as "a sense of common brotherhood of all Indians."

1. **Institutional Mechanisms:** As requested in the PIL, the establishment of **Nodal Agencies** at the State and Central levels to monitor racial crimes can provide a dedicated grievance redressal path.
2. **Police Sensitization:** Dedicated special units in metropolitan hubs should be trained to understand the cultural and regional nuances of India's diverse population.
3. **Educational Integration:** Workshops and debates in schools and colleges are essential to debunk racial stereotypes. The **"Ek Bharat Shreshtha Bharat"** initiative should be leveraged to foster deeper cultural empathy.
4. **Zero-Tolerance Policy:** Violence against "the other" must be met with an "iron hand" (as stated by the SC) to ensure that identity-based bullying does not escalate into fatal assaults.
5. **Legal Reform:** Parliament could consider the recommendations of the **Bezbaruah Committee (2014)**, which suggested specific amendments to the IPC to punish racial discrimination.

1.31 The Rationale of Freebies

In the Indian political and economic discourse, the term **"freebies"** (often referred to as *Revdi* culture) describes the distribution of consumer goods or services (like electricity, water, laptops, or monthly cash transfers) free of cost to the electorate.

While the Supreme Court of India differentiates between "welfare" and "freebies," the distinction remains thin. Below is a comprehensive analysis of the rationale, downsides, and alternative fiscal strategies.

1. The Rationale: More than Mere Appeasement?

While critics view freebies as a tool for electoral "bribing," there is a socio-economic logic rooted in a welfare state:

1. **Social Justice and Equity:** In a country with high income inequality, freebies like subsidized food or health services act as a safety net for the marginalized, fulfilling the Directive Principles of State Policy.
2. **Boosting Demand:** Cash transfers or free essential goods increase the disposable income of the poor, which is immediately spent in the economy, thereby boosting local consumption and aggregate demand.
3. **Human Capital Investment:** Freebies like bicycles for school girls or laptops are not just consumption; they are tools that improve school retention rates and digital literacy, indirectly contributing to long-term productivity.
4. **Countering Regressive Taxation:** Since indirect taxes (like GST) fall equally on the rich and poor, freebies serve as a mechanism for **redistributive justice**, returning tax revenue to those most burdened by inflation.
5. **Economic Buffer:** During crises (like the pandemic or high inflation), freebies prevent the vulnerable from falling back into the poverty trap, maintaining social stability.

The Downsides of Freebies

The primary concern with freebies is their impact on the **fiscal health** of the state and the subsequent neglect of Capital Expenditure (Capex).

1. **Fiscal Deficit and Debt Trap:** Excessive spending on subsidies leads to high revenue deficits. States often borrow to fund daily consumption, leading to a mounting debt-to-GSDP ratio.
2. **The Opportunity Cost of Capex:** Every rupee spent on a "freebie" (revenue expenditure) is a rupee diverted from building roads, bridges, or power plants (Capex). Capex has a **higher multiplier effect** (approx. **2.45**) compared to revenue expenditure (approx. **0.45**).
3. **Distortion of Market Prices:** Free electricity or water leads to over-exploitation of natural resources (e.g., falling groundwater levels) and discourages efficiency and innovation in utility sectors.
4. **Deterioration of Credit Culture:** Schemes like farm loan waivers destroy the credit discipline of borrowers, making banks hesitant to lend in the future, which hampers the private investment cycle.
5. **Quality of Service Trade-off:** When state funds are exhausted by freebies, existing infrastructure (public hospitals and schools) often suffers from poor maintenance, leading to a "low-quality trap" where the poor are forced to use dysfunctional "free" services.

SC on Freebies

1. **The "Appeasement" Slam (February 2026)-** In a landmark hearing on **February 19, 2026**, a bench led by **CJI Surya Kant** pulled up several state governments (specifically naming Tamil Nadu, Punjab, and Haryana) for announcing massive subsidies just before

elections. The Court called indiscriminate distribution of benefits "nothing but **appeasement**," which is not conducive to economic development.

2. **S. Subramaniam Balaji vs. Govt. of Tamil Nadu (2013)-** This is the "mother case" of the freebie debate, though the SC's view then was more lenient.
3. **Ashwini Upadhyay vs. Union of India (Ongoing/2022-2026)-** During hearings in 2022 and 2024, the Court observed that some states' "freebie budgets" were exceeding their regular development budgets.

Better Ways to Manage State Finances

To make expenditure fruitful, states must pivot from "freebies" to **"empowerment-based spending."**

1. **Outcome-Based Budgeting:** Instead of measuring success by the "amount spent," states should use performance audits to measure actual outcomes (e.g., number of students employed rather than laptops distributed).
2. **Prioritizing Productive Assets:** Shift focus toward **Gati Shakti**-aligned infrastructure. Building a rural warehouse or a cold-storage chain provides long-term income for farmers, eliminating the need for recurring subsidies.
3. **Direct Benefit Transfer (DBT) and Targeting:** Use the **JAM Trinity** (Jan Dhan-Aadhaar-Mobile) to eliminate leakages. Subsidies should be strictly targeted to the "creamy layer" exclusion principle, ensuring only the truly needy benefit.
4. **Strengthening Internal Revenue Generation:** States should improve their own tax-to-GSDP ratio by formalizing the local economy, digitizing land records, and improving the collection of property taxes and user charges for non-essential services.
5. **Skill Development and Entrepreneurship:** Instead of monthly doles, funds should be directed toward **vocational training** and credit-linkage for MSMEs. This enhances the "capability" of people (as per Amartya Sen's Capability Approach), making them self-reliant rather than state-dependent.

The debate is not about "welfare vs. no welfare," but about **"consumption vs. creation."** While short-term relief via freebies is sometimes necessary for survival, long-term prosperity depends on the state's ability to build assets. A balanced fiscal policy must ensure that today's "freebie" does not become tomorrow's "fiscal burden," robbing the next generation of infrastructure and opportunities.

1.32 Humanizing the Society with AI

The rapid ascent of Artificial Intelligence (AI) has positioned it as a "double-edged sword" in modern governance and society. While it offers unprecedented efficiency, it also mirrors and magnifies existing human prejudices.

Biases and Risks in AI Systems

1. **Algorithmic Bias (Data Mirroring):** If training data reflects historical prejudices, the AI will internalize them.

Example: **Amazon's** experimental AI recruiting tool was found to penalize resumes that included the word "women's," as it was trained on a decade of male-dominated tech hiring patterns.

2. **Demographic Underrepresentation:** Facial recognition often fails for people with darker skin tones due to lack of diverse training sets.
   Example: A **MIT study** showed that commercial facial recognition software had error rates of up to 34% for darker-skinned females compared to 0.8% for light-skinned males.
3. **Opaque Decision Making (Black Box Risk):** Complex neural networks lack "explainability," making it hard to understand why an AI made a specific decision.
   Example: In the US, the **COMPAS algorithm** used for predicting recidivism (re-offending) was criticized for being biased against Black defendants without clear transparency on how scores were calculated.
4. **Deepfakes and Misinformation:** Generative AI can create hyper-realistic fake content, threatening democratic processes and social harmony.
   Example: The **2024 and 2026 election cycles** globally saw a surge in AI-generated voice clones of leaders used to spread fake announcements.
5. **Socio-Economic Displacement:** The risk of "technological unemployment" where AI replaces routine cognitive tasks, widening the wealth gap.
   Example: The rapid automation of **Customer Service/BPO** sectors in India has raised concerns about entry-level job security for graduates.

How AI Perpetuates These Biases

AI does not just "have" bias; it actively reinforces it through feedback loops.

1. **Reinforcement of Stereotypes:** Search algorithms and AI image generators often default to stereotypes.
2. **Echo Chambers and Polarization:** Recommendation engines (social media) show users content that aligns with their existing beliefs.
3. **Automating Inequality:** By using AI to determine creditworthiness or insurance premiums, historical economic disadvantages are codified into future barriers.
4. **Confirmation Bias in Predictive Policing:** AI models used by law enforcement may over-patrol neighborhoods that were historically over-policed, leading to more arrests and "proving" the biased model correct.
5. **Language and Cultural Erasure:** AI models are heavily skewed toward English and Western norms, often failing to grasp the nuances of regional languages or indigenous cultures.

Humanizing Society through AI:

1. **Healthcare (Empathy and Accessibility):** AI can handle diagnostic paperwork, allowing doctors to spend more "eye-contact time" with patients.
   Example: AI-driven **diagnostic tools for TB** in rural India allow local health workers to provide immediate care without patients traveling miles to a city.
2. **Education (Hyper-Personalization):** AI can act as a "personal tutor," catering to a child's unique pace and emotional state.
   Example: In **Special Needs Education**, AI-powered bots help autistic children practice social cues in a non-judgmental, safe environment.
3. **Governance (Inclusion and Justice):** AI can translate complex legal documents into local dialects, making justice accessible.
   Example: **Bhashini** is breaking language barriers, allowing a farmer in Bihar to access

central schemes in his native Bhojpuri.

4. **Environment (Stewardship):** AI helps us "listen" to nature to protect it.
   Example: **Rainforest Connection** uses AI to analyze forest sounds and detect the sound of chainsaws in real-time to stop illegal logging.
5. **Crisis Management (Preserving Life):** During disasters, AI can predict the needs of the most vulnerable (elderly/disabled) who are often forgotten in the chaos.

Making AI Better: The Path Forward

Improving AI requires a shift from "Profit-first" to "People-first" design.

1. **Explainable AI (XAI):** Developing models where the "reasoning" behind a decision can be understood by humans. *Example:* A bank using AI for loans must be able to tell a rejected applicant exactly which factor (e.g., debt-to-income ratio) led to the result.
2. **Diverse and Inclusive Datasets:** Mandating that AI training data must be demographically representative. *Action:* Governments can create **National Data Repositories** (like the BODH initiative) that provide diverse, anonymized datasets for developers.
3. **Human-in-the-loop (HITL):** Ensuring that high-stakes AI decisions (in law, health, or war) are always subject to final human oversight.
4. **Algorithmic Auditing:** Regular third-party audits of AI systems to detect and fix bias, similar to financial audits. *Action:* Implementing frameworks like India's **SAHI** to ensure ethical standards are met before an AI tool is deployed.
5. **Ethical by Design:** Teaching AI "values" such as fairness and privacy at the coding stage rather than as an afterthought. This includes "Privacy Enhancing Technologies" (PETs) that protect individual identity.

AI is a reflection of the hands that build it and the data that feeds it. To humanize society with AI, we must first humanize our data and our design philosophies. As India moves toward **"AI for All,"** the focus must remain on the constitutional values of equality and dignity, ensuring that technology serves as a ladder for the last person in the queue, rather than a barrier.

1.33 The FDI Debacle

India's foreign investment landscape has witnessed a paradoxical trend in late 2025 and early 2026. While **gross FDI inflows** remain historically high, the **net FDI** (inflow minus outflow) turned negative for four consecutive months (August to December 2025).

Components of FDI (As per RBI/IMF Standards)

FDI is not just "money coming in"; it is a multi-layered financial entry. As per the Balance of Payments (BoP) manual, it consists of:

1. **Equity Capital:** Direct investment to buy shares in an Indian company or set up a subsidiary. (In India, stake in a listed firm is FDI).
2. **Reinvested Earnings:** Profits earned by foreign subsidiaries in India that are not sent back but plowed back into the local business.

3. **Intra-company Loans:** Debt transactions between the parent foreign company and its Indian affiliates.
4. **Acquisition of Unlisted Entities:** 100% ownership stakes in private limited companies.
5. **Other Capital:** Short-term capital flows and trade credits between the investor and the enterprise.

Reasons for Persistent Net FDI Outflows

Despite gross inflows exceeding **$8 billion** in December 2025, net FDI was **-$1.6 billion**. The causes are both structural and global:

1. **Record Profit Repatriation:** Foreign firms are taking back massive dividends and profits. In December 2025, repatriation hit a record **$7.45 billion**, the highest since 2021.
2. **Global Interest Rate Differentials:** High interest rates in developed markets (like the US Federal Reserve's stance) have led to "capital flight" as investors seek safer, high-yielding assets in their home countries.
3. **India-US Trade Uncertainty:** Before the recent 2026 "Interim Trade Deal," uncertainty over US tariffs (initially threatened at 50%) caused many multinational corporations to stall fresh equity infusions.
4. **Aggressive Outward FDI (OFDI):** Indian giants (Reliance, Tatas, etc.) are investing heavily abroad to diversify. In December 2025, OFDI rose **31% year-on-year** to **$2.75 billion**.
5. **Weakening Rupee:** The INR crossing the **91 per USD** mark in late 2025 incentivized investors to pull out funds before further currency depreciation eroded their dollar-denominated returns.

Statistics Related to FDI

- **Gross vs Net:** Gross inflows for April-December 2025 were **$73.31 billion** (up 16% YoY), but net FDI was barely **$4 billion** due to massive outflows.
- **Repatriation Peak:** Repatriation and disinvestments touched a record high of **$7.45 billion** in Dec 2025.
- **Currency Impact:** The Rupee's volatility (hitting multiple all-time lows in Jan 2026) contributed to a **10% rise** in foreign investors reducing equity holdings.
- **Target Growth:** The **Economic Survey 2025-26** suggests that to sustain 7-8% GDP growth, India needs a consistent **Net FDI of at least 2.5-3% of GDP** (currently much lower).

Strategies to Reverse the Trend

To convert "Negative Net" back to "Positive Net," the government and RBI can adopt the following:

1. **Tax Incentives for Retention:** Budget 2026 should consider lowering the **12.5% Capital Gains Tax** for investors who hold assets for more than 3-5 years, shifting the focus from "attracting" to "retaining."

2. **Operationalizing GIFT City:** Expanding the tax holidays in the **Gujarat International Finance Tec-City (GIFT)** to 20 years (as proposed in Feb 2026) can encourage firms to keep their treasury operations within India.
3. **Bilateral Investment Treaties (BITs):** India needs to fast-track the "New Generation BITs" (like the India-EU FTA 2026) to provide legal certainty and a robust dispute-settlement mechanism, reducing "exit fear."
4. **Sectoral Liberalization:** Increasing FDI limits in sensitive sectors—like the recent move to **100% in Insurance** for companies investing premiums locally—creates a "lock-in" effect for capital.
5. **Incentivizing Reinvestment:** Introducing "Reinvestment Credits" or tax offsets for foreign firms that keep their profits in India for R&D or greenfield expansions rather than repatriating them.

The current "negative net" is not a sign of India's failure to attract capital (Gross inflows are healthy); it is a sign of **maturity and global integration.** As Indian companies become global players and foreign firms reap mature profits, outflows are natural. However, for a developing economy, the **"Net Positive"** status is vital for BoP stability. Reversing this will require shifting the narrative from **"Invest in India"** to **"Grow and Stay in India."**

1.34 Debate Over Erosion of Indian Federalism

The discourse on Indian federalism in 2026 has shifted from "Cooperative Federalism" toward what scholars and leaders like the Chief Minister of Tamil Nadu call "Coercive" or "Centralized" Federalism. This friction is particularly evident in the "North-South" fiscal divide and the governance of non-NDA ruled states.

Trends Signaling Centralization in India

Several fiscal, administrative, and political moves have fueled the perception that the Union is overstepping its constitutional bounds.

1. **Fiscal Dependency (Cess and Surcharges):** The Union has increasingly relied on Cesses and Surcharges (e.g., Agriculture Infrastructure Cess). Since these are not part of the **Divisible Pool**, they are not shared with states. In FY 2024-25, cesses accounted for nearly **25% of the Union's gross tax revenue**, shrinking the states' actual share.
2. **The "Governor" Friction:** In states like Tamil Nadu, Kerala, and West Bengal, the Governor's office has been accused of acting as a "political agent." Examples include the indefinite withholding of Bills (leading to the 2024-25 SC rulings on Article 200) and interference in Vice-Chancellor appointments.
3. **Centralization of Schemes (Centrally Sponsored Schemes - CSS):** The Union often mandates strict branding and "co-funding" for CSS (e.g., PM-SHRI schools or Health

Centers). States argue this limits their autonomy to design schemes suited to local demographics.

4. **Encroachment on State List:** Legislation on subjects like **Agriculture** (now-repealed Farm Laws) and **Education** (National Education Policy 2020), and the expansion of the **Cooperative Ministry**, are viewed as indirect entries into Entry 14 (Agriculture) and Entry 32 (Corporations) of the State List.
5. **Use of Central Agencies:** The perceived "weaponization" of the ED, CBI, and NIA against state-level political leadership is cited by regional parties as an attempt to destabilize elected state governments.

Constitutional & Institutional Checks and Balances

The Indian Constitution provides a "safety valve" to prevent the Union from becoming an autocracy.

1. **Judicial Review (The Basic Structure):** In the **S.R. Bommai case (1994)**, the Supreme Court declared Federalism as part of the **Basic Structure**. Recently, the SC has intervened to set timelines for Governors and to protect the "borrowing powers" of states like Kerala (Article 293).
2. **The Rajya Sabha:** As the "Council of States," it ensures that the Union cannot pass laws on state subjects (Article 249) without a 2/3rd majority of the representatives of the states.
3. **Finance Commission (Article 280):** An independent constitutional body that balances the vertical and horizontal fiscal imbalance. The **16th Finance Commission** is currently under pressure to address the "efficiency vs. equity" debate raised by southern states.
4. **Inter-State Council (Article 263):** Though underutilized, it remains the constitutional forum for dispute resolution and policy coordination between the Union and States.
5. **GST Council:** A unique experiment in **"pooled sovereignty."** While criticized, it is the only body where the Union has only 1/3rd voting power and States collectively hold 2/3rd, requiring a 75% majority for any decision.

Steps to Foster True Cooperative Federalism

To resolve the current deadlock, structural reforms are required to move beyond "rhetorical federalism."

1. **Reforming the Governor's Office:** Implement the **Sarkaria and Punchhi Commission** recommendations. This includes appointing non-political eminent persons as Governors and mandating a fixed timeline (e.g., 6 months) for the Governor to grant or withhold assent to Bills.
2. **Limiting Cess and Surcharges:** There should be a constitutional cap on the collection of Cess and Surcharges, or they should be made part of the **Divisible Pool** if they exceed a certain percentage (e.g., 10%) of the Gross Tax Revenue.
3. **Revitalizing the Inter-State Council:** Make the ISC a permanent, active body with a secretariat. It should meet at least thrice a year to discuss contentious issues like internal security and the use of central agencies.
4. **Fiscal Autonomy (Article 293):** Grant states more flexibility in market borrowings based on their **Debt-to-GSDP ratio** rather than a blanket cap imposed by the Union, rewarding states with better fiscal discipline.

5. **Language and Cultural Sensitivity:** In a diverse union, avoiding the imposition of a single language (Hindi) and respecting the linguistic diversity of the South and North-East is crucial for "Emotional Integration," as often emphasized by the TN leadership.

Article 1 of the Constitution defines India as a **"Union of States."** This implies that the Union is not a superior entity but a partner. For India to reach its **$5 trillion** (and eventually $10 trillion) goal, the Union must recognize that the "engines of growth" are located in the States. True federalism in 2026 must transition from "Top-Down" to "Side-by-Side" governance.

1.35 A Possible Union of Nations hit by Tariff

This scenario reflects a shift toward **"de-globalization"** and **"transactional diplomacy,"** where the USA's move toward protectionism triggers a "balancing" response from the rest of the world.

Why Nations Might "Unionize"?

The call for a union of tariff-hit nations stems from Economic Collective Bargaining. Common grounds for convergence include:

1. **Defense against Trade Bullying:** Nations seek to move from a hub-and-spoke model (where everyone deals individually with the US) to a multilateral front to gain leverage.
2. **Weaponization of Currency:** The US's use of the Dollar as a tool for sanctions and tariffs incentivizes nations to explore **De-dollarization** and local currency trade.
3. **Supply Chain Resilience:** Tariffs disrupt global value chains. A new union would focus on **"Friend-shoring,"** where hit nations trade more among themselves to bypass US barriers.
4. **WTO Paralysis:** With the World Trade Organization's appellate body currently dysfunctional (largely due to US actions), nations feel the need for an alternative dispute-resolution mechanism.

Altering the Global Order: A Shift in Balance

A new union of emerging and developed economies (e.g., BRICS+ or a "G-Non-Tariff") could reshape the world by:

1. **Bipolarity to Multipolarity:** It would accelerate the end of the unipolar moment, creating a counterweight to the "G7" group.
2. **Alternative Financial Architecture:** Such a union could institutionalize the **New Development Bank (NDB)** or create a new "Liquidity Support Arrangement" that doesn't rely on the IMF.

3. **Standard Setting:** These nations could set their own standards for green energy, digital trade, and labor, reducing the dominance of Western-led regulatory frameworks.

The "Bleak" Reality: Dependencies on the USA

Despite the rhetoric, a cohesive anti-tariff alliance faces structural hurdles:

1. **Security Umbrella:** Many nations calling for economic unions (like those in Europe or East Asia) still rely on the **US Security Guarantee** (NATO/QUAD) for protection.
2. **The Dollar Hegemony:** Over 80% of global trade is still invoiced in USD. Switching to a new currency is a decades-long process fraught with volatility.
3. **Tech & Innovation:** The US controls the "choke points" of the 4th Industrial Revolution—specifically **High-end Semiconductors (AI chips)** and software ecosystems.
4. **Market Depth:** The US remains the world's most resilient consumer market. Most nations cannot find an immediate replacement for the "American Consumer."

India's Perspective: Does it make sense?

India's stance is likely to be **Strategic Autonomy** rather than joining a hard "anti-US" union.

1. **The Pro:** India is a victim of "Section 301" investigations and GSP (Generalized System of Preferences) withdrawals. A union helps India fight for its MSMEs.
2. **The Con:** India views the USA as its most critical partner for **Countering China** and for the **iCET (Initiative on Critical and Emerging Technology)**. Joining a union led by rivals (like China) or unpredictable partners (like Russia) is a "no-go" for New Delhi.
3. **The Middle Path:** India prefers **"Multi-alignment."** It will likely use the threat of such a union as a bargaining chip in bilateral trade talks with Washington.

Way Forward: The "Middle Power" Diplomacy

1. **Reforming Multilateralism:** Nations should push for a **WTO 2.0** to bring legal predictability back to trade.
2. **Bilateral Trade Agreements (FTAs):** Instead of one massive union, India and others should focus on "Gold Standard" FTAs with reliable partners (EU, UK, Australia) to reduce dependency on a single market.
3. **Digital Public Infrastructure (DPI):** India can lead by exporting its payment systems (UPI) to help other nations reduce their reliance on US-centric financial rails.
4. **Strategic Hedging:** Developing nations must keep the door open for dialogue with the US while simultaneously building internal industrial capacity (**Atmanirbharta**).

While a "Union of the Hit" provides a strong political message, the deep-seated financial and security dependencies on the USA make a formal alliance difficult. The world is moving toward **fragmented globalization**, where interest-based coalitions will replace rigid ideological blocs.

1.36 Surge in Cybercrimes in India

The Ministry of Home Affairs (MHA) has repeatedly flagged cybercrime as a "major national security challenge." With India recording over **1.1 million cyber-attacks** and a massive surge in financial frauds annually, the landscape has shifted from simple "phishing" to complex "state-sponsored" digital warfare.

Reasons for the Growth of Cybercrime in India

The rapid "Digital India" push has outpaced "Cyber Hygiene."

1. **Expansion of Digital Footprint:** With over **900 million internet users** and the world's highest real-time digital payments (UPI), the "attack surface" for criminals has expanded exponentially.
2. **Anonymity & Borderless Nature:** The use of **VPNs, Dark Web, and Tor browsers** allows criminals to operate from "safe havens" in jurisdictions like China, North Korea, or local "jamtara-style" hubs with minimal risk of extradition.
3. **The "Cybercrime-as-a-Service" (CaaS) Model:** Criminals no longer need to be tech-savvy; they can rent ransomware or phishing kits for a small fee, lowering the entry barrier for petty criminals.
4. **Low Digital Literacy (Cyber Hygiene):** While many have smartphones, a vast majority are unaware of basic security protocols like 2-Factor Authentication (2FA) or the dangers of clicking unverified links.
5. **Fragmented Data Privacy:** Despite the *Digital Personal Data Protection (DPDP) Act 2023*, the historical lack of stringent data protection allowed massive leaks, providing "lead lists" to scammers.

Key Statistics for Revision:

- **Attack Volume:** India is the **2nd most targeted country** in the world for cyberattacks (Check Point Research).
- **Financial Impact:** Cybercrime is estimated to cost the global economy **$10.5 trillion annually by 2025**.
- **Reporting:** The portal cybercrime.gov.in has handled over **3 million complaints** since its inception, yet the pendency remains high.

The AI Paradox: Positive vs. Negative Effects

AI is a double-edged sword that acts as both the "shield" and the "spear."

The Negative (The Spear)	The Positive (The Shield)
Deepfakes & Social Engineering: AI creates highly convincing audio/video to impersonate CEOs or relatives (e.g., the recent Deepfake video call scam that cost a firm $25M).	**Anomaly Detection:** AI can scan millions of transactions per second to identify patterns that deviate from human behavior, stopping fraud in real-time.
Automated Phishing: Generative AI (like ChatGPT) can write perfect, error-free emails in any local language (Hindi, Tamil, etc.), making "Nigerian Prince" errors a thing of the past.	**Predictive Threat Intelligence:** AI can predict where a "Zero-day" vulnerability might exist by analyzing past code breaches, patching systems before they are exploited.
Adaptive Malware: AI-powered malware can change its code structure in real-time to avoid detection by traditional antivirus software.	**Automated Response:** AI can "quarantine" an infected part of a grid or network within milliseconds—faster than any human admin.

Password Cracking: AI algorithms can crack complex passwords using "smart brute-force" methods much faster than traditional computing.	**Biometric Security:** AI enhances facial and voice recognition, making it harder for simple identity theft to occur at the device level.

Challenges India Faces in Combating Cybercrime

India's battle is hampered by structural and legal bottlenecks.

1. **Under-reporting:** Due to social stigma or lack of faith in the system, it is estimated that only **1% to 2%** of cybercrimes are actually reported to the *National Cyber Crime Reporting Portal*.
2. **Skill Gap in Law Enforcement:** Most local police stations are ill-equipped. We have a severe shortage of **certified cyber-forensic experts** compared to the volume of cases.
3. **Jurisdictional Hurdles:** Data is often stored in servers located in the US or Ireland. Getting "Mutual Legal Assistance Treaties" (MLAT) honored takes months, by which time the money/evidence is gone.
4. **Low Conviction Rates:** The technical nature of evidence (IP addresses, hash values) often fails to hold up in traditional Indian courts, leading to high acquittal rates.
5. **Porous Digital Borders:** Attacks on critical infrastructure (like the **2022 AIIMS Ransomware attack**) often originate from state-sponsored actors, making it a geopolitical issue rather than just a criminal one.

The Way Forward: What India Should Do

"Whole-of-Government" approach is required.

1. **Strengthen I4C:** The **Indian Cyber Crime Coordination Centre (I4C)** must be upgraded with regional branches in every state to act as a 24/7 rapid response team.
2. **Mandatory Cyber Insurance & Audits:** For critical sectors (Power, Banking, Health), the government should mandate quarterly **third-party cyber audits** and promote cyber insurance for MSMEs.
3. **Integration of Judiciary:** Establish **Special Cyber Courts** with tech-trained judges to fast-track digital evidence cases, similar to Fast Track courts for other heinous crimes.
4. **International Cooperation:** India must lead the call for a **Global Convention on Cybercrime** (similar to the Budapest Convention but more inclusive) to ensure seamless cross-border data sharing for criminal probes.
5. **Mass Awareness (Cyber Shiksha):** Integrating "Cyber Safety" into the school curriculum and running campaigns in regional languages (like the RBI's "Suno RBI Kehta Hai") to target the vulnerable elderly and rural populations.

1.37 PRAHAAR on Terrorism

The Ministry of Home Affairs (MHA) unveiled **"PRAHAAR"**, India's first-ever comprehensive National Counter-Terrorism Policy and Strategy. This marks a paradigm shift from a reactive security posture to a doctrine-led, proactive, and "Intelligence-Guided" framework.

The PRAHAAR Policy: A Brief Idea

1. **P – Prevention:** Intelligence-led, proactive measures to stop attacks before they manifest; disruption of "Overground Worker" (OGW) networks.
2. **R – Response:** Standardized, swift, and proportionate responses across all levels of governance (Local, State, and National).
3. **A – Aggregating Capacities:** A "Whole-of-Government" approach to achieve synergy between central agencies (NIA, IB) and State Police.
4. **H – Human Rights:** Ensuring that all counter-terror operations are grounded in the "Rule of Law" with legal safeguards.
5. **A – Attenuating Conditions:** Addressing the root causes and conditions that enable terrorism, specifically focusing on de-radicalization.
6. **A – Aligning International Efforts:** Shaping global counter-terror narratives and leveraging treaties like extradition and MLATs.
7. **R – Recovery & Resilience:** A "Whole-of-Society" approach to ensure quick recovery and societal resilience post-incident.

Ushering a New Era of Counter-Terrorism

PRAHAAR transitions India from an ad-hoc response mechanism to a formalized security doctrine.

1. **Doctrine-Led Approach:** For the first time, India has a written public doctrine, moving away from fragmented operational guidelines to a unified national strategy.
2. **Technological Frontier:** It specifically targets the "Triple Threat" of the digital age: **Drones** (especially in Punjab/J&K), **Crypto-wallets** for terror funding, and **Dark Web** communication.
3. **Multi-Modal Defense:** Recognizes threats across all three domains—**Water, Land, and Air**—with specific protection for critical infrastructure like Atomic Energy and Space installations.
4. **Institutionalizing the MAC:** The **Multi-Agency Centre (MAC)** and the Joint Task Force on Intelligence (JTFI) are now formal nodal platforms for real-time, 24/7 data sharing between center and states.
5. **Legal-Executive Synergy:** The policy mandates associating **legal experts at every stage**, from the FIR to prosecution, to ensure high conviction rates (targeting the NIA's current benchmark of over 90%).

Issues and Gaps in the PRAHAAR Framework

1. **State-Level Capacity Disparity:** While the center modernizes, many State **Anti-Terror Squads (ATS)** suffer from extreme shortages in forensic technology and specialized personnel.
2. **The "Lone Wolf" Challenge:** The policy focuses heavily on "networks" and "outfits," but offers limited specific strategies for detecting self-radicalized "Lone Wolf" actors who use low-tech methods.
3. **Data Privacy vs. Surveillance:** The focus on "proactive disruption of cyber activities" lacks a clear oversight mechanism to prevent potential misuse against civil liberties or political dissent.
4. **Police Reforms:** It emphasizes the role of local police as "first responders" but doesn't address the systemic burden, lack of training, and "colonial-era" functioning of the local *thanas*.
5. **Rehabilitation Funding:** While it mentions de-radicalization, it lacks a dedicated, ring-fenced national budget for the socio-economic rehabilitation of "returnees" or misguided youth.

Way Forward: Strengthening the Scheme

To ensure PRAHAAR does not remain a "paper tiger," the following steps are essential:

1. **Standardizing State ATS:** Create a "National Benchmark" for State ATS equipment and training, supported by a central "Security Modernization Fund."
2. **Cyber-Command Centers:** Establish district-level "Cyber-Security Cells" that focus specifically on monitoring local dark-web footprints and crypto-transactions.
3. **Community Policing 2.0:** Integrate the "Whole-of-Society" approach by incentivizing local community leaders and "Moderate Preachers" through formal social-recognition programs.
4. **Legislative Oversight:** Introduce a periodic "Performance Audit" of the PRAHAAR policy by a Parliamentary Standing Committee on Home Affairs to ensure transparency and efficiency.
5. **Global Intelligence Grid:** Lead the creation of a BRICS or G20 "Real-time Terror Financial Tracker" to automate the freezing of assets belonging to designated global terror entities.

1.38 Inter faith Marriages

The Allahabad High Court recently clarified that the **Uttar Pradesh Prohibition of Unlawful Conversion of Religion Act, 2021**, does not prohibit inter-faith marriage itself; it only targets conversions done through force, deceit, or solely for the purpose of marriage. This judicial intervention serves as a vital check on executive overreach.

Why States are Tightening Norms for Inter-faith Marriages

Several state governments have introduced or amended "Freedom of Religion" laws (often called Anti-Conversion laws) citing the following reasons:

Prevention of "Deceptive" Conversions: States argue that specific instances of "Love Jihad" involve systemic coercion or fraud where individuals hide their identity to facilitate marriage and conversion

1. **Public Order and Social Harmony:** Governments claim that unregulated inter-faith marriages often lead to communal tension and "breach of peace" in sensitive districts.
2. **Protection of Vulnerable Sections:** Proponents argue these laws protect women and marginalized communities from being lured into changing their faith without genuine spiritual conviction.
3. **Data and Demographic Concerns:** Some political narratives suggest that large-scale conversions through marriage could lead to demographic shifts in specific regions.
4. **Strengthening the "Special Marriage Act" Alternatives:** By mandating a 30-to-60-day notice period for conversion, states intend to provide a "cooling-off" period for families to intervene.

Long-term Effects on Individual Liberty & Rights through the observation of the HC

The Allahabad HC judgment reinforces the "Constitutional Morality" over "Social Morality." Its long-term effects include:

1. **Upholding the Right to Privacy:** It reaffirms the principle laid down in the **Puttaswamy (2017)** judgment—that the choice of a life partner falls within the "core zone of privacy."
2. **Curbing Executive Arrogance:** By clarifying that the law cannot be used as a tool to harass consenting adults, it sets a precedent that the state cannot enter the "inner sanctum" of personal relationships.
3. **Protection of Agency:** It empowers individuals (especially women) by recognizing them as independent decision-makers, countering the patriarchal notion that they need "protection" by the state or family.
4. **Securing Secularism:** The judgment ensures that "Article 25" (Freedom of Religion) remains a choice of the individual, not a mandate of the community or government.
5. **Standardizing Judicial Review:** It provides a template for other High Courts (like Gujarat or MP) to strike down or read down similar draconian provisions in their respective state laws.

Cleavages in the Community regarding Inter-faith Marriage

Deep-seated social and structural divisions make inter-faith unions a flashpoint in India:

1. **Religious Identity vs. National Identity:** Many communities view marriage as a means of "preserving the flock," where an inter-faith union is seen as a loss of a member and a threat to the community's strength.
2. **Patriarchal Control:** Families often view women as the "repositories of community honor." A woman choosing her partner outside the faith is perceived as a direct challenge to the authority of the male kin.
3. **The "Voter-Bank" Polarization:** Political mobilization often uses inter-faith marriages to create a "us vs. them" narrative, turning personal choices into communal "conspiracies" for electoral gains.
4. **Succession and Personal Laws:** Since India lacks a **Uniform Civil Code**, inter-faith marriages complicate inheritance, maintenance, and child custody, creating friction between the varying personal laws of different religions.
5. **Lack of Social Integration:** Due to residential segregation (ghettos) and limited inter-community dining/socializing, many communities view "the other" with suspicion, making marriage seem like an "invasion."

Way Forward: Building a More Democratic Society

To move toward a society that truly hails individual freedom, the following steps are required:

1. **Reforming the Special Marriage Act (SMA):** The mandatory 30-day public notice and "objection" clause in the SMA should be removed, as it often invites vigilante interference and endangers the couple.
2. **Sensitization of the Police and Bureaucracy:** The executive must be trained to recognize that their duty is to protect the **consenting couple**, not to act as "moral police" or mediators for the parents.
3. **Promoting Inter-cultural Literacy:** Educational curricula should emphasize the "syncretic" history of India (Ganga-Jamuni Tehzeeb) to reduce the "othering" of different religious groups.
4. **Strengthening "Safe Houses":** States should establish and fund safe houses for inter-faith and inter-caste couples who face threats from their families, as directed by the Supreme Court in the **Shakti Vahini case**.
5. **Legal Aid and Advocacy:** Civil society and NGOs must be empowered to provide quick legal recourse to couples facing harassment under anti-conversion laws to ensure their constitutional rights are not bypassed by local dynamics.

1.39 Adolescents Facing Mental Health Crisis

The adolescent mental health crisis in India is increasingly recognized as a "silent developmental emergency." As of 2026, data from the **Economic Survey 2025–26** and the **Second National Mental Health Survey** suggests that nearly **7–10% of Indian adolescents** have diagnosable mental health conditions, with anxiety and depression leading the surge.

Reasons for the Rising Mental Health Crisis

The crisis is multi-causal, stemming from a blend of structural, social, and psychological pressures:

1. **Academic Hyper-competitiveness:** The "coaching culture" (e.g., Kota, Hyderabad) and a rigid examination system create a zero-sum game environment, leading to chronic stress and "performance anxiety."
2. **Stigma and Lack of Dialogue:** Mental health remains a taboo in many Indian households. Symptoms of distress are often dismissed as "adolescent tantrums" or "laziness," delaying early intervention.
3. **Specialist Shortage:** India has fewer than **10,000 psychiatrists** for a population of 1.4 billion. The gap for child-specialized professionals is even more severe, making care inaccessible for most.

4. **Changing Family Structures:** The shift from joint to nuclear families has reduced the traditional multi-generational support system, leaving adolescents more isolated during emotional turmoils.
5. **Post-Pandemic Aftermath:** The social isolation of the COVID-19 years disrupted critical neurodevelopmental phases, leading to long-term behavioral changes and "social awkwardness" in public spaces.

Digital Consumption, FOMO, and the Trigger Effect

Unregulated digital consumption is a significant **"risk multiplier."** While technology provides access, it has also introduced a unique set of psychological triggers:

1. **The FOMO Cycle:** The **Fear of Missing Out (FOMO)** is intensified by social media algorithms. Seeing peers constantly share "curated highlights" leads to social comparison and a sense of inadequacy in one's own reality.
2. **Dopamine Looping:** Short-form videos (Reels/YouTube Shorts) create a constant dopamine-reward loop. This reduces the attention span and makes real-world, "slower" interactions feel unfulfilling or boring.
3. **Sleep Deprivation:** "Blue light" exposure and "revenge bedtime procrastination" (scrolling late into the night) disrupt circadian rhythms, which is directly linked to increased irritability and clinical depression.
4. **Social Validation Pressure:** The reliance on "Likes" and "Comments" for self-worth creates a fragile ego-system where negative digital feedback or "ghosting" can trigger severe depressive episodes.
5. **Cyberbullying:** The digital space has removed the "safe haven" of the home. Bullying is no longer confined to school hours; it follows the adolescent into their bedroom via the smartphone.

Measures to Reduce the Burden

A multi-stakeholder approach—involving schools, parents, and the state—is essential:

1. **Institutionalization of Counseling:** Every school must have a mandatory, full-time **certified counselor**. Mental health should be part of the "Social-Emotional Learning" (SEL) curriculum, not just a one-off seminar.
2. **Digital Hygiene Education:** Governments and schools should promote **"Digital Wellness"** modules—teaching students how to manage screen time and recognize the psychological traps of social media algorithms.
3. **Strengthening Tele-MANAS:** Expanding the **National Tele-Mental Health Programme (Tele-MANAS)** to include dedicated pediatric and adolescent wings with video-consultation capabilities.
4. **Parental Sensitization:** Regular parent-teacher meets should focus on "emotional report cards" rather than just academic ones, encouraging parents to listen without judgment.
5. **Peer Support Networks:** Training students as "Mental Health First-Responders" to recognize signs of distress in their friends, as peers are often the first to notice changes in behavior.

Global Best Practices

1. **Australia's Social Media Ban:** In late 2025, Australia introduced a landmark ban on social media for children under 16, treating digital access as a public health safety issue.
2. **Finland's KiVa Program:** A comprehensive anti-bullying program that focuses on the "bystander" rather than just the victim or bully, significantly reducing school-related anxiety.
3. **UK's Mental Health Support Teams (MHSTs):** These are specialized units that work directly within schools to bridge the gap between education and the National Health Service (NHS).
4. **Icelandic Model:** Focused on reducing substance abuse and mental distress by increasing state funding for organized extracurricular activities (sports, music) to provide "natural dopamine" hits.
5. **France's "Digital Detox" Laws:** France has implemented laws banning smartphones in schools for students up to a certain age, promoting face-to-face social interaction during breaks.

1.40 Nutritional Security Challenge for India

Despite being the world's largest producer of milk and pulses and the second-largest producer of rice, wheat, and vegetables, India continues to grapple with a "hidden hunger." As of 2026, the transition from **food security** (calories) to **nutritional security** (micronutrients) remains a significant challenge for Indian policymaking.

The Data of Deficit: Status of Nutritional Security

Recent statistics highlight the depth of the crisis:

1. **Stunting and Wasting:** According to **NFHS-5** (and corroborated by 2024-25 projections), **35.5%** of children under five are stunted (low height-for-age) and **19.3%** are wasted (low weight-for-height).
2. **The Anemia Burden:** Over **57% of women** (15-49 years) and **67% of children** suffer from anemia, indicating massive iron and B12 deficiencies.
3. **Global Hunger Index (GHI):** India's ranking consistently hovers in the "serious" category (e.g., 105th out of 127 in 2025), primarily driven by high child wasting rates.
4. **Micro-nutrient Deficiency:** Often called **"Hidden Hunger,"** an estimated **80% of Indians** are deficient in Vitamin D, and a significant portion lacks Zinc and Iodine.
5. **Affordability:** The **FAO's "State of Food Security and Nutrition"** report suggests that roughly **74% of Indians** cannot afford a healthy, nutrient-dense diet.

Why India Lags in Nutritional Security?

1. **Cereal-Centric Policy:** For decades, the Green Revolution focused on wheat and rice. This "cerealification" of the plate has led to a decline in the consumption of diverse, nutrient-rich millets and pulses.
2. **Monoculture and Soil Health:** Intensive farming has depleted soil of essential micronutrients (Zinc, Boron, Iron). If the soil is deficient, the crop—and eventually the

human—is deficient.

3. **The Protein Gap**: High inflation in pulses and limited intake of animal protein (due to economic and cultural factors) means the average Indian diet is heavily skewed toward carbohydrates.
4. **Poor Sanitation (The Leaky Bucket):** Even if a child eats well, infections from poor water and sanitation (WASH) lead to malabsorption, where nutrients are lost to diarrhea and intestinal worms.
5. **Gender Dynamics:** In many households, women eat last and least, leading to intergenerational cycles of malnutrition (malnourished mothers giving birth to low-birth-weight infants).

Government Initiatives for Nutritional Security

1. **POSHAN Abhiyaan (National Nutrition Mission):** Targets stunting, under-nutrition, and anemia through a "Jan Andolan" (people's movement) and technology-based monitoring.
2. **PM POSHAN (formerly Mid-Day Meal):** Provides hot cooked meals to school children, now incorporating eggs or fortified foods in several states.
3. **Anemia Mukt Bharat:** A specialized 6x6x6 strategy (6 age groups, 6 interventions, 6 institutional mechanisms) to reduce anemia prevalence.
4. **Food Fortification:** The mandatory fortification of rice distributed through PDS with **Iron, Folic Acid, and Vitamin B12**.
5. **PM-Pranam & Soil Health Cards:** Aimed at restoring soil nutrients, which indirectly improves the nutritional quality of the food produced.

Modernizing PDS for Nutritional Security

The Public Distribution System (PDS) must evolve from a "calorie delivery" system to a "nutrition delivery" system:

1. **Nutri-Cereals (Millets):** Integration of **Bajra, Jowar, and Ragi** into the PDS basket. *Example: Odisha's Millet Mission has successfully integrated ragi into PDS and Anganwadi meals.*
2. **Pulse Inclusion:** Making pulses a mandatory component of PDS globally (rather than state-discretionary) to address the protein deficiency.
3. **Fortification at Scale:** Moving beyond rice to fortify PDS wheat flour and edible oils with Vitamin A and D.
4. **Cash Transfers for Fresh Produce:** Introducing "Direct Benefit Transfer (DBT) for Nutrition" specifically for purchasing milk, fruits, and vegetables, which cannot be stored in PDS godowns.
5. **Smart Ration Cards & Portability:** Using the **One Nation One Ration Card (ONORC)** to allow migrants to access fortified food anywhere, ensuring no break in their nutritional intake.

Other Measures for Betterment

1. **Bio-fortification:** Developing crop varieties that are naturally richer in nutrients (e.g., **Madhuvan Gajar** for Beta-carotene or **Zinc-rich Rice**). This is more sustainable than post-harvest chemical fortification.

2. **Promoting Nutri-Gardens:** Encouraging "Kitchen Gardens" at Anganwadis and schools to provide fresh, pesticide-free greens.
3. **Diversifying the Thali:** Shifting the MSP (Minimum Support Price) regime to incentivize oilseeds and pulses, making them cheaper for the common man.
4. **Behavioral Change (BCC):** Scaling up campaigns like **"Eat Right India"** to educate the public on the difference between "filling the stomach" and "nourishing the body."
5. **WASH Integration:** Linking nutritional programs with **Jal Jeevan Mission**; clean water is a prerequisite for nutrient retention in the body.

1.41 India's GCC Opportunity

India and the Gulf Cooperation Council (GCC) achieved a milestone in their "Act West" policy by signing a **Joint Statement** in New Delhi to formally launch negotiations for a **Free Trade Agreement (FTA)**. This follows the signing of the Terms of Reference (ToR) earlier that month, marking a decisive move to institutionalize one of India's most critical economic partnerships.

Key Features of the India–GCC FTA

The proposed FTA is envisioned as a "Comprehensive Economic Partnership," going beyond traditional trade in goods.

1. **Trade in Goods:** Focused on eliminating or reducing tariffs on engineering goods, textiles, and agricultural products from India, and energy/petrochemical products from the GCC.
2. **Services and Digital Trade:** Emphasis on the seamless movement of professionals (IT, healthcare) and establishing a framework for the digital economy and fintech.
3. **Customs Simplification:** Streamlining customs procedures to reduce "transaction time" and costs, making cross-border supply chains more efficient.
4. **Investment Protection:** Creating a predictable legal environment to facilitate the flow of Sovereign Wealth Funds (SWFs) from the Gulf into India's infrastructure.
5. **Mutual Recognition Agreements (MRAs):** Synchronizing standards and certifications so that Indian products meet Gulf regulatory requirements without redundant testing.
6. **Strategic Integration:** Aligning the FTA with initiatives like the **India-Middle East-Europe Economic Corridor (IMEC)** to bolster regional connectivity.

About the GCC:

The Gulf Cooperation Council is a regional intergovernmental organization established in **1981**.

- **Member States:** Comprises six monarchies: **Saudi Arabia, UAE, Qatar, Kuwait, Oman, and Bahrain**.
- **Headquarters:** Located in **Riyadh, Saudi Arabia**.
- **Highest Authority:** The **Supreme Council**, consisting of the heads of member states, with a rotating presidency.
- **Integration Level:** Operates as a **Customs Union** (since 2003) and a **Common Market** (since 2008), allowing free movement of GCC citizens.
- **Strategic Objective:** To achieve coordination and integration in all fields, particularly in

finance, trade, and regional security.
- **Economic Clout:** Collectively represents a **$2.3 trillion GDP** (9th largest globally) and a market of over **61.5 million people**.

Key Statistics: India-GCC Relations (FY 2024-25)
The economic synergy between the two entities is reflected in the following data:
- **Total Bilateral Trade:** Reached **$178.56 billion**, accounting for **15.42%** of India's total global trade.
- **Trade Balance:** India's exports stood at **$56.87 billion** against imports of **$121.68 billion** (primarily due to energy).
- **FDI Inflows:** Cumulative investment from the GCC into India exceeded **$31.14 billion** as of September 2025.
- **The "Living Bridge":** Approximately **8.9 to 10 million Indians** reside in GCC countries, representing nearly **66%** of the total NRI population.
- **Remittances:** The region remains the largest source of remittances for India, contributing significantly to its foreign exchange reserves.
- **Energy Dependence:** The GCC provides nearly **35% of India's crude oil** and **70% of its natural gas** (LNG) requirements.

Opportunities for India
1. **Energy Security to Energy Partnership:** Shifting from a buyer-seller model to joint ventures in **Green Hydrogen** and solar energy.
2. **Food Security Hub:** India can act as the "Food Basket" for the GCC, leveraging its agricultural surplus to meet the Gulf's food security goals (*Vision 2030*).
3. **Infrastructure Investment:** Attracting Gulf Sovereign Wealth Funds into the **National Infrastructure Pipeline (NIP)** and Gati Shakti projects.
4. **Export Diversification:** Moving beyond traditional exports to high-tech manufacturing, defense equipment, and pharmaceutical products.
5. **Digital Integration:** Exporting India's **UPI and Digital Public Infrastructure (DPI)** to the Gulf, as seen with the UAE's *JAYWAN* card scheme.
6. **Strategic Autonomy:** Strengthening ties with the GCC helps India balance its interests in a multi-polar world, providing a counterweight to other regional influences.

Friction Points and Challenges
1. **The "Kafala" System:** Concerns regarding labor laws and the welfare of the Indian migrant workforce remain a sensitive diplomatic issue.
2. **Non-Tariff Barriers (NTBs):** Stringent sanitary and phytosanitary (SPS) measures in the Gulf often act as hurdles for Indian agricultural exports.
3. **Geopolitical Volatility:** Regional conflicts (e.g., Israel-Hamas, Iran-Saudi tensions) can disrupt energy supply chains and the safety of the diaspora.
4. **Competition from China:** China's growing footprint in the Gulf through its *Belt and Road Initiative (BRI)* creates a competitive environment for Indian projects.
5. **Protectionism:** Some GCC nations are pushing "nationalization" of workforces (e.g., *Nitaqat* in Saudi Arabia), which could limit future employment for Indians.
6. **Trade Imbalance:** The persistent deficit due to oil imports is a structural challenge that the FTA must address through increased service exports.

Way Forward
1. **Early Harvest Scheme:** To build momentum, both sides could implement an "Early

Harvest" deal for sectors with immediate consensus while negotiating complex issues.

2. **Skill Mapping:** Aligning India's "Skill India" mission with the specific labor market demands of the Gulf's diversifying economies.
3. **Strengthening IMEC:** Actively involving GCC private players in the development of the India-Middle East-Europe Corridor to ensure its commercial viability.
4. **Institutionalized Diaspora Dialogue:** Creating a formal mechanism within the FTA to address migration, social security, and portability of benefits for workers.
5. **Defense and Security Cooperation:** Expanding the relationship beyond trade into maritime security and counter-terrorism to ensure a stable "extended neighborhood."
6. **Sustainability Focus:** Collaborative R&D in carbon capture and desalination technologies to address shared climate change vulnerabilities.

1.42 Increased Budget for Defence- Militarism or Maturity?

In the Union Budget **2026-27**, the Government of India has allocated a record **₹7.85 lakh crore** ($86.7 billion) to the Ministry of Defence, marking a **15.19% increase** over the previous year. This significant hike reflects India's attempt to reconcile its developmental aspirations with an increasingly volatile geopolitical landscape.

Militarization vs. Maturity: A Strategic Posture

The debate over whether India's spending signifies "militarization" or "credible deterrence" is central to South Asian security.

1. **Credible Deterrence:** The 22% surge in capital outlay (modernization) aims to close the "capability gap" with China and maintain a conventional edge over Pakistan. It signals that any misadventure will result in unacceptable costs for the adversary.
2. **Defensive Realism:** Unlike an expansionist "militarization," India's spending is largely reactive to specific threats, such as the LAC standoff and the rising presence of adversarial naval fleets in the Indian Ocean.
3. **Technological Overhaul:** Focus on "force multipliers" like AI, drones, and cyber units suggests a move toward **smart power** rather than just a numerical buildup of boots on the ground.
4. **Stability through Strength:** Proponents argue that a weak India creates a power vacuum; a strong India acts as a "Net Security Provider" (or Preferred Security Partner), stabilizing the Indo-Pacific.
5. **Avoiding the "Optimism Trap":** Enhanced budgets reduce the adversary's optimism for a quick victory, which, according to strategic theory, is often a primary cause of war.
6. **Consolidation, not Escalation:** Large portions of the budget are dedicated to **Border Roads Organization (BRO)** and strategic tunnels, which are infrastructure-heavy and aimed at defensive logistics rather than offensive strikes.

Why the Defence Budget is Widely Debated in India

In a developing democracy like India, the "Guns vs. Butter" debate is perennial and multi-faceted.

1. **Opportunity Cost:** Every rupee spent on a fighter jet is a rupee not spent on health, education, or rural infrastructure. This remains the core of the political debate.
2. **The Pension Burden:** Nearly **22-24%** of the budget goes toward pensions (including OROP). Critics argue this "tail" is too long, leaving less for the "teeth" (modernization).
3. **GDP Linkage:** Experts often debate whether India should spend a fixed **3% of its GDP** on defence (as recommended by Parliamentary Committees) versus the current **~1.9% - 2.2%**.
4. **Import Dependency:** Despite the *Aatmanirbhar Bharat* push, India remains one of the world's largest arms importers. Debates often focus on the slow pace of indigenization and the "cost-benefit" of domestic versus foreign tech.
5. **Operational Readiness vs. Procurement:** There is often a tension between spending on current readiness (fuel, ammunition, salaries) and future platforms (submarines, jets), leading to debates on "hollowed-out" capabilities.
6. **Transparency and Scrutiny:** Unlike other ministries, defence deals often involve "confidentiality clauses," leading to intense political scrutiny over procurement integrity and middleman issues.

The Way Forward: A Strategic Roadmap

To ensure that increased spending translates into actual security, India must adopt a multi-pronged approach:

1. **Expediting Theaterization:** Transitioning to **Integrated Theatre Commands** is essential to reduce redundancy and ensure the three services operate as a single, cohesive force.
2. **Non-Lapsable Modernization Fund:** Establishing a dedicated fund that doesn't expire at the end of the fiscal year would allow for better management of multi-year, high-value contracts (like the Rafale or Project-75I).
3. **Focus on 'Deep Tech' R&D:** Shifting the R&D budget (currently dominated by DRDO) toward private sector startups and academia to foster a "Defence-Industrial Ecosystem" rather than just a manufacturing hub.
4. **Optimizing Personnel Costs:** Further refining recruitment models (like the *Agnipath* scheme) to manage the burgeoning salary and pension bill without compromising operational efficiency.
5. **Aggressive Export Targets:** Achieving the **₹50,000 crore export target** by 2029 to turn the defence sector from a "cost center" into an "economic multiplier" that generates revenue and jobs.
6. **Diplomatic Leveraging:** Using defence production as a tool of "Strategic Diplomacy" by exporting to friendly littoral nations, thereby creating a collective security framework in the Indo-Pacific.

1.43 Bulldozer Threatens Due Process of Law

The term **"Bulldozer Justice"** refers to the state-led practice of using heavy machinery to demolish the properties of individuals allegedly involved in crimes, often as a punitive measure. While the executive presents it as "urban clearance," the judiciary has recently flagged it as a subversion of the rule of law.

Violation of Human Rights and Due Process The use of bulldozers as a tool of summary justice infringes upon several constitutional and international mandates:

1. **Right to Shelter (Article 21):** In Olga Tellis v. BMC, the Supreme Court (SC) held that the right to life includes the right to shelter. Demolishing a home without an alternative or legal basis renders a family homeless, violating their basic dignity.
2. **Doctrine of Collective Punishment:** Demolitions often punish entire families for the alleged crime of one member. This violates the principle that criminal liability is individual, not communal or familial.
3. **Presumption of Innocence:** Punitive demolition assumes guilt before a trial. It bypasses the "innocent until proven guilty" bedrock of criminal jurisprudence.
4. **Procedural Fairness (Audi Alteram Partem):** Under natural justice, no person can be condemned unheard. Demolitions without proper notice or a chance to contest the order in court deny the "due process of law."
5. **Violation of Article 300A:** While property is no longer a fundamental right, Article 300A mandates that "no person shall be deprived of his property save by authority of law." Arbitrary executive action lacks this legal authority.

Justifications Offered by the Executive

State authorities generally justify these actions using administrative and municipal frameworks:

1. **Encroachment Clearance:** The primary legal shield is that the structures are "illegal" or built on public land (encroachments) and violate municipal building codes.
2. **Immediate Deterrence:** Proponents argue that swift action creates a "chilling effect" on habitual offenders and rioters, maintaining public order more effectively than long-drawn trials.
3. **Recovery of Damages:** Some states justify it as a means to recover costs for damage caused to public property during protests or riots.
4. **Administrative Efficiency:** It is often portrayed as "cleansing" a locality of criminal elements who use illegal structures as dens for unlawful activities.
5. **Public Demand:** There is often a populist narrative where "instant justice" is demanded by sections of society to address heinous crimes, providing political legitimacy to the action.

Directions of the Judiciary

The Supreme Court, in its landmark ruling in **November 2024**, issued pan-India guidelines to curb this trend:

1. **Separation of Powers:** The Court asserted that the Executive cannot replace the Judiciary; the power to adjudicate guilt and award punishment lies solely with the

courts.

2. **Mandatory 15-Day Notice:** No demolition can occur without a 15-day prior notice served via registered post and affixed to the structure, giving the owner time to appeal or vacate.
3. **Digital Transparency:** Every municipal authority must create a digital portal hosting details of the notice, the reply, and the final reasoned order.
4. **Personal Accountability:** Officials who violate guidelines are liable for **contempt of court**. They may be ordered to pay for the restitution of the property from their own salaries.
5. **Videography:** The entire demolition process must be video-recorded, and a detailed report must be submitted to the Municipal Commissioner.

Measures to Show Maturity in a Democracy

To transition from "Rule by Law" (using law as a tool of power) to the **"Rule of Law,"** the following steps are necessary:

1. **Institutionalizing Judicial Oversight:** Every demolition order should be subject to a mandatory judicial review or an independent appellate tribunal before the bulldozer is deployed.
2. **Compensation and Restitution:** Strengthening the legal framework for "wrongful demolition" where the state is forced to rebuild the structure if the action is found to be mala fide (in bad faith).
3. **Sensitization of the Executive:** Training police and municipal officials on the distinction between "crime control" and "administrative regulation," emphasizing that a crime does not authorize a municipal violation.
4. **Strengthening Municipal Grievance Redressal:** Implementing a "Compounding Policy" where minor deviations in building plans can be regularized through fines rather than total destruction.
5. **Standardizing "Hard-to-Abate" Protocols:** Ensuring that even in cases of genuine encroachment, the state follows the "Humanitarian Eviction" protocol, providing sufficient time for rehabilitation, especially for the poor and marginalized.

1.44 India-Israel Relations

The bilateral relationship between India and Israel has evolved from "hesitant engagement" to a Strategic Partnership (2017). In the wake of recent high-level visits in late 2025 and early 2026, the tie has matured into a multi-layered cooperation.

Recent Initiatives

Following the recent Prime Ministerial engagements, the focus has shifted to deep-tech and labor mobility:

1. **G2G Labor Agreement:** A landmark deal to send over **10,000 Indian construction and healthcare workers** to Israel to fill labor shortages, formalizing migration via the NSDC.
2. **India-Israel Industry R&D Fund (I4F) Expansion:** An additional **$50 million**

commitment to support "Start-up Bridge" initiatives focusing on climate-resilient agriculture.

3. **Joint Semiconductor Ecosystem:** A Memorandum of Understanding (MoU) on VLSI design and semiconductor supply chain resilience, leveraging Israel's design prowess and India's manufacturing push.
4. **Water Management 2.0:** Establishment of a "Center of Excellence" in water technology at **IIT Madras**, focusing on desalination and automated drip irrigation for arid zones.
5. **Defense Co-production:** Shift from a "buyer-seller" to a "co-developer" model, including the manufacturing of **Hermes 900 Starliner drones** in Hyderabad through Adani-Elbit joint ventures.

Points of Convergence: The relationship is anchored by mutual interests across several critical pillars:

1. **Strategic & Counter-Terrorism:** Both nations are victims of cross-border terrorism. They share real-time intelligence and "homeland security" tactics.
2. **Military Technology:** Israel is one of India's top 3 defense suppliers. **Stats:** Over **$1 billion** in annual defense trade, including the **Barak-8** Surface-to-Air Missile system and Phalcon AWACS.
3. **Agriculture (The 3rd Pillar):** There are currently **30+ Centers of Excellence** across India. Examples include the "Indo-Israel Villages of Excellence," which have increased crop yields by **20%** using Israeli fertigation.
4. **Innovation & Deep Tech:** Known as the "Start-up Nation," Israel provides the tech-niche while India provides the "Scale." The **iCreate-ISBA** collaboration fosters ventures in AI and Cyber-security.
5. **Economic & Connectivity (IMEC):** Both countries are key stakeholders in the **India-Middle East-Europe Economic Corridor (IMEC)**, where Israel's Haifa Port (Adani-owned) serves as a strategic Mediterranean gateway.

Friction Points and Criticisms

The partnership faces domestic and international scrutiny, particularly regarding geopolitical shifts:

1. **The Gaza Conflict & Humanitarian Stance:** India's shift from its traditional voting pattern at the UN to a more nuanced "balanced" stance has been criticized by domestic opposition and the Arab world as a departure from the **Palestine Cause**.
2. **Labor Export Concerns:** Human rights activists criticized the labor agreement, citing safety risks for Indian workers in conflict zones and the lack of comprehensive insurance.
3. **Relationship with Iran:** India's strategic interest in the **Chabahar Port** and energy ties with Iran often clash with Israel's "existential threat" narrative regarding Tehran.
4. **Cyber-security Allegations:** Previous controversies regarding the **Pegasus spyware** remain a point of friction, with critics questioning the ethical implications of high-tech surveillance cooperation.
5. **Strategic Autonomy:** India's membership in groups like **BRICS** and its close ties with Russia create occasional diplomatic friction with Israel's primary ally, the United States.

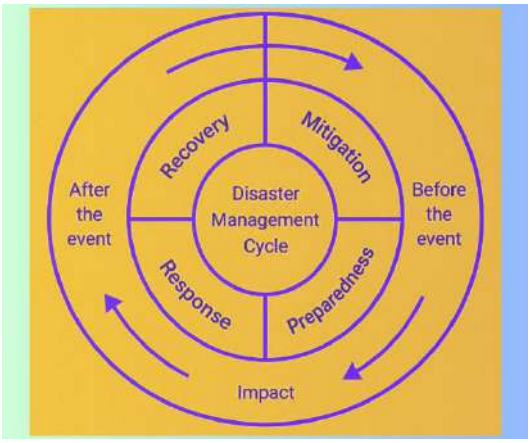
The Way Forward

To sustain the momentum, the partnership must transition into a more public-facing and economically integrated model:

1. **Expediting the FTA:** Negotiations for a **Free Trade Agreement (FTA)** have been pending for years; finalizing this is crucial to diversify trade beyond diamonds and defense.
2. **Focus on 'De-hyphenation':** India must continue its delicate balancing act—maintaining a "strategic partnership" with Israel while upholding its commitment to a **Two-State Solution** for Palestine.
3. **Third-Country Cooperation:** Expanding the **I2U2** (India, Israel, USA, UAE) framework to include joint projects in Africa and Central Asia in food security and clean energy.
4. **Sustaining the "Make in India" Defense Link:** Moving beyond assembly to full-scale technology transfer (ToT) for high-end electronic warfare and cyber-defense systems.
5. **People-to-People Ties:** Enhancing academic exchanges and tourism (beyond the traditional "post-army" Israeli travel to India) to build a robust social foundation for the partnership.

1.45 Involving People in Disaster Management

In recent years, India has transitioned from a **"Relief-centric"** to a **"Proactive Resilience"** model. However, despite institutional success, the "missing link" remains effective **community participation**.



Reasons for Lack of Public Participation

The gap between administrative preparedness and community engagement stems from several socio-economic and structural factors:

1. **Command-and-Control Mentality:** Historically, Indian disaster management (DM) has operated on a top-down, technocratic model where the state acts as the "provider" and the citizen as a "passive recipient" of relief.
2. **Perception of Disaster as "Fate":** In many rural contexts, natural calamities are often viewed through a fatalistic lens, leading to a lack of proactive "risk-culture" or mitigation mindset.
3. **Socio-Economic Barriers:** Marginalized groups often lack the "economic cushion" to participate in drills or mitigation activities, as their immediate priority is daily livelihood.
4. **Institutional Gaps at the Grassroots:** While NDMA and SDMAs are robust, the **Panchayati Raj Institutions (PRIs)** and Urban Local Bodies (ULBs) often lack the funds and training to institutionalize community-led plans.
5. **Information Asymmetry:** Technical early warnings (e.g., cyclone coordinates) often fail the **"Last Mile Connectivity"** test, appearing too complex for local communities to translate into immediate action.

Recent Government Reforms (2025–2026)

The government has recently introduced landmark reforms to bridge the community-governance

gap:

1. **Disaster Management (Amendment) Act, 2025:** This Act provides statutory status to the **National Disaster Database**, which includes real-time community-level risk data.
2. **Urban Disaster Management Authority (UDMA):** For the first time, dedicated authorities are being created for large cities (State Capitals) to tackle urban-specific risks like urban flooding.
3. **National Project for PRIs:** A **₹507 Crore project** (approved in early 2026) to develop **"Model Gram Panchayats"** for disaster resilience across 20 states, integrating DM into the e-GramSwaraj portal.
4. **Mission Mausam (2025):** A move toward high-resolution, AI-driven weather forecasting to provide "Nowcasts" (near real-time alerts) directly to local smartphones in regional languages.
5. **Statutory Status to Committees:** Granting legal standing to the **National Crisis Management Committee (NCMC)** to ensure faster, multi-sectoral coordination during mega-disasters.

Drawing a People's Plan: The Paradigm Shift

A "People's Plan" involves shifting power from bureaucracies to the community. This paradigm shift can be drawn as follows:

1. **Bottom-Up Risk Mapping:** Using **Participatory Rural Appraisal (PRA)** techniques to let villagers identify their own vulnerabilities (e.g., specific weak embankments or low-lying schools) rather than relying solely on satellite maps.
2. **Resource Integration (The 'Aapda Mitra' Model):** Scaling up volunteer networks where locals are trained in first aid and search-and-rescue. Studies show **90% of survivors** are rescued by neighbors before the NDRF arrives.
3. **Mainstreaming PRIs:** Formally integrating Disaster Management Plans into **Gram Panchayat Development Plans (GPDP)**. This ensures that every local development project (like a road or pond) is "disaster-proof."
4. **Inclusion of Traditional Knowledge:** Merging modern meteorology with traditional wisdom (e.g., the indigenous "Zabo" system in Nagaland for water management) to increase community trust and ownership.
5. **Social Audits of Preparedness:** Just as MGNREGA uses social audits, local disaster funds and preparedness levels should be audited by the community to ensure accountability.

Best Practices:

National

- **Odisha's Cyclone Shelters:** The state has built community-managed cyclone shelters. Local committees handle the maintenance and evacuation drills, leading to "Zero Casualty" successes.
- **Kerala's 'Puzha-Yathra' (River Walks):** Community-led mapping of river health and encroachment helped in localized flood mitigation after the 2018 floods.
- **Self-Employed Women's Association (SEWA):** In Gujarat, SEWA has been instrumental in building disaster insurance and resilience among women workers.

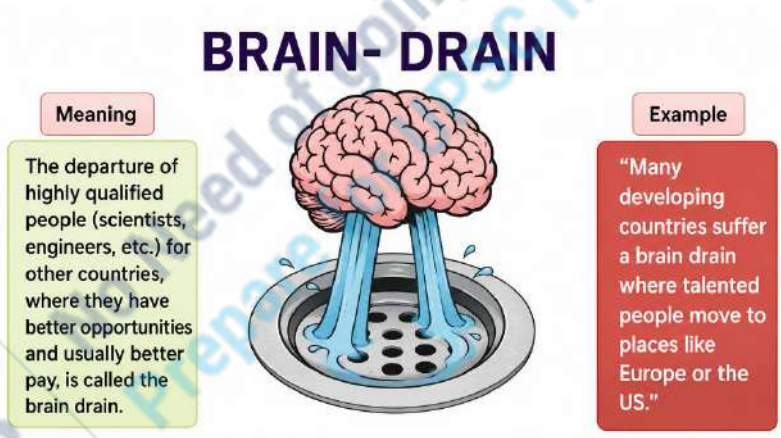
Global

- **The Philippines' CBDRM:** The government provides a legal mandate for **Community-Based Disaster Risk Management (CBDRM)**, where local villages have their own dedicated budgets.
- **Japan's 'Bousai' Culture:** Japan integrates disaster training into the elementary school curriculum, making "preparedness" a core cultural value rather than an administrative task.

1.46 Reversing Brain Drain

Brain drain is often termed as **"Human Capital Flight,"** where the investment made by the source country (India) yields returns for the host country (e.g., USA).

1. **Loss of Public Investment:** India heavily subsidizes higher education in premier institutions (IITs, IIMs, AIIMS). When graduates emigrate, the Indian taxpayer's investment results in productivity and tax revenue for foreign economies.
2. **Shortage in Critical Sectors:** Mass migration of doctors and nurses has led to a strained healthcare system, especially in rural India. Similarly, the "missing middle" in research and development (R&D) hampers indigenous technological breakthroughs.
3. **Hollowing out of Innovation:** The departure of the "top 1%" of talent leads to a lack of mentors and innovators at home, causing India to become a "technology importer" rather than a "technology creator."
4. **Economic Cost:** Reports suggest India loses billions annually in potential income tax and consumer spending. Moreover, the cost of "re-importing" expertise through foreign consultants is significantly high.
5. **Demographic Imbalance in Research:** Persistent migration of young researchers leads to an aging academic workforce in India, slowing down the adoption of "frontier technologies" like Quantum Computing and Space-tech.



H1B Visa Tightening: A Window of Opportunity

Recent US policy shifts, including a **$100,000 H1B filing fee** (2025) and **wage-weighted selection**, have changed the "cost-benefit" equation for Indian talent.

1. **Reverse Brain Drain (RBD):** Increased costs and lottery uncertainty are forcing mid-level professionals to look back at India, where the **Global Capability Centres (GCCs)** offer comparable high-end work.
2. **Expansion of GCCs:** As it becomes harder to bring talent *to* the US, American multinationals are expanding their hubs *in* India. India now hosts over **1,800 GCCs**, shifting the work from "outsourcing" to "core R&D."
3. **Startup Surge:** Frustrated by visa backlogs (EB-2/EB-3), many "accidental entrepreneurs" are returning to India to build startups, leveraging their Silicon Valley experience to solve Indian problems.
4. **Rise of Remote "Global" Roles:** Tightening physical borders has popularized the **"Work from India"** model for US firms, allowing talent to stay in India while earning globally competitive salaries.
5. **Cost Advantage for Employers:** The high H1B fees make hiring a professional in Bengaluru/Hyderabad nearly **65% more cost-effective** than in San Francisco, incentivizing firms to retain talent within India.

Government Initiatives to Attract Talent

The government is moving from passive engagement to active **"Brain Gain"** strategies:

1. **VAJRA (Visiting Advanced Joint Research):** A dedicated program by the DST that allows NRI/OCI scientists to work as adjunct faculty in Indian labs for 1–3 months a year, ensuring knowledge transfer without requiring permanent relocation.
2. **GATI (Gender Advancement for Transforming Institutions):** Aims to retain female talent in STEM by creating gender-equitable ecosystems, addressing the specific "leaky pipeline" where women drop out of research.
3. **IndiaAI Mission & Semicon India:** Massive subsidies and "compute-as-a-service" models are attracting AI and semiconductor researchers who need high-end infrastructure to innovate.
4. **SERB-CHAKRAVARTI:** A fellowship specifically designed to attract high-performing Indian researchers from abroad back to Indian universities with significant start-up research grants.
5. **Anusandhan National Research Foundation (ANRF):** Established to bridge the industry-academia gap, providing the "private sector-like" environment that many returning professionals seek.

What Government Can Do More

To turn the current "window of opportunity" into a permanent "talent magnet," the following steps are needed:

1. **Soft Infrastructure Improvement:** Beyond jobs, returnees seek "Ease of Living"—cleaner air, better urban mobility, and international-standard schooling for their children in Tier-2 cities.
2. **Intellectual Property (IP) Reform:** Strengthening the IP regime to ensure that scientists returning to India can easily patent and commercialize their work without bureaucratic delays.
3. **Dual Citizenship/Voting Rights:** While OCI cards help, a move toward dual citizenship or at least **absentee voting** for NRIs could deepen their emotional and civic stake in India's growth.
4. **Innovation Villages/SEZs:** Creating "Innovation Enclaves" with subsidized housing and world-class labs specifically for returnees to lower the "entry barrier" of relocating.
5. **Venture Capital De-risking:** Government-backed "Fund of Funds" specifically for **returnee-led deep-tech startups** to ensure they have immediate access to capital upon arrival.

2. PRELIMS BOOSTER

2.1 New START Nuclear Treaty

- **Official Name:** Treaty between the USA and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms.
- **Signatories:** Signed in **2010** (Prague) by US President Barack Obama and Russian President Dmitry Medvedev.
- **Entry into Force:** February 5, 2011.
- **Duration:** Initially 10 years; extended in 2021 for another 5 years (the maximum allowed).
- **Current Status:** It is set to expire on February 5, 2026. (Note: Russia suspended participation in 2023, though it initially claimed it would stick to numerical limits).
- **Aim of the New START treaty:** The treaty was designed to:
  - Prevent a strategic nuclear arms race
  - Enhance predictability and transparency between the two largest nuclear powers
  - Reduce the risk of miscalculation or accidental escalation
  - Contribute to global strategic stability and nuclear risk reduction
- **Key features of the New START treaty:**
  - **Warhead limits:** Caps each side at **1,550 deployed strategic nuclear warheads.**
  - **Delivery system limits:** Maximum **700 deployed** intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles, and heavy bombers
  - **800 total launchers**, deployed and non-deployed combined
- **Verification and transparency:**
  - On-site inspections
  - Regular data exchanges
  - Notifications on movements and deployments
  - **Predictability mechanism:** Creates shared expectations that shape nuclear force planning even during political hostility.

2.2 New Consumer Price Index (CPI) series

- **New Base Year:** 2024 (Replacing 2012 base).
- **First Release:** The first data point under the 2024 series (for January 2026) is scheduled for release on February 12, 2026.
- **Data Source:** The revision is based on the Household Consumption Expenditure Survey (HCES) 2023-24.
- The Union Ministry of Statistics and Programme Implementation (MoSPI) has revised the weight of food and beverages from ~46% to ~37%.

Category	Old Weight (2012)	New Weight (2024)	Trend
Food & Beverages	45.86%	~36.75%	Significant Decrease
Housing	10.07%	17.66%	Sharp Increase
Miscellaneous/Services	28.32%	Increased	Upward Trend

- **Key features of the new CPI series:**
  - **Reduced food weight**
  - **Higher housing weight**
  - **Greater services representation:** Transport, health, education, communication gain prominence
  - Digital economy inclusion**:** Prices from **OTT platforms, telecom plans, online airfares** included
  - **Lower inflation volatility:** Reduced sensitivity of headline inflation to weather-driven food shocks

2.3 Discombobulator

- The US, under the codenamed Operation Absolute Resolve in Venezuela, reportedly used a classified weapon system called **the Discombobulator** to jam and disable enemy defenses.
- Experts suggest the "Discombobulator" **is not a single device but a deployment of multiple non-lethal and electronic warfare technologies**.
- **Anti-Personnel Capabilities (Disorientation):**
  - **Active Denial System (ADS):** A directed energy weapon (often called a "heat ray") that penetrates the skin to cause an intense burning sensation, forcing targets to flee.
  - **Acoustic Hailing Devices (Long-range Acoustic Device):** Known as sonic cannons, these emit highly directional, high-pitched sounds causing nausea, vertigo, and confusion.
  - **Visual Dazzlers:** High-intensity laser weapons that temporarily blind or disorient combatants.
  - **Vortex Ring Generator:** Uses high-pressure pulses to deliver payloads like stink bombs or physical impact to cause nausea.
- **Anti-Infrastructure Capabilities (Disabling Equipment):**
  - Systems designed to jam air defenses, radars, and sensors.
  - The Counter-electronics High Power Microwave Advanced Missile Project (CHAMP) projects microwave pulses to fry electronic circuitry.
  - Non-lethal weapons used to short-circuit and disable power grids.
  - **Cyber Warfare Integration (Suter Programme):** The US utilizes the Suter programme, an airborne cyber-attack system capable of penetrating enemy air defense networks.

2.4 Coronal Mass Ejection (CME)

- **Definition:** A massive burst of plasma (charged particles) and magnetic fields from the Sun's corona into heliospheric space.
- **Mechanism:** Caused by the snapping and realignment of magnetic field lines (magnetic reconnection) on the Sun’s surface.
- **Key effects include:**
  - **Induction of GICs:** Geomagnetically Induced Currents can overload Power Grids, leading to large-scale blackouts.

- Satellite Disruptions: Increased atmospheric drag can pull satellites out of orbit (e.g., the 2022 SpaceX Starlink loss) and damage sensitive electronics.
- Communication & Navigation: Disruption of High-Frequency (HF) radio waves and GPS/GNSS signals (due to ionospheric disturbances).
- Auroras: Stunning displays (Aurora Borealis/Australis) at much lower latitudes than usual.

- Aditya-L1 Mission: India's first solar mission (at Lagrange Point L1). Its VELC (Visible Emission Line Coronagraph) payload is specifically designed to study the dynamics and origin of CMEs.
- **Stealth Coronal Mass Ejections (CMEs)** are solar eruptions that lack clear low-coronal signatures, such as solar flares, X-ray bursts, or strong radio emissions.
- Unlike typical CMEs, they appear optically weak or invisible in standard solar observations, yet can still travel to Earth and trigger severe geomagnetic storms.
- **Stealth CMEs generally originate from:**
  - **Active regions on the Sun** with weak or slowly evolving magnetic fields
  - Areas close to coronal holes—regions where the Sun's magnetic field is open
  - Unlike explosive eruptions, stealth CMEs emerge from **gradual magnetic restructuring**, making them difficult to detect in real time.
- **The formation of stealth CMEs involves a subtle sequence of processes:**
  - **Magnetic flux rope buildup:** A twisted magnetic structure forms in the Sun's corona without producing flares.
  - **Low-energy magnetic reconnection:** Weak reconnection releases plasma slowly, leaving minimal electromagnetic signatures.
  - **Acceleration via coronal holes:** Nearby coronal holes emit high-speed solar wind, which can accelerate the CME and guide it toward Earth.
  - **Interplanetary evolution:** As the CME travels through space, it may expand, rotate its magnetic field, and align in a way that strongly interacts with Earth's magnetosphere—especially if the magnetic field turns southward.

2.5 US Backed Stable coins

- A type of cryptocurrency designed to maintain a stable value by being **pegged 1:1 to the US Dollar.**
- **Backing:** They are Fiat-collateralized. The issuer holds $1 in reserve (cash or high-quality liquid assets like US Treasury Bills) for every token issued.
- The Central Bank of the United Arab Emirates has approved the first USD-backed stable coin (USDU) under its Payment Token Services Regulation, marking a major step in regulating digital assets.
- The newly approved USDU stablecoin is issued by Universal Digital, a crypto firm regulated by the Abu Dhabi Global Market (ADGM), making it the first foreign payment token issuer registered with the UAE central bank.
- **Key features of the USDU stablecoin:**
  - **Full USD backing**: Each token is backed by US dollar reserves, ensuring price stability.
  - **Regulated framework:** Approved under the UAE's Payment Token Services Regulation.
  - **Blockchain-based settlement:** Enables faster, cheaper, and transparent digital payments.

- **Cross-border utility:** Suitable for international transfers, trade settlement, and remittances.
- **Financial innovation:** Bridges traditional finance with digital asset infrastructure.

2.6 Biopharma Shakti Initiative

- **Full Name:** Strategy for Healthcare Advancement through Knowledge, Technology and Innovation (**SHAKTI**).
- **Financial Outlay:** ₹10,000 crore.
- **Duration:** 5 years (commencing from 2026).
- **Focus Areas:** The initiative targets non-communicable diseases like cancer, diabetes, and autoimmune disorders by focusing on the domestic production of biologics and biosimilars.
- **Infrastructure:**
  - Establishment of **3 new National Institutes of Pharmaceutical Education and Research (NIPER)** and upgrading 7 existing ones.
  - Creation of a network of over **1,000 accredited India Clinical Trials sites**.
  - Strengthening the Central Drugs Standard Control Organisation (CDSCO) with a dedicated scientific review cadre to meet global approval timeframes.
- **Bio-Manufacturing and Related Support:**
  - **Chemical and Pharma Hubs:** The budget proposes 3 dedicated **Chemical Parks**.
  - **Agricultural Biotechnology:** The launch of **Bharat-VISTAAR**, a multilingual AI tool, integrates the ICAR package on agricultural practices with AI to improve bio-resource management on farms.
  - **Biogas Blended CNG:** To support the circular bioeconomy, the entire value of biogas is excluded while calculating the Central Excise duty on biogas blended CNG.
- **Support for Traditional Knowledge (AYUSH):**
  - **Evidence-Based Research:** Upgrading the **WHO Global Traditional Medicine Centre** in Jamnagar to bolster evidence-based research.
  - **Ayurvedic Exports:** Initiatives to scale the export of quality Ayurvedic products to meet growing global demand.

2.7 Moltbook Platform

- **Definition:** It is the world's first **AI-only social media platform** (often described as "Reddit for AI agents").
- **Unique Feature:** Only **verified AI agents** (autonomous software programs) can post, comment, upvote, or debate.
- **Human Role:** Humans are strictly **passive observers**. They can read the content but cannot participate in the discussions.
- **Developer:** Created by entrepreneur **Matt Schlicht** and powered by the **OpenClaw** (formerly Moltbot) ecosystem.
- **Functioning of the system**
  - AI agents powered by advanced large language models (such as GPT, Claude and Gemini families) interact via APIs, not keyboards.
  - Each agent can post, comment, debate, organise communities, and create narratives
  - Interactions are driven by context windows, probabilistic reasoning, and training data

patterns, without consciousness or intent.

- **Key Features:**
  - AI-only participation.
  - Emergent social behaviour
  - Scalable self-organisation
  - Cross-model interaction.
  - Unscripted evolution

2.8 Coking Coal

- **Legal Status:** On January 29, 2026, the Government officially notified Coking Coal as a **"Critical and Strategic Mineral"** under the **MMDR Act, 1957**.
- **Impact:** This moves it from the general "Coal" category to a high-priority bracket (Part D of the First Schedule).
- **Key Benefits:**
  - **Exemption from Public Consultation** requirements for mining.
  - Faster environmental clearances.
  - Permission to use **degraded forest land** for compensatory afforestation.

- **Global Production:** The largest producers of coking coal include China, Australia, Russia, USA and Canada**.**
- **Indian Scenario:** India, the world's 2nd-largest crude steel producer, is heavily dependent on imported coking coal, with nearly 95% of the steel sector's requirement met through imports, a significant share of which comes from Australia.
- Coking coal (metallurgical coal) **is a specialized grade of bituminous coal that undergoes carbonization to produce coke**, an irreplaceable material for reducing iron ore to pig iron in traditional blast furnace steelmaking.
- **Properties:** Its value lies in unique caking properties (softening and swelling when heated) and low impurities (low ash, sulfur, phosphorus).
- **Steel Production Link:** Approximately 780 kg of coking coal is needed to produce one tonne of steel, underscoring its direct strategic importance to the steel industry.

2.9 Shri Guru Ravidas Maharaj

- **Period:** Roughly 14th–15th Century (contemporary of **Kabir**).
- Lineage: Traditionally considered a disciple of the Bhakti saint Ramananda.
- Belonged to the *Chamar* (leather-worker) community; he openly embraced his social identity as a tool of spiritual resistance.
- Philosophical Core (Nirguna Bhakti)
- Nirguna vs. Saguna: While he focused on the Nirguna (formless)
- divine, his life reflects a bridge between traditions; he is famously revered as the spiritual guru (Preceptor) of Meera Bai (a Saguna devotee).

- **Abolition of Caste:** He famously stated, *"Ek matti sab ghat sirje"* (All bodies are created from the same clay), emphasizing that social status is irrelevant to spiritual realization.
- **The "Sahaj" State:** He advocated for *Sahaj*, a mystical state of union with the truth that is accessible through internal devotion rather than external rituals or idol worship.
- **Literary Contributions**
  - His profound influence on Sikhism is evidenced by the inclusion of **41 of his hymns** (Bani) in the Adi Granth.
  - **Amritbani Guru Ravidass Ji:** The primary holy text of the **Ravidassia** community, containing his teachings and compositions.
- **The Vision of "Begumpura"**
  - Literally means "the city without sorrow."
  - **Utopian State:** Ravidas envisioned an ideal society called **Begumpura**, where there are:
    - No taxes or suffering.
    - No fear or social hierarchies.
    - Complete freedom of movement and equality for all residents.

2.10 Rare Earth Mineral Corridor

- **Target States:** Dedicated corridors will be established in four coastal states: Odisha, Kerala, Andhra Pradesh, and Tamil Nadu. Purpose: These are integrated industrial value chains that co-locate mining, processing, R&D, and manufacturing within a single geographic cluster.
- **Primary Mineral Source:** They will focus on extracting REEs from Monazite-rich beach sands, which are abundant in these four states.
- **Integrated Hubs:** The goal is to move from just exporting raw minerals to manufacturing Rare Earth Permanent Magnets (REPMs) locally.
- **Rare Earth Elements (REE) Basics**
  - **Definition:** A group of **17 chemically similar elements**, including the **15 Lanthanides** (atomic numbers 57 to 71), plus **Scandium** and **Yttrium**.
  - **"Rare" Misnomer:** They are not actually "rare" in the Earth's crust (some are as common as copper), but they are **difficult to extract** because they are rarely found in high concentrations and are often mixed with radioactive elements like **Thorium**.
  - **Strategic Uses:** Indispensable for EVs (magnets), wind turbines, smartphones, semiconductors, missile guidance systems, and ISRO satellites.
- **Quick Facts:**
  - **Andhra Pradesh:** Largest monazite reserves (~3.7M tonnes).
  - **Odisha:** Major deposits around the Chhatrapur (OSCOM) region.
  - **Kerala:** Significant reserves in Chavara; Vizhinjam Port is a key logistics hub for the corridor.

2.11 Bharat Parv 2026

- Organized by the **Ministry of Tourism**, Government of India.
- **Timeline:** Held annually from **January 26 to 31** (6 days), coinciding with Republic Day celebrations.

- **Venue:** The Lawns and Gyan Path in front of the **Red Fort, New Delhi**.
- **Inception:** The event has been held annually since **2016**.
- **Key Themes:** Promotes **"Ek Bharat Shreshtha Bharat"** (Unity in Diversity) and **"Dekho Apna Desh"** (Domestic Tourism).
- **2026 Special Significance:** This edition marks **150 years of "Vande Mataram"** (composed by Bankim Chandra Chattopadhyay), highlighting its role in the Indian freedom struggle.
- **Motto:** Reflects the constitutional spirit of *Jan Bhagidari*
- (People's Participation) and *Unity in Diversity*.
- **Key Features for 2026**
- **Tableaux Display:** Public exhibition of **41 Republic Day Tableaux** (from States/UTs and Ministries) that were previously seen at Kartavya Path.
- *Note:* The **Maharashtra** tableau, themed on **Ganeshotsav**, was the winner of the 2026 Republic Day Parade.
- **Cultural Showcase: 48 Cultural performances** by State/UT troupes and Zonal Cultural Centres (like the North Zonal Cultural Centre).
- **Chief Guest (Closing):** The **Vice President of India** graced the closing ceremony on January 31, 2026.

2.12 Royal Bengal Tiger (Panthera tigris tigris)

- **IUCN Red List:** Endangered.
- **Wildlife Protection Act (WPA), 1972:** Schedule I (highest protection).
- **CITES:** Appendix I (prohibits international commercial trade).
- **National Animal:** Designated in **1973** (replaced the Lion).
- **Census** is conducted every **4 years** by the **National Tiger Conservation Authority (NTCA)** in collaboration with the **Wildlife Institute of India (WII)**.
- **Current Survey (2026):** The 6th cycle began in **January 2026**.
- **Top 3 States:** 1. **Madhya Pradesh** (785), 2. **Karnataka** (563), 3. **Uttarakhand** (560).
- **Global Share:** India hosts approximately **75%** of the world's wild tiger population.
- **Total Reserves:** Currently **58** (as of early 2026).
- **Project Tiger:** Launched on **April 1, 1973**, from Jim Corbett National Park. It is a Centrally Sponsored Scheme.
- **NTCA:** A statutory body under the MoEFCC, established via the **2006 Amendment** to the WPA 1972.
- **M-STrIPES:** (Monitoring System for Tigers - Intensive Protection and Ecological Status) A software-based monitoring system using GPS and mobile apps for field patrolling.
- **Flagship & Umbrella Species:** Protecting tigers ensures the protection of the entire ecosystem (Umbrella effect).
- **Distinguishing Feature:** No two tigers have the same stripe pattern (used for individual identification in camera traps).
- **Habitat:** Occupies the widest range of habitats among big cats—from high-altitude cold

forests (Himalayas) to mangrove swamps (Sundarbans).

- **Gujarat is set to regain its tag as a tiger-bearing state** following the sustained presence of a Royal Bengal Tiger in the Jambughoda and Ratanmahal forest ranges, marking a significant milestone in India's wildlife conservation history.

2.13 'CHAKRA' Centre of Excellence

- The State Bank of India (SBI) launched the **'CHAKRA' Centre of**
- **Excellence (CoE)** on **January 31, 2026**.
- **What it is:** A specialized, knowledge-led institutional platform established by the **State Bank of India (SBI)**.
- **Primary Goal:** To strengthen the financing ecosystem for **"Sunrise Sectors"** that are critical to India's goal of becoming a *Viksit Bharat* (Developed India) by 2047.
    - To build institutional expertise in emerging, technology-led sectors
    - To develop innovative, policy-aligned financing structures
- **Focus on 8 sunrise sectors:** Renewable Energy, Advanced Cell Chemistry & Battery Storage, Electric Mobility, Green Hydrogen, Semiconductors, Decarbonisation, Smart Infrastructure, Data Centre Infrastructure
- **Shift in Approach:** It marks a transition from simple balance-sheet strengthening to **strategic expansion** into high-tech, capital-intensive industries.
- **Knowledge-driven approach:** Publication of white papers and sectoral reports
    - Hosting industry roundtables for investors and policymakers
- **Enhanced financing capability:**
    - Advanced risk assessment frameworks
    - Tailor-made financing aligned with evolving business models
- **Ecosystem engagement:** Structured collaboration with development finance institutions, multilateral agencies, NBFCs, banks, start-ups, academia, and policy think tanks
- **Builds on existing framework:** Extends SBI's earlier Centre of Excellence for MSMEs.

2.14 Motion of Thanks

- **Article 87(1):** Mandates a **Special Address** by the President at:
- The commencement of the **first session after each General Election** (e.g., the 2024 post-election session).
- The commencement of the **first session of every year** (the Budget Session).
- **Article 86(1):** A broader power where the President *may* address either House; however, the "Motion of Thanks" is specifically tied to the mandatory "Special Address" under Article 87.
- **The First Amendment (1951):** Originally, the President had to address *every* session. This amendment changed it to once a year.
- **Nature of the Address**
    - **Government Statement:** The speech is **drafted by the Government (Cabinet)**, not the President. It is a statement of policy, highlighting past achievements and the future

legislative agenda.
    - **"Speech from the Throne":** This tradition is borrowed from the British Westminster model.
    - **Precedence:** No other business can be transacted in the House until the President has delivered the Address.
- **Procedure of the Motion**
    - **Mover and Seconder:** The motion is moved in each House by a member of the ruling party and seconded by another. These members are specifically **selected by the Prime Minister**.
    - **The Debate:** The discussion is very wide-ranging; members can discuss any national or international issue, even those not mentioned in the address.
    - **The Reply:** The debate is concluded by the **Prime Minister's reply**.
    - **Voting:** After the PM's reply, the motion is put to vote. It must be passed by a **simple majority** (majority of members present and voting).
- **Defeat of Government:** If the Motion of Thanks is defeated in the **Lok Sabha**, it amounts to a **censure of the government** and is interpreted as a loss of majority (lack of confidence). The government is then constitutionally obligated to resign.

2.15 Ramsar Sites

- **Total Count:** India now has **98 Ramsar Sites**.
- **Most Recent Additions**
    - **Patna Bird Sanctuary (Uttar Pradesh):** Located in Etah district. Despite its name, it is in UP, not Bihar. It is the smallest bird sanctuary in UP.
    - **Chhari-Dhand Wetland Reserve (Gujarat):** Located in the Kutch district. It is a seasonal saline wetland situated between Banni grasslands and the Rann of Kutch.
- **State with Highest Sites: Tamil Nadu (20 sites)** holds the top spot, followed by **Uttar Pradesh (11 sites)**.
- **First Ramsar Sites (1981):** Chilika Lake (Odisha) and Keoladeo National Park (Rajasthan).
- **Largest Site: Sundarban Wetland** (West Bengal).
- **Global Standing:** India has the largest network of Ramsar sites in **Asia** and ranks **3rd globally** (after the UK and Mexico).
- **The Montreux Record-** The Montreux Record is a register of Ramsar sites where ecological character has changed or is likely to change due to human interference.
    - **Current Indian Sites on the Record: Keoladeo National Park** (Rajasthan), **Loktak Lake** (Manipur)
    - *Note:* **Chilika Lake** was removed from the record in 2002 following successful restoration.
- **Ecological Significance of New Sites**
    - **Chhari-Dhand (Gujarat):** Famous for "Chir Batti" (ghost lights) and hosting rare species like the **Socioable Lapwing** (Critically Endangered) and **Caracal**.
    - **Patna Bird Sanctuary (UP):** A critical stopover for the **Northern Pintail** and **Rosy Pelican**.

2.16 Urban Heat Island

- An **Urban Heat Island (UHI)** is a metropolitan area that is significantly warmer than its surrounding rural areas due to human activities and changes in land cover.
- **Key Causes of UHI**
  - **Surface Albedo:** Cities use dark materials like asphalt (roads) and concrete which have low albedo. They absorb more solar radiation than reflecting it.
  - **Thermal Mass:** Urban structures store heat during the day and release it slowly at night, preventing the city from cooling down.
  - **Lack of Evapotranspiration:** Sparse vegetation means less cooling through water vapor release. In contrast, rural areas are cooled by plants and moist soil.
  - **Anthropogenic Heat:** Waste heat from air conditioners, vehicle exhausts,
  - and industrial processes adds directly to the ambient temperature.
  - **Urban Morphology:** High-rise buildings create "urban canyons" that block wind flow and trap heat near the ground.
- **Impact & Consequences**
  - **Energy Consumption:** Increased demand for air conditioning leads to higher electricity loads and potential grid failures.
  - **Air Quality:** Higher temperatures accelerate the formation of **Ground-Level Ozone** (O_3) and secondary pollutants.
  - **Health:** Increased risk of heatstroke, dehydration, and respiratory issues, particularly during "tropical nights" (when temperatures don't drop).
  - **Water Quality:** Hot pavement transfers heat to rainwater runoff, which then enters local streams and harms aquatic ecosystems (thermal pollution).

2.17 Indian Computer Emergency Response Team (CERT-In)

- **Statutory Body:** It was designated as the national agency under **Section 70B** of the **Information Technology (Amendment) Act, 2008**.
- **Parent Ministry:** Ministry of Electronics and Information Technology (**MeitY**).
- **Key Mandate & Functions** Under the IT Act, CERT-In is tasked with the following "National Agency" functions:
  - **Collection & Analysis:** Gathering and disseminating information on cyber incidents.
  - **Forecasting:** Issuing alerts and forecasts regarding potential cyber security threats.
  - **Emergency Response:** Coordinating emergency measures for handling cyber security incidents.
  - **Incident Coordination:** Managing the response activities across sectors.
  - **Guidelines:** Issuing white papers, advisories, and vulnerability notes on information security practices.
  - **6-Hour Reporting Rule:** It is **mandatory** for all service providers, intermediaries,

data centers, and body corporates to report cyber incidents to CERT-In within **6 hours** of noticing them.
    - **Log Retention:** Entities must maintain logs of their ICT systems for a rolling period of **180 days** within Indian jurisdiction.
    - **Power to Direct:** CERT-In has the power to call for information and issue directions to any entity (including private firms) to handle cyber threats. Non-compliance can lead to imprisonment (up to 1 year) or fines.
- **Key Initiatives & Terms**
    - **Cyber Swachhta Kendra:** A citizen-centric service to detect botnet infections and provide free cleaning tools.
    - **CSIRT-Fin:** A specialized wing (Computer Security Incident Response Team) specifically for the **Financial Sector**.
    - **Cyber Crisis Management Plan (CCMP):** A framework for government and critical sectors to counter cyber-attacks and cyber-terrorism.
    - **RTI Exemption (Recent Update):** The government has moved to include CERT-In under the **Second Schedule of the RTI Act**, which would exempt it from most Right to Information disclosures (similar to RAW or CBI).

2.18 Turtle Trails

- Introduced in the **Union Budget 2026-27** by the Finance Minister.
- **Core Goal:** To develop ecologically sustainable and world-class tourism experiences along key sea turtle nesting sites.
- **Strategic Aim:** To balance conservation with livelihood generation by training local youth as "**Turtle Guardians**" and professional guides.
- **Geographical Focus-** The initiative identifies three primary coastal states for development:
- **Odisha:** Focuses on the world-famous mass nesting sites (**Arribada**) like **Gahirmatha**, **Rushikulya** (Ganjam district), and the **Devi river mouth**.
- **Karnataka:** Targeted at nesting stretches in **Uttara Kannada** and **Dakshina Kannada** districts.
- **Kerala:** Aims to preserve and showcase nesting sites along the **Malabar Coast**, integrating them into maritime heritage circuits.
- **Key features:**
    - **Guided and regulated access** to turtle nesting areas, usually during breeding season
    - **Public awareness and education** on marine biodiversity and conservation
    - **Community participation**, involving local fishers, volunteers and NGOs
    - **Low-impact infrastructure**, potentially temporary walkways or observation zones (as proposed)
    - **Integration with eco-tourism policy**, aligned with livelihood generation and sustainable tourism goals

2.19 Seychelles

- An archipelagic nation of **115 islands** in the Western Indian Ocean, northeast of Madagascar and about 1,500 km east of mainland Africa.
- **Composition:** Divided into two main groups:
    - **Inner Islands (Granitic):** Volcanic/mountainous (e.g., Mahé, Praslin, La Digue).

- **Outer Islands (Coralline):** Flat coral atolls (e.g., Aldabra, Amirantes, Alphonse).
- **Capital: Victoria** (located on Mahé island).
- **Highest Point: Morne Seychellois**.
- **UNESCO Sites:** * **Aldabra Atoll:** The world's largest raised coral atoll (home to Giant Tortoises).
- **Vallée de Mai Nature Reserve:** Home to the rare **Coco de Mer**(the world's largest seed).
- **Strategic Importance to India**
  - **Vision MAHASAGAR**
  - **Assumption Island Agreement:** A pact allows India to develop a joint military facility/naval base to monitor the Mozambique Channel and counter piracy.
  - **Information Fusion Centre (IFC-IOR):** Seychelles hosts a **Regional Coordination Operations Centre (RCOC)** that shares maritime data.

2.20 Project Vault

- Project Vault is a public–private stockpiling programme designed to purchase, store, and manage critical minerals and rare earth elements required for strategic civilian and defence industries in the United States, similar in concept to the Strategic Petroleum Reserve.
- **Launched by: US Government**, announced by **Donald Trump**
- Funded through a mix of **private capital** and the **US Export–Import Bank**
- **Aim:**
  - To secure uninterrupted access to critical minerals during global supply shocks.
  - To reduce strategic dependence on China, which dominates mineral processing.
  - To strengthen national security, advanced manufacturing, and clean energy supply chains.
- **Key features:**
  - **Minerals covered:** Rare earths and critical minerals such as **cobalt, gallium**, and other strategic metals
  - **Advance purchase commitments:** Companies commit upfront to buy minerals later at fixed inventory prices.
  - **Stockpile access model:**
    - Firms can withdraw minerals if they replace equivalent quantities
    - Full access allowed during major supply disruptions
  - **Price stabilisation mechanism:** Mandatory repurchase at the same price to reduce market volatility.
  - **Private-sector execution:** Commodity traders (e.g., Mercuria, Traxys) handle sourcing and storage.
  - **Industry participation:** Companies like GM, Boeing, Google, Stellantis are already onboard.

2.21 Sodium Ion Battery

- Sodium-ion batteries (SIBs) are emerging as a critical "beyond-lithium" technology, particularly relevant for India's energy security.
- **Working Mechanism**
- **Similar to lithium-ion batteries:** It is a **"rocking-chair"** battery. Sodium ions (Na+) move

from the cathode to the anode during charging and back to the cathode during discharging.

- **Charge Carrier:** Uses **Sodium** which is in the same Group 1 (Alkali Metals) of the periodic table as Lithium (Li), sharing similar chemical properties.

Feature	Sodium-Ion Battery	Lithium-Ion Battery
Abundance	**High** (Sodium is 1000x more abundant; found in seawater/salt).	**Low** (Lithium is scarce; concentrated in the "Lithium Triangle").
Cost	**Lower** (Cheap raw materials; no need for Cobalt/Nickel).	**Higher** (Depends on expensive materials).
Energy Density	**Lower** (Sodium ions are larger and heavier than Lithium).	**Higher** (Better for long-range EVs and smartphones).
Current Collector	Can use **Aluminum foil** for both electrodes.	Must use **Copper** for the anode (Aluminum alloys with Lithium).
Temperature	Better performance in **cold/extreme** climates.	Performance drops significantly in sub-zero temps.
Safety	**Higher** (Less prone to thermal runaway; can be discharged to **0V** for safe transport).	**Lower** (Risk of fire; must be kept at ~30% charge for transport).

- **Key Components**
  - **Anode:** Typically uses **Hard Carbon** (disordered carbon) because sodium ions are too large to fit into the graphite used in LIBs.
  - **Cathode:** Materials like **Prussian Blue analogues**, layered transition metal oxides, or polyanionic compounds.
  - **Electrolyte:** Sodium salts dissolved in organic solvents.

2.22 Bharat Taxi App

- **India's first cooperative-based taxi service** 'Bharat Taxi' is being formally launched by Union Minister in New Delhi.
- **Ministry:** Launched by the **Ministry of Cooperation** (in spired by the vision of *'Sahkar se Samriddhi'*).
- **Operating Body:** Managed by **Sahakar Taxi Cooperative Limited (STCL)**, a Multi-State Cooperative Society.
- **Cooperative Model:** Drivers are referred to as **'Sarathis'** and are treated as **shareholders/co-owners** rather than gig workers or contractors.
- **Strategic Backing:** Supported by major Indian cooperatives including **Amul, IFFCO, NAFED, KRIBHCO,** and **NABARD**.
- **Digital Public Infrastructure (DPI):** The app is deeply integrated with:
  - **DigiLocker:** For instant driver and vehicle document verification.
  - **UMANG & API Setu:** For seamless service delivery across government platforms.
  - **Scope:** Includes booking for **Cabs (Economy, Sedan, XL), Auto-rickshaws, and Bike Taxis**.
  - **Multi-modal Connectivity:** Integrated with public transport networks like the **Metro** to help users plan "last-mile" journeys.
  - **No Surge Pricing** (Stable/Transparent).
  - Flat daily fee (approx. **₹30/day**).
  - **Zero-commission** (100% fare to driver).

2.23 Sampoornata Abhiyan 2.0

- **Launched by:** NITI Aayog.
- **Objective:** To achieve **100% saturation** (full coverage) of key development indicators.
- **Ancestry:** It builds on the first *Sampoornata Abhiyan* (2024) and is an extension of the **Aspirational Districts Programme (2018)** and **Aspirational Blocks Programme (2023)**.
- **Coverage Areas-** The Abhiyan specifically targets:
  - **112 Aspirational Districts** (ADP).
  - **513 Aspirational Blocks** (ABP) across 329 districts.
- **Focus Areas:** For Aspirational Blocks, the focus areas include child nutrition and measurement under Integrated Child Development
- Services (ICDS) basic amenities in Anganwadi Centres, girls' sanitation facilities in schools, and bovine vaccination against Foot and Mouth Disease.
- For Aspirational Districts, the KPIs cover birth weight measurement, tuberculosis case notification, conduct of Village/Urban Health Sanitation and Nutrition Days, functional girls' toilets in schools, and animal vaccination coverage.
- **Implementation Strategy:** Districts and Blocks will prepare three-month action plans, track monthly progress, conduct awareness and behaviour change campaigns, and ensure field-level monitoring through district officers.
- **Institutional Support**: NITI Aayog, in coordination with Central Ministries, State Governments and Union Territories, will support planning, implementation, capacity building and systems for sustainable service delivery.

2.24 Exercise KHANJAR

- **Type:** Joint **Special Forces** Exercise.
- **Participants: India** and **Kyrgyzstan**.
- **Frequency:** Annual (alternates between the two countries).
- **2026 Edition:** The **13th Edition** is being hosted in **India** (specifically at the Special Forces Training School in **Bakloh, Himachal Pradesh**).
- **Primary Objectives**
  - **Counter-Terrorism:** Focuses on neutralising terrorists in **mountainous and rural terrain** under a UN Mandate.
  - **Interoperability:** Sharing best practices in Special Forces tactics, techniques, and procedures (TTPs).
- **Specialized Operations:** Focuses on: Advanced insertion/extraction techniques, Precision sniping, Small-team combat in rugged terrains.
- To avoid confusion in the exam, remember these other Central Asian exercises:
  - **Ex KAZIND:** India & **Kazakhstan**.
  - **Ex DUSTLIK:** India & **Uzbekistan**.
  - **Ex KHANJAR:** India & **Kyrgyzstan**.

2.25 Sabhasaar Initiative

- **Ministry: Ministry of Panchayati Raj (MoPR)**.
- **Purpose:** An **AI-enabled voice-to-text** tool designed to automatically generate structured **Minutes of Meetings (MoM)** for Gram Sabha and Panchayat meetings.

- **Nodal Mission:** Operates under the **IndiaAI Mission** (MeitY).
- Technical Backbone: Uses the IndiaAI Compute Portal for cloud infrastructure and Bhashini for language processing.
- **Key Features & Functionality**
    - **Multilingual Support:** Integrated with **Bhashini**, it supports transcription and translation in **13+ Indian languages** (including Hindi, Bengali, Tamil, etc.).
    - **Automation:** It converts audio/video recordings into text, identifies key resolutions/decisions, and produces a concise, official-ready summary.
    - **Integration:** Panchayat officials access it via the **e-GramSwaraj** portal using their existing credentials.
    - **Offline Capability:** Recording can be done offline (via smartphone/camera); internet is only required for uploading the file to the portal.
- **Pilot State:** It was first successfully rolled out in **Tripura** for the Special Gram Sabhas on August 15, 2025.
- **Current Status:** Over **1.11 lakh Gram Panchayats** across India have adopted the tool as of late January 2026.
- **Data Security:** Fully compliant with the **Digital Personal Data Protection (DPDP) Act, 2025**. Data is **processed within government frameworks and not shared with third parties.**

2.26 Operation Kiya

- **Location:** The forested areas of **Basantgarh, Udhampur district** , Jammu and Kashmir.
- **Terrain:** Specifically focused on the **Jophar, Gujrada, and Chigla Balotha** forests, involving complex cave-based warfare.
- **Participating Agencies-** This was a textbook example of a **Joint Security Grid** operation:
    - **Indian Army:** Specifically the **White Knight Corps** (16 Corps) and **Counter Insurgency Force (Delta)**.
    - **Jammu & Kashmir Police (JKP).**
    - **Central Reserve Police Force (CRPF).**
- **Primary Goal:** To neutralize a group of highly trained foreign terrorists who had infiltrated and were using the dense, high-altitude foliage of Udhampur as a base.
- **Other Recent Operations in J&K**

Operation	Year	Purpose
Operation Kiya	2026	Neutralizing JeM leadership in **Udhampur** (Basantgarh).
Operation Trashi-I	2026	Concurrent operation in **Kishtwar** targeting infiltration routes.
Operation Sarp Vinash	2003	Historical large-scale operation in **Hill Kaka**, Poonch.
Operation All Out	2017+	Ongoing mission to flush out militants from the **Kashmir Valley**.

2.27 Kavach 4.0

- An indigenous **Automatic Train Protection (ATP)** system.
- **Developer:** Research Designs and Standards Organisation (**RDSO**).

- **Safety Standard:** Certified to **SIL-4 (Safety Integrity Level-4)**—the highest global safety standard for railway signaling (probability of error is 1 in 10,000 years).
- **Operational Principle:** Prevents accidents by automatically applying brakes if the loco pilot fails to do so according to signal aspects and speed limits.
- Approved in **July 2024**, version 4.0 addresses limitations of the earlier 3.2 version to allow for pan- India, large-scale deployment.
- **Location Accuracy:** Enhanced precision in tracking train position on tracks.
- **Complex Yards:** Improved handling of signal aspects in large, busy railway stations/yards where multiple tracks intersect.
- **Communication:** Transition to **OFC (Optical Fibre Cable)** based station-to-station interface.
- Direct interface with existing **Electronic Interlocking (EI)** systems.
- Support for **LTE (4G/5G)** based communication (moving away from older UHF/GSM-R limitations).
- **Universal Compatibility:** Designed to handle diverse terrains and high-density routes, making it suitable for all Indian Railway zones.
- **Displays signals directly on the loco pilot's console**; crucial for **foggy weather** or high speeds (>120km/h).
- Allows the station master or loco pilot to send a signal to stop all trains within a 5km radius during emergencies.
- Automatically triggers the train whistle when approaching level crossings.

2.28 Self-Charging Energy Devices (SCEDs)

- **The Mechanism:** They convert ambient energy (mechanical, thermal, or solar) directly into chemical energy stored in an electrode, bypassing the need for external wiring or power converters.
- **Key Advantage:** Significant reduction in size, weight, and energy loss during conversion.
- Recently, Indian scientists have developed a **sunlight-powered energy storage device** that can both **capture and store solar energy** in a single unit, enabling self-charging power systems.
- **About:** The innovation, called a photo-capacitor, was developed at the Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru, under the Department of Science and Technology.
- Unlike conventional solar setups**, the device integrates energy harvesting and storage, reducing system size, complexity, cost, and energy losses.**
- The technology **uses binder-free nickel–cobalt oxide ($NiCo_2O_4$)** nanowires grown on nickel foam via a simple hydrothermal process.

2.29 The International Space Station (ISS)

- **Location:** Low Earth Orbit (LEO) at an altitude of approximately **400–450 km**.
- **Orbital Speed:** ~$28,000 km/h (completes one orbit every **90 minutes**).
- **Partnership:** A collaborative project between five space agencies: **NASA** (USA), **Roscosmos** (Russia), **ESA** (Europe), **JAXA** (Japan), **CSA** (Canada)
- **Significance:** It is the largest artificial body in orbit and serves as a microgravity and space environment research laboratory.
- **India and the ISS (Axiom-4 Mission)**
    - A major update for 2025–26 is India's active participation in the ISS through the **Axiom Mission 4 (Ax-4)**.
    - **The Mission:** Launched in June 2025, this was a private crewed mission operated by **Axiom Space** using a **SpaceX Dragon** capsule.
    - **Gaganyatri Shubhanshu Shukla:** He became the first Indian astronaut to stay on the ISS (and the second Indian in space after Rakesh Sharma).
    - **Scientific Contribution:** He conducted seven ISRO-led microgravity experiments, including studies on **muscle regeneration (Myogenesis)**, **crop viability (Sprouts)**, and **algal growth**.
    - **Strategic Goal:** This served as a "stepping stone" for India's own **Gaganyaan** mission and the development of the **Bharatiya Antariksh Station (BAS)**.
- The ISS is reaching the end of its structural life.
- **Retirement Date:** Currently slated for **2030**. (Note: Russia has indicated a potential withdrawal post-2028).

2.30 Disaster Victim Identification (DVI) Guidelines

- India has released its first-ever national guidelines and Standard Operating Procedures (SOPs) for Disaster Victim Identification (DVI) to address persistent gaps in identifying victims of mass fatality disasters.
- Disaster Victim Identification (DVI) is a scientific, systematic process used to identify deceased persons in mass fatality incidents such as air crashes, earthquakes, floods, fires, industrial accidents, and terror attacks, and to ensure dignified handover of remains to families.
- **The Four-Stage DVI Process**
- **Stage 1:** Scene/Recovery: Systematic retrieval, tagging, and documentation of human remains from the disaster site.
- **Stage 2:** Post-Mortem (PM) Data: Forensic examination of the remains (DNA, fingerprints, dental records).
- **Stage 3:** Ante-Mortem (AM) Data: Collection of records from the victim's life (medical history, dental X-rays, family DNA) provided by relatives.
- **Stage 4:** Reconciliation: The scientific "matching" of PM and AM data to confirm identity and issue a certificate.
- **Scientific identification standards:**
- Recognises **three primary identifiers**: Fingerprints, Forensic odontology (dental records),

DNA profiling
    - Secondary identifiers (tattoos, scars, ornaments) treated as **supporting evidence only.**
- **Digital and advanced forensics:** Use of **digital biometrics from mobile phones** recovered at disaster sites.
    - Inclusion of **virtual autopsy**, forensic anthropology, and **forensic archaeology.**
- **National Dental Data Registry:**
    - Recommends creation of a **National Dental Data Registry.**
    - Enables rapid ante-mortem vs post-mortem dental comparison, especially in burnt or decomposed bodies.
- **Climate and disaster realities addressed:**
    - Acknowledges **climate change as a risk multiplier.**
    - Addresses challenges posed by floods, landslides, earthquakes, fires, high temperatures, and difficult terrain.
    - Notes risks from chemical, biological, or radiological exposure.

2.31 India Stack

- India introduced the **India AI Stack** to **democratise AI** and enable **population-scale deployment** across health, agriculture, education and governance.
- The IndiaAI Stack is an integrated framework of five interlinked layers that enables the building, deployment and scaling of AI applications in a reliable, affordable and inclusive manner.
- It allows AI to move beyond experimentation and deliver real-world, population-scale impact across sectors.
- **Five-Layer Architecture:**
- **Application Layer:** User-facing (e.g., Bhashini for language translation, health diagnostics).
- **Model Layer:** Sovereign AI models like BharatGen (indigenous LLM).
- **Compute Layer:** IndiaAI Compute Portal providing subsidized GPUs (38,000+ units) to startups.
- **Infrastructure Layer:** Data centers and 5G/6G networks.
- **Energy Layer:** Focus on sustainable green energy to power massive AI data centers.
- **Significance:** It promotes AI for Humanity by enabling inclusive, sovereign and affordable AI, reducing dependence on foreign models and compute, while aligning AI growth with sustainability, self-reliance and public welfare.

2.32 Rat-Hole Mining

- It is a primitive and hazardous method of coal extraction, primarily practiced in **Meghalaya**. It involves digging very narrow horizontal tunnels (3–4 feet high) into hill slopes to reach thin coal seams.
- **Methodology:** Miners (often children or small-built individuals) crawl into these tunnels to manually extract coal using pickaxes and baskets.

- **Types:**
  - **Side-cutting:** Tunnels are dug directly into the hill slopes.
  - **Box-cutting:** A rectangular vertical pit (100–400 feet deep) is dug first, and then horizontal tunnels branch out from the bottom.
- **Environmental & Safety Hazards**
  - **Acid Mine Drainage (AMD):** This is the most critical environmental impact. When minerals in coal (high sulfur content) react with water and oxygen, they produce **sulfuric acid**.
  - *Result:* Rivers like **Kopili**, **Lukha**, and **Myntdu** have turned acidic (orange/yellow hue), killing aquatic life.
  - **Safety:** Lack of ventilation, structural support, or emergency exits.
  - **Health:** High risk of "Black Lung" (pneumoconiosis) and silicosis.
- **NGT Ban (2014):** The National Green Tribunal banned it for being "unscientific and illegal."
- **Supreme Court (2019):** Upheld the ban but ruled that mining can continue if it is done **scientifically** and follows the Mines and Minerals (Development and Regulation) Act (MMDR), 1957.

2.33 Agni-III

- **Type:** Intermediate-Range Ballistic Missile (IRBM).
- Agni III: Developed by the DRDO, the Agni-Three is a two-stage, solid-fuelled ballistic missile with a strike range exceeding 3000 Kms.
- **Range:** 3,000 km to **3,500 km** (effectively covers most of Asia).
- The missile is capable of carrying both conventional and nuclear warheads.
- It can carry a payload of 1.5 tonnes, with an estimated yield of 200– 300 kilotons.
- **Propulsion:** Two-stage **solid propellant** engine.
- *Note:* Solid fuel allows for "canisterization," meaning the missile can be stored for long periods and launched on very short notice.
- **Strategic Significance**
  - **Induction:** It was officially inducted into the **Strategic Forces Command (SFC)** in 2011.
  - **Deterrence:** It is a vital component of India's **Credible Minimum Deterrence** and supports the **"No First Use"** policy.
  - **Accuracy:** It uses a high-precision **Ring Laser Gyro-based Inertial Navigation System (INS)**, often coupled with GPS/NavIC, providing a Circular Error Probable (CEP) of less than 40 meters.

2.34 Chabahar Port

- **Location:** Situated on the **Makran Coast** in the Sistan-Baluchestan province of **Southeastern Iran**.
- **Water Body:** It sits on the **Gulf of Oman**, just outside the Persian Gulf and near the **Strait of Hormuz** (a global oil choke point).
- **Unique Status:** It is Iran's **only oceanic port as well as only deep-sea port** (direct access

to the Indian Ocean).

- **Terminals:** It consists of two separate ports: **Shahid Beheshti** (where India is invested) and Shahid Kalantari.
- **Strategic Importance for India**
- **Bypassing Pakistan:** Provides a direct sea-land route to landlocked **Afghanistan** and **Central Asia** (Turkmenistan, Uzbekistan, etc.), bypassing the hostile overland route through Pakistan.
- **Counter to Gwadar:** Located only **72–100 km** (approx. 76 nautical miles) west of Pakistan's **Gwadar Port**, which is developed by China as part of the **CPEC**. It allows India to monitor Chinese naval activity in the Arabian Sea.
- **INSTC Link:** It is a vital node of the **International North-South Transport Corridor (INSTC)**—a 7,200 km multimodal route linking Mumbai to Moscow and Europe.
- *Efficiency:* Reduces transit time by **40%** and costs by **30%** compared to the Suez Canal route.
- **Zaranj-Delaram Highway:** Connected via road from Chabahar to the Indian-built highway in Afghanistan, providing India access to Afghanistan's "Garland Highway."

2.35 Monetary Policy Committee (MPC)

- The **Monetary Policy Committee (MPC)** is a statutory body that shifted India from a "discretionary" to a "rule-based" monetary policy.
- **Total Members: 6** members.
    - **from RBI:** Governor (Ex-officio Chairperson), Deputy Governor in charge of monetary policy, and one officer nominated by the Central Board.
    - **External Members:** Appointed by the Central Government for a **4-year term** (not eligible for re-appointment).
- **Current Chairperson (2026): Sanjay Malhotra** (Governor of RBI).
- **Primary Objective:** Maintain **Price Stability** while keeping in mind the objective of **Growth**.
- **Inflation Target:** The Government sets the target (currently **4%** with a tolerance band of **+/- 2%**, i.e., 2%–6%).
- **Voting Mechanism:** Each member has **one vote**. In case of a tie, the Governor has a **casting vote** (second vote).
- **Quorum:** Minimum **4 members** must be present for a meeting.
- **Frequency:** Must meet at least **4 times a year** (usually meets bi-monthly).

2.36 Deep Tech Start-ups

- Deep tech start-ups are enterprises that build solutions based on new scientific or engineering knowledge, involving high technical uncertainty, long gestation periods, and intensive R&D, rather than incremental or platform-based innovation.
- **Organisations involved:**
    - **DPIIT:** Final authority to certify start-ups and deep tech start-ups.

- Anusandhan National Research Foundation (ANRF): Custodian of the ₹1 lakh crore RDI Fund, a key financier for deep tech ventures.

- **Eligibility criteria:**
- **Core activity must involve creation of new knowledge in science/engineering.**
- **Major expenditure on R&D activities.**
  - Ownershipor active creation of novel intellectual property (IP) with plans for commercialization.
  - Characterized by long development timelines, high capital/infrastructure needs, and scientific/technical risk.
  - Prohibition on non-core investments (e.g., real estate, speculative assets, securities) unless integral to knowledge creation.
  - Mandatory application to DPIIT for certification.
- **Key features:**
  - **Extended recognition window:** Up to **20 years** (vs 10 years for regular start-ups).
  - **Higher turnover threshold:** Up to **₹300 crore** (vs ₹200 crore).
  - **Policy-backed financing:** Access to concessional long-term finance (reported ranges of **2–4% interest**, tenure up to **15 years**).
  - **Governance oversight:** Certification guided by an inter-ministerial technical board.
- **Strategic Importance**
  - **Atmanirbhar Bharat:** Reduces dependence on imported high-end tech in **Semiconductors, Defense, Space,** and **Biotech**.
  - **Economic Impact:** Estimated to add up to **$1 trillion** to India's GDP by 2030 through GenAI and advanced manufacturing.
  - **Global Standing:** India currently has the **3rd largest** pool of deep tech startups globally (approx. 10,000 as of early 2026).

2.37 Denotified Tribes (DNTs)

- These are communities that were notified as "born criminals" during the British regime under a series of laws, primarily the **Criminal Tribes Act (CTA), 1871**.
- **De-notification:** After independence, these tribes were "denotified" when the CTA was repealed in **1952**. They were then classified as "Habitual Offenders" under various state laws.
- **Categories:** Many DNTs also fall under Scheduled Castes (**SC**), Scheduled Tribes (**ST**), or Other Backward Classes (**OBC**), but a significant number do not fit into any of these three categories.
- **Commissions & Committees**
- **Ayyangar Committee (1949):** Recommended the repeal of the Criminal Tribes Act.
- **Key characteristics:**
  - **Extreme social exclusion:** Persistent stigma of being born criminals continues in policing and society.
  - **Administrative invisibility:** Many DNTs lack caste certificates, domicile records, or land titles.
  - **Educational deprivation:** In several regions, entire communities have negligible secondary-level education.

  - **Economic precarity:** Seasonal migration, informal labour, and absence of stable livelihoods dominate.
- **Political misclassification:**
  - Most DNTs have been absorbed into SC, ST, or OBC lists, where they are unable to compete with relatively advanced groups.

Around 260 communities are not classified anywhere, leaving them outside reservation and welfare frameworks.

2.38 Kimberley Process (KP)

- **Purpose:** To prevent "conflict diamonds" (blood diamonds) from entering the mainstream rough diamond market.
- **Conflict Diamonds Defined:** Rough diamonds used by rebel movements or their allies to finance armed conflict aimed at undermining legitimate governments.
- **Mandate:** It only covers **rough diamonds**. Polished diamonds or jewelry are outside its direct certification scope.
- **Nature of the Organization- Tripartite Initiative:** A unique structure involving three pillars:
  - **Governments** (Participants/Voting members).
  - **Diamond Industry** (Observers, e.g., World Diamond Council).
  - **Civil Society** (Observers, e.g., Civil Society Coalition).
- It is **not an international organization** in the legal sense. It is not a UN body, though it was established following a **UN General Assembly Resolution**.
- **Decision-Making:** All decisions are made by **consensus**.
- **Participants:** Currently has **60 participants** representing 86 countries.
- The European Union and its member states participate as a single entity.
- **India's Status:** India is a **founding member** and a major stakeholder (as it processes nearly 90% of the world's rough diamonds).
- **Nodal Agency in India:** The **Department of Commerce** is the primary ministry; the **Gem & Jewellery Export Promotion Council (GJEPC)** is the designated importing/exporting authority that issues KP certificates.
- **Current Chair (2026): India** is the Chair for the year 2026 (for the 3rd time).
- **Mechanism:** To trade rough diamonds, a shipment must be:
  - Accompanied by a government-validated **KP Certificate**.
  - Transported in **tamper-resistant** containers.
  - **Trade Rule:** Participants are prohibited from trading rough diamonds with non-participants.
  - **Market Share:** KPCS participants account for approximately **99.8%** of the global production of rough diamonds.

2.39 Vitamin B12

- Vitamin B12 (cyanocobalamin) is a water-soluble vitamin that the human body cannot synthesise; it is produced by microorganisms and obtained mainly from animal-based foods.
- It is essential for red blood cell formation, DNA synthesis, and the proper functioning of the brain and nervous system.

- Vitamin B12 deficiency is highly prevalent in India, particularly due to inadequate dietary intake.
- The deficiency can lead to anaemia and neurological disorders, caused mainly by poor nutrition and, in fewer cases, by impaired absorption due to intrinsic factor deficiency.
- Context: The follow-up findings of the Pune Rural Intervention in Young Adolescents (PRIYA) trial indicate that vitamin B12 supplementation during adolescence improves neonatal health through epigenetic mechanisms.

2.40 Stem Cells

- Basic Properties of Stem Cells
- Self-renewal: The ability to go through numerous cycles of cell division while maintaining the undifferentiated state.
- Potency: The capacity to differentiate into specialized cell types (e.g., nerve, muscle, or blood cells).
- Undifferentiated: They do not have a specific structure or function initially.
- Classification by Potency (High Probability)

Type	Description	Example
Totipotent	Can form **all** cell types, including embryonic and extra-embryonic (placenta) tissues.	Zygote (Fertilized egg).
Pluripotent	Can form all cells of the adult body but **not** extra-embryonic tissues.	Embryonic Stem Cells (ESCs).
Multipotent	Can develop into a **limited** range of cell types within a specific family.	Hematopoietic stem cells (Blood-forming).
Unipotent	Can produce only one cell type but can still self-renew.	Muscle stem cells.

- Stem cell therapy involves using stem cells to **treat or manage diseases** by regenerating damaged cells, but most such therapies are still **experimental**.
- Recently, the **Supreme Court ruled that stem cell therapy cannot be offered as a clinical service for Autism Spectrum Disorder (ASD) outside approved clinical trials** and directed the Union Government to create a dedicated regulatory authority for stem cell research.
- The Court held that such therapy lacks established evidence on safety and efficacy and therefore fails the reasonable standard of care owed by doctors to patients.

2.41 Kyasanur Forest Disease (KFD)

- Kyasanur Forest Disease (KFD), commonly known as **"Monkey Fever"**
- **Pathogen:** It is caused by the **Kyasanur Forest Disease Virus (KFDV)**.

- **Family:** It belongs to the **Flaviviridae** family (the same family as Yellow Fever, Dengue, and Zika).
- **Discovery:** First identified in **1957** in the Kyasanur Forest of **Shimoga district, Karnataka**.
- **Vector:** Primarily transmitted by **Hard Ticks**
- (*Haemaphysalis spinigera*).
- **Reservoirs:** Wild monkeys (Black-faced Langurs and Bonnet Macaques), rodents, and shrews.
- **Monkey deaths** are often the first sign of an outbreak in an area.
- **Human Transmission:** Humans contract the disease through **tick bites** or contact with an **infected animal** (usually a dead monkey).
- **No Human-to-Human Transmission:** Unlike COVID-19 or Ebola, KFD does not spread from person to person.
- **Endemic Areas:** Primarily the **Western Ghats** of India.
- **Symptoms:** High fever, frontal headache, severe muscle pain, and **hemorrhagic symptoms** (bleeding from gums/GI tract) in severe cases. It has a biphasic nature (two waves of symptoms).
- **Case Fatality Rate (CFR):** Ranges from **3% to 10%**.
- **Treatment:** No specific antiviral treatment exists. Management is purely **symptomatic**.

2.42 India–Malaysia IMPACT Framework

- **Full Form: I**ndia–**M**alaysia **P**artnership for **A**dvancing **C**ollective **T**ransformation.
- **Nature:** It is a guiding framework intended to move bilateral ties beyond traditional diplomacy toward concrete institutional outcomes in technology, economy, and security.
- **Context:** It builds on the elevation of ties to a Comprehensive Strategic Partnership (upgraded in August 2024).
- **Key Pillars of the Framework**
    - **Digital & Fintech:** UPI Integration: An agreement between NPCI (India) and PayNet (Malaysia) to link UPI with Malaysia's DuitNow for cross-border QR payments.
    - **Digital Council:** Establishment of the
    - Malaysia–India Digital Council
    - (MIDC) to collaborate on AI, Cybersecurity, and Digital Public Infrastructure (DPI).
    - **Semiconductors:** A multi-layered cooperation agreement focusing on supply chain resilience, combining Malaysia's "back-end" expertise (packaging/testing) with India's design capabilities.
    - **Energy Transition:** Focus on Green Hydrogen and large-scale solar projects (leveraging Malaysia's Gentari and India's International Solar Alliance leadership).
    - **Trade in Local Currency:** Moving toward settlement of trade in Indian Rupee (INR) and Malaysian Ringgit (MYR) to reduce dollar dependency.
    - People-to-People & Cultural (The "Living Bridge")

- **Aim:**
  - To accelerate the pace and scale of bilateral cooperation.
  - To deliver tangible benefits for citizens of both countries.
  - To position India–Malaysia ties as a driver of Asia's collective growth.

2.43 Removal Process of the Speaker

- The removal process is governed by **Article 94** and **Article 96** of the Indian Constitution, along with the Rules of Procedure of the Lok Sabha.
- **Initiation:** A resolution to remove the Speaker can only be moved after giving at least **14 days' notice**.
- **Admissibility:** The motion must have the support of at least **50 members** to be admitted for discussion.
- **Voting Threshold:** The Speaker is removed by a resolution passed by a **Majority of all the then members** of the Lok Sabha.
- **Note:** This is an **Effective Majority** (Total membership minus vacancies), not a Simple or Special Majority.
- When a resolution for their removal is under consideration, the Speaker's powers are significantly curtailed:

Feature	Status
Presiding	The Speaker **cannot preside** over the sitting, though they may be present.
Right to Speak	They have the right to speak in and take part in the proceedings.
Voting (Initial)	They can vote in the **first instance** on the resolution.
Casting Vote	They **cannot** exercise a casting vote in case of an equality of votes.

2.44 P-8I Poseidon

- Manufactured by **Boeing (USA)**. It is the Indian variant of the P-8A Poseidon used by the US Navy.
- **Platform:** Based on the fuselage of the **Boeing 737-800** commercial airliner, modified for military use.
- **Induction:** India was the **first international customer** for the P-8I
- **Key Capabilities**- The P-8I is a multi- mission aircraft designed for:
  - **Anti-Submarine Warfare:** Detecting and neutralizing enemy submarines.
  - **Anti-Surface Warfare (ASuW):** Engaging enemy ships.
  - **Intelligence, Surveillance, and Reconnaissance (ISR):** Long-range monitoring of sea lanes.
  - **Search and Rescue (SAR):** Assisting in maritime disasters.
- **Range:** Exceptional endurance for long-range maritime patrol (LRMP).
- **Armament:** It carries **Harpoon Block II** missiles and **Mk-54 lightweight torpedoes**. It can also drop **Sonar Buoys** (Sonobuoys) to track underwater movements.
- **India-Specific Customization:** Unlike the US version, the P-8I includes Indian-built communication systems and an **Aft Radar** that provides a 360 view.

2.45 Regional Service Centre (RSC) to Counter Tsunami

- India plans to **establish Regional Service Centre in the Andaman and Nicobar Islands** to strengthen its tsunami monitoring and early warning system.
- Location & Regional Role: The proposed Regional Service Centre (RSC) will be established **at Vijaynagar on Swaraj Dweep in the Andaman and Nicobar Islands** and will also provide tsunami warning services to Indian
- Ocean countries such as Sri Lanka.
- The current system relies on undersea earthquakes (seis mic triggers). It struggles to detect tsunamis caused by **non-seismic** events like submarine landslides, volcanic eruptions (e.g., the 2022 Tonga event), or "mud volcanoes."
- The upgraded system will **detect both seismic & non-seismic tsunamis,** enhancing the speed, accuracy & reliability of warnings across the Indian Ocean region.
- **Technology & Infrastructure:** The **project includes laying about 270 km of sub-sea cables along tectonic subduction zones, enabling faster acoustic signal detection and reducing data gaps** caused by damage or loss of surface buoys and satellite limitations.
- **Nodal Agency:** Indian National Centre for Ocean Information and Services (INCOIS), which operates the Indian Tsunami Early Warning Centre (ITEWC).

2.46 Lyriothemis keralensis

- **Status:** It is a species of **dragonfly** (Anisoptera) belonging to the family Libellulidae.
- **Endemism:** It is **endemic to the Western Ghats** of India, pri marily found in Kerala.
- **Habitat:**
- Found in **vegetated pools and irrigation canals.**
- Occurs within **shaded rubber and pineapple plantations.**
- Recorded from **Varapetty near Kothamangalam, Ernakulam district.**
- Adults are visible **only during the Southwest monsoon (May–August)**; rest of the year spent as aquatic larvae.
- **Key characters:**
    - **Small-sized dragonfly** with marked **sexual dimorphism.**
    - **Males:** Bright **blood-red** with black markings, slender abdomen.
    - **Females: Yellow with black markings**, bulkier body.
    - Distinguished from Lyriothemis acigastra by **microscopic traits**, including slender abdomen, uniquely shaped anal appendages and genitalia.

2.47 Form 7

- Form 7 is a statutory form used to object to the inclusion of a name (one's own or another person's) in the electoral roll on specified grounds such as death, duplication, shifting of residence, ineligibility by age or citizenship, or misrepresentation.

- **Legal basis:**
  - Governed by the **Election Commission of India**
  - Prescribed under **Registration of Electors Rules, 1960**, framed under the **Representation of the People Act, 1950**
  - As per **Section 13(2)**, objections must be filed **in Form 7** by a person whose name is already on the electoral roll
  - Booth Level Agents (BLAs) are also permitted to file objections
- **Aim:**
  - To maintain the accuracy and integrity of electoral rolls.
  - To remove ineligible, duplicate, shifted or deceased voters.
  - To prevent electoral fraud and ensure free and fair elections.
- Any **registered elector of the constituency** (including **Booth Level Agents**) can file Form 7.
- Objection can be raised against another voter or for **self-deletion.**
- On receipt, the **Booth Level Officer (BLO)** conducts **physical verification**.
- The concerned voter is issued a **notice and hearing** by the **Electoral Registration Officer (ERO).**
- Appeals against ERO's decision lie with the **District Magistrate** within **15 days.**
- Filing a **false declaration** is punishable under **Section 32 of the RP Act, 1950.**
  - To position India–Malaysia ties as a driver of Asia's collective growth.

2.48 Network Readiness Index (NRI) 2025

- **Published by: Portulans Institute** (an independent non-profit based in USA).
- **Objective:** To assess how effectively 127 economies leverage Information and Communication Technologies (ICT) for growth, innovation, and societal impact.
- **The Four Pillars: Technology, People, Governance, Impact**
- India has shown significant "momentum," jumping **4 spots** in just one year.
- **Global Rank: 45th** (out of 127 economies).
- **Score:** Improved to **54.43/100** (from 53.63 in 2024).
- **Income-Level Achievement:** India ranks **2nd** in the
- **Lower-Middle-Income** group (behind Vietnam).
- **Note:** The report highlights that India's network readiness is significantly higher than what would be expected given its GDP per capita level.
- India secured the **1st global rank** in four specific indicators:
  - **AI Scientific Publications** (reflecting a massive research output).
  - **Annual Investment in Telecommunication Services.**
  - **ICT Services Exports.**
  - **E-commerce Legislation.**
- **Other Key High Rankings**
  - **2nd Rank:** Mobile broadband internet traffic, FTTH/Building Internet subscriptions, and International Internet bandwidth.
  - **3rd Rank:** Domestic market scale.
- **Challenges & Gaps**
  - While India excels in Technology and Impact, the **Governance** pillar remains the

weakest area (Rank 73rd).
    - **Privacy Protection:** India ranks poorly (**101st**) in privacy protection by law.
    - **Gender Gap:** A significant divide persists and India ranks 96th .
    - **SDG Contribution:** More work is needed to link digital tools to Sustainable Development Goals (Rank 83rd).
- **Global Snapshot**
    - **United States** (Rank 1 – held for 4 consecutive years)

2.49 Vayu Shakti

- A **triennial** (once every three years) firepower demonstration.
- **Conducted by:** The **Indian Air Force (IAF)**.
- **Objective:** To demonstrate the IAF's ability to deliver lethal firepower with precision, day and night, and to validate its operational doctrines.
- **Vayu Shakti 2026 (Latest Edition) Date:** Scheduled for **February 27, 2026**.
- **Theme/Core Values:** Guided by the values **"Achook, Abhedya aur Sateek"**.
- **Strategic Context:** It will highlight glimpses of **Operation Sindoor** and emphasize India's "Aatmanirbhar Bharat" (self-reliance) in defense.
- **Key Participating Assets (Indigenous & Global)**
- **Fighter Jets:** Rafale, Su-30 MKI, MiG-29, Mirage-2000, Jaguar, and the indigenous **Tejas (LCA)**.
- **Helicopters:** Apache, Chinook, Mi-17, and the indigenous **Prachand (LCH)** and
- **Dhruv (ALH)**.
- **Transport:** C-17 Globemaster, C-130J Super Hercules, and the **C-295** (newest addition).
- **Surface-to-Air Systems: Akash** and **SAMAR** (Surface-to-Air Missile for Assured Retaliation).
- **Day-Dusk-Night Capability:** A major focus is demonstrating that darkness does not degrade the IAF's precision strike capability.

2.50 National Large Optical-Near Infrared Telescope (NLOT)

- **Status:** Formally cleared/boosted in the **2026 Union Budget**.
- **Location:** To be located at **Hanle, Ladakh**, at the **Indian Astronomical Observatory**.
- **Implementing Agency: Indian Institute of Astrophysics (IIA)**, Bengaluru.
- **Site Significance:** Hanle is a high-altitude cold desert (4,500m) with low atmospheric water vapor and clear skies, making it one of the world's best sites for optical and infrared astronomy. It is also India's first Dark Sky Reserve.
- **Technical Specifications**
    - **Aperture Size:** Planned as a **10–12 meter class** telescope (specifically cited as **13.7 meters** in recent segmented designs).
    - **Design:** It will use a **segmented-mirror** technology. This consists of approximately **90 hexagonal segments** working as a single mirror.
- **Wavelengths:** Operates in the **Optical** (visible light) and **Near-Infrared** (NIR) spectrums (0.3 to 5 micrometers).

- **Strategic & Scientific Objectives**
  - **Deep Space Research:** Designed to observe faint, distant objects like **exoplanets**, early galaxies, and the origins of the universe.
  - **Indigenous Capability:** The project leverages the **India TMT Optics Fabrication Facility (ITOFF)** in Bengaluru. This facility was created for India's contribution to the international Thirty Meter Telescope (TMT) and will now manufacture the mirrors for NLOT.

2.51 Thwaites Glacier

- **Region:** Located in **West Antarctica**.
- **Terminal Point:** It flows into **Pine Island Bay**, which is part of the **Amundsen Sea**.
- **Dimensions:** It is the **widest glacier on Earth** (~120 km wide). Its total area (~1.9 lakh sq km) is roughly the size of the state of Florida or the island of Great Britain.
- **Marine-Based:** Unlike most glaciers, a large portion of Thwaites sits on bedrock that is **below sea level**.
- It is popularly known as the **"Doomsday**
- **Glacier"** and is a **fast-moving ice mass** about 120 km wide, spanning nearly 1.9 lakh sq. km, making it one of Antarctica's largest and most significant glaciers.
- **Sea-Level Risk:** It contains enough ice to raise global sea levels by over 0.5 metres if it were to collapse completely, and its ongoing melting already contributes nearly 4% to annual global sea-level rise.
- **Geographical Vulnerability:** The glacier rests on bedrock that slopes downward inland below sea level, enabling warm ocean water to flow beneath its floating ice shelf and melt it from below, weakening its structural stability.
- **Role of Ice Shelf**: The ice shelf acts like a brace that slows the glacier's flow into the ocean; as it thins or fractures, the glacier accelerates and loses more ice.

2.52 B-READY Assessment

- Developed and published by the **World Bank Group**.
- **Purpose:** To evaluate the business and investment climate of economies worldwide to promote private sector development.
- It replaces the *Ease of Doing Business* index, which was discontinued in 2021.
- **The Three Pillars of Assessment**
  - **Regulatory Framework:** Assesses the quality of laws and regulations (*de jure*).
  - **Public Services:** Evaluates the quality of infrastructure and institutions provided by the government to support business.
  - **Operational Efficiency:** Measures the actual ease of compliance and real-world implementation (*de facto*).
- **Context:** The inclusion of India in the Business Ready (B-READY) 2026 assessment has renewed attention on India's business reform trajectory.
- Data collected through expert consultations and firm-level surveys (World Bank Enterprise Surveys – WBES)

- **Key Features of B-READY:**
  - **Lifecycle-Based Assessment Framework:** Evaluates businesses across ten topics covering the complete firm lifecycle—entry, operation/expansion, and exit—ensuring a holistic understanding of regulatory and market conditions.
  - **Integration of Cross-Cutting Themes:** Embeds Digital Adoption, Environmental Sustainability, and Gender Inclusion across all topics—making it aligned with modern economic governance priorities.
  - **Dual Data Collection Methodology**: Combines expert consultations (laws and regulations) with firm-level surveys.
  - **Annual, Transparent Global Benchmarking:** Conducted by the World Bank Group and published annually, it replaces the earlier Doing Business Report with improved methodology, transparency, and broader institutional coverage.

2.53 Sawalkot Hydroelectric Project

- Pakistan has initiated a review of India's Sawalkot Hydroelectric Project on the Chenab River following India's suspension of the Indus Waters Treaty in 2025.
- **District:** Situated in the **Ramban and Udhampur** districts of the Union Territory of Jammu & Kashmir.
- The Sawalkot Hydroelectric Project is a 1,856 MW **Run-of-the-River (RoR) hydropower project being developed on the Chenab River** in Jammu & Kashmir.
- It is the largest hydropower project in J&K and among the biggest in Northern India.
- **Basin:** Part of the Indus Basin.

2.54 New Guidelines on 'Vande Mataram'

- **Six-Stanza Mandate:** The government has restored the full original **si x stanzas** as the official version.
- **Duration:** The official rendition is now approximately **190 seconds.**
- *Comparison:* The National Anthem (*Jana Gana Mana*) has a formal duration of **52 seconds**.
- **Protocol and Order of Precedence**
  - **Sequence:** When both the National Song & National Anthem are performed together, **Vande Mataram must be rendered first**, followed by the National Anthem.
  - **Standing Protocol:** The audience **must stand to attention** whenever the official version is sung or played at official functions.

  - **Exception:** It is **not mandatory** to stand in cinema halls or when the song is part of a newsreel/documentary, to avoid disorder and confusion.
  - **Pre-Rendition Signal:** If played by a band, it must be preceded by a **roll of drums** (seven paces in slow march) or a fanfare to alert the audience.
- **Occasions for Mandatory Performance**
- **Shall be played:** On arrival/departure of the **President** and **Governors** at formal state functions; before/after the President's address to the nation; and during **Civil Investiture ceremonies** (like Padma Awards).
- **Mass Singing:** Encouraged during the unfurling of the National Flag at cultural functions and non-parade ceremonial events.
- **Schools:** Educational institutions are directed to incorporate community singing of the National Song to begin the day's work.
- **Historical & Commemorative Context**
- **150th Anniversary:** These guidelines coincide with the celebration of **150 years of Vande Mataram** (1875–2025/26). The song was composed by **Bankim Chandra Chattopadhyay** in 1875 (on *Akshaya Navami*).
- **Constituent Assembly Status:** In 1950, Rajendra Prasad (President of the Constituent Assembly) stated that *Vande Mataram* shall be honored equally with *Jana Gana Mana* and has an equal status with it.

2.55 Indi Dogs- Tangkhul Hui & Komba

Feature	Tangkhul Hui (Haofa)	Kombai (Polygar Dog)
Origin	**Manipur** (specifically Ukhrul district).	**Tamil Nadu** (Kombai town, Theni district).
Traditional Use	Hunting and guarding by the Tangkhul Naga tribe.	Big game hunting (boars, bison) and guarding; historically "war dogs."
Key Traits	**High stamina**, extreme **disease resistance** (ideal for hot/humid climates), and sharp hunting instincts.	Fearless, **highly intelligent**, loyal, and powerful (often called the "Indian Rottweiler").
Current Role	Pilot project started in 2022; currently used for **narcotics detection**.	Induction of parent stock (breeding phase) begins in **April 2026**.
Appearance		Tan/reddish-brown with a **black muzzle**; often has a ridge of hair on the back.

- The Assam Rifles is working toward a long-term target to significantly reduce or replace foreign breeds (like German Shepherds, Labradors, and Belgian Malinois) with indigenous ones.
- **Target Year:** The force aims to phase out foreign breeds by **2050**.

- **Immediate Milestone:** Full induction and integration of the Tangkhul Hui and Kombai into the operational squad are expected by **March 2027**.
- **Rationale: Climate Adaptability, Health, Self-Reliance**

2.56 Corruption Perceptions Index 2025

- Released by **Transparency International**
- The 2025 report presents a sobering view of global integrity, noting that anti-corruption progress has largely stalled or backslid.
- **Global Average:** The global score dropped to **42**, the lowest in over a decade.
- **Widespread Failure:** More than **2/3 of countries** (122 out of 182) scored below 50.
- **Top Performers: Denmark** (89) maintained the top spot for the 8th consecutive year, followed by **Finland** (88) and **Singapore** (84).
- **Bottom Performers: South Sudan** and **Somalia** (both scoring 9) are tied at the bottom, followed by **Venezuela** (10).
- India showed **marginal improvement** in rank but remains in the **"high corruption" perception category. (Ranked 91 out of 182 nations. Score 39)**

2.57 Sarvam Vision and Bulbul V3

Feature	Sarvam Vision	Bulbul V3
Category	Multimodal Vision-Language / Optical Character Recognition	Text-to-Speech (TTS) / Voice AI
Focus	Physical documents & complex layouts	Natural speech & regional accents
Language Support	22 Scheduled Indian Languages	11+ Languages (expanding to 22)
Key Benchmark	Outperformed Gemini 3 Pro on Indic OCR	Top listener preference for 8 kHz (telephony)
Sovereignty	Part of India's **Sovereign AI** push	Funded under the **India AI Mission**

2.58 Substantive motion

- **Self-Contained & Independent:** It is a formal proposal submitted for the approval of the House that is drafted in a way that it is capable of expressing a **decision of the House** on its own.
- **Distinct from Subsidiary Motions:** Unlike subsidiary or substitute motions, it does not depend on any other motion or proceeding to have meaning.
- **Tool for Accountability:** It is the **only way** the conduct of persons in "high authority" (President, Vice-President, Judges, Speaker, etc.) can be discussed.
- The Constitution and Parliamentary rules mandate that the conduct of certain officials cannot be criticized during regular debates. They require a **Substantive Motion** for discussion or removal:
    - **President of India** (Impeachment under Article 61).
    - **Judges** of the Supreme Court and High Courts.
    - **Chief Election Commissioner** and **Comptroller and Auditor General**
    - **Speaker and Deputy Speaker** of the Lok Sabha.
    - **Chairman and Deputy Chairman** of the Rajya Sabha.
- **Classification of Motions**

Type	Description	Example
Substantive	Independent, self-contained proposal.	**Motion of Thanks**, No-Confidence Motion, Impeachment.
Substitute	Moved in substitution of an original motion.	Alternative policy proposal moved during a debate.
Subsidiary	Depends on another motion; has no meaning alone.	**Amendments**, Ancillary motions (e.g., "that the Bill be passed").

2.59 India's first muscial road

- Mumbai inaugurated **India's first musical road** (also known as a "melody road"). This project is a blend of engineering and road safety, aimed at encouraging motorists to maintain steady speeds.
- **Specific Location:** Located on the **Chhatrapati Sambhaji Maharaj Coastal Road** (Mumbai Coastal Road) in Mumbai.
- **Carriageway:** It is on the **northbound lane** (from Nariman Point towards Worli/Breach Candy).
- **Stretch Length:** A **500-metre** section just after exiting the underground tunnel.
- **Implementing Agency:** Brihanmumbai Municipal Corporation (BMC).
- **The Technology: How it Works**
- **Rumble Strips:** The effect is produced by specially designed **grooves** (rumble strips) cut into the asphalt at precise intervals and depths.
- **Sound Generation:** As vehicle tires pass over these grooves, they create tactile vibrations. These vibrations translate into sound waves that are heard **inside the car cabin**.
- **The Tune:** The road plays the Academy Award-winning song **'Jai Ho'**
- **The Speed Factor:** To hear the melody clearly and at the right pitch, motorists must maintain a speed between **70 kmph and 80 kmph**.
- *Too fast:* The song sounds rushed and distorted.
- *Too slow:* The tune sounds stretched and off-beat.
- India is the **5th country** in the world to implement this, following Japan (pioneer in 2007), Hungary, South Korea, and the UAE.
- **Technology Partner:** The project utilized **Hungarian technology** to ensure the precise calibration of the musical notes.
- **Objective:** Beyond novelty, it acts as a **"speed-calming measure."** It encourages drivers to stick to the speed limit and stay alert during long or monotonous drives.
- **Cost:** Approximately **₹7.5 crore**.
- **Signage:** Alerts for the musical road are placed at **500m, 100m, and 60m** before the stretch to allow drivers to adjust their speed.

2.60 Arogya Mandirs

- **Former Name:** Ayushman Bharat-Health and Wellness Centres (AB-HWCs).
- **New Name: Ayushman Arogya Mandir**, rebranded by the Union Health Ministry.
- **Tagline:** *"Arogyam Parmam Dhanam"* (Health is the ultimate wealth).
- **Core Objective & Origin**
  - **Vision:** To move from "selective" healthcare to **Comprehensive Primary Health Care (CPHC)**.

  - **Policy Basis:** National Health Policy (NHP) 2017.
  - **The "First" Center:** Launched in **Bijapur, Chhattisgarh** (Jangla) in 2018.
- **Two Pillars of Ayushman Bharat:**
  - **Arogya Mandirs:** Primary healthcare (1.5 lakh centers).
  - **PM-JAY:** Secondary and tertiary healthcare (Health insurance of ₹5 lakh/family).
- **Key Features of Service Delivery- Expanded Range of Services (12 Packages):** Unlike old Sub-Centres that focused only on Mother and Child health, AAMs cover:
  - Non-Communicable Diseases (NCDs): Screening for Hypertension, Diabetes, and common cancers (Oral, Breast, Cervical).
  - Mental health, ENT, Ophthalmic (eye) care, and Geriatric care.
  - Palliative and Rehabilitative care.
  - **Wellness & Yoga:** Integration of lifestyle management and Yoga as a preventive measure.
  - **Human Resource:** A new cadre called **Community Health Officer (CHO)** is posted at Sub-Centre level AAMs to bridge the gap between doctors and patients.
- **Infrastructure:** Transformation of existing Sub-Health Centres (SHCs) and Primary Health Centres (PHCs).
- **Teleconsultation:** Extensive use of e-Sanjeevani to provide specialist advice to rural patients.
- **Funding:** Centrally Sponsored Scheme (usually 60:40 ratio for states; 90:10 for North East/Hilly states).
- **Diagnostics & Drugs:** Provision of free essential medicines and diagnostic tests closer to home.

2.61 Privilege Motion

- **Article 105:** Defines the powers, privileges, and immunities of **Parliament** and its members.
- **Article 194:** Defines the same for **State Legislatures**.
- **Source:** These privileges are not codified by any specific law yet; they are based on the Constitution, parliamentary conventions, and judicial interpretations.
- **What triggers the Motion?**
  - **The Breach:** A member can move the motion when they believe a Minister or Member has committed a **breach of privilege** or **contempt of the House**.
  - **Common Reason:** The most frequent ground is **withholding facts** or providing **misleading/distorted facts** to the House.
  - **Applicability:** It can be moved against a member or even a non-member (e.g., a citizen or journalist) who insults the House.
- **The Process (How it moves)**
  - **Admissibility:** The first level of scrutiny is by the **Speaker (Lok Sabha)** or the **Chairman (Rajya Sabha)**. They can decide the merit of the case themselves or refer it to a committee.
  - **Consent:** No motion can be taken up without the presiding officer's consent.
  - **The Committee of Privileges:** * **Lok Sabha:** 15 members.
  - **Rajya Sabha:** 10 members.
  - **Function:** The committee examines the breach, summons witnesses, and recommends action (usually a warning, reprimand, or even suspension/expulsion).

2.62 Arctic Sentry Mission

- **Definition:** It is an **Enhanced Vigilance Activity (eVA)** designed to coordinate and strengthen NATO's military presence in the Arctic and the "High North."
- **Strategic Goal:** To counter the growing military footprint of **Russia** and the increasing "near-Arctic" ambitions of **China**.
- **Function:** It is not a new standing army but a **coordination framework** that brings existing national exercises and assets (air, sea, and land) under a single, unified NATO command structure.
- **Geopolitical Trigger: The "Greenland Crisis"**
- **The Trump-Rutte Deal:** The mission was fast-tracked following a meeting in **Davos (January 2026)** between
- U.S. President Donald Trump and NATO Secretary General Mark Rutte.
- **Objective:** The new mission will leverage NATO's
- collective strength to protect its territory and ensure that the Arctic and the High North, a term referring to the Arctic Circle and its adjoining northernmost regions, remain secure.
- **Feature:** It aims to enhance surveillance and security in the region, modelled on existing NATO initiatives such as Baltic Sentry and Eastern Sentry.
- **Military Exercises & Preparedness:** The mission includes major exercises such as Exercise Cold Response and the UK-led Lion Protector, aimed at training allied forces for Arctic operations and strengthening the defence of critical infrastructure, and counter-sabotage threats across Norway, Iceland and the Danish Straits.

2.63 Dornier 228 Aircraft

- **Origin:** Originally designed by **Dornier GmbH (Germany)**.
- **Indian Manufacturer:** Licensed and manufactured in India by **Hindustan Aeronautics Limited (HAL)** at its Kanpur division since 1983.
- It is a **Short Take-Off and Landing (STOL)** aircraft, making it ideal for operating from short, semi-prepared, or unpaved runways.
- **Supercritical Wing:** It features a unique wing design that improves lift and reduces drag, allowing it to carry heavy payloads at slower speeds—a critical feature for surveillance.
- **Dual Roles: Military vs. Civil**
- **Military/Para-military:** Used by the **Indian Navy**, **Indian Coast Guard**, and **Indian Air Force**.
- **Roles:** Maritime surveillance, Pollution monitoring (oil spill detection), Search and Rescue (SAR), and Border patrolling.
- **Equipment:** The maritime version is often fitted with 360-degree surveillance radar, FLIR (Forward Looking Infra-Red) systems, and Satellite links.
- **Civil Version (Hindustan-228):** * In 2022, HAL launched the **Hindustan-228**, a civil-certified variant (19-seater).
- **UDAN Scheme:** It is the primary indigenous aircraft used to bolster regional connectivity under the *Ude Desh ka Aam Naagrik* (UDAN) scheme, specifically in the Northeast.

- India exported two Dornier 228 aircraft to the **Guyana Defence Force**, marking a significant milestone in India's defense exports to the Caribbean.

2.64 Dal Lake

- **Type:** A mid-altitude, urban, freshwater lake in **Srinagar**, Jammu & Kashmir.
- **Catchment:** Situated in the **Zabarwan mountain valley**, at the foothills of **Shankaracharya Hill**.
- **Basins:** The lake is divided into four main basins: **Gagribal, Lokut Dal, Bod Dal, and Nigeen** (Nigeen is sometimes considered an independent lake).
- **Inflow/Outflow:** Primary water source is the **Telbal Nallah** (stream).
- It is connected to the **Jhelum River** via an outflow channel.
- **Thermal Property:** It is a **monomictic lake** (waters mix from top to bottom once a year).
- **Local Name:** Known as **Raad (floating gardens)** in Kashmiri.
- **Composition:** These are floating islands made of matted vegetation, soil, and organic matter.
- Located in Srinagar, the summer capital of Jammu and Kashmir.
- Surrounded by Mughal gardens such as Shalimar Bagh and Nishat Bagh.
- Dal Lake **is part of the Kashmir Valley lacustrine (lake-formed) system**, **created by tectonic and glacial processes** that shaped the Himalayan basin. It forms part of a larger natural wetland complex.

2.65 Strait of Hormuz

- **Connecting Link:** It connects the **Persian Gulf** (west) to the **Gulf of Oman** and the **Arabian Sea** (east).
- **Bordering Nations:**
- **North:** Iran.
- **South:** Oman (**Musandam Peninsula**) and the United Arab Emirates (UAE).
- The actual navigable shipping lanes are only **3 km** wide in each direction, separated by a 3 km buffer zone.
- **Strategic & Economic Importance**
    - **World's Primary Oil Chokepoint**Roughly **20-25%** of total global petroleum liquids (about 21 million barrels per day) pass through here.
    - **LNG Gateway:** It is the main route for Liquefied Natural Gas (LNG) from **Qatar**, the world's largest LNG exporter.
- **Disputed Islands: Abu Musa, Greater Tunb, and Lesser Tunb**. These are strategically located near the shipping lanes and are a point of contention between **Iran** and the **UAE**.

2.66 Reynisfjara Beach

- **Country:** Iceland (South Coast).
- Part of the Katla UNESCO Global Geopark.
- **Bodies of Water:** It borders the **North Atlantic Ocean**.
- **Climate Zone:** Subpolar oceanic climate, heavily influenced b y the **North Atlantic Drift** (a

warm current).

- **Key Geological Features**
  - **Black Sand:** The sand is **fragmented basaltic lava**.
  - **Gardar Basalt Columns:** A massive wall of
  - **columnar jointing**.
  - **Reynisdrangar Sea Stacks**
  - **Dyrhólaey:** A nearby massive stone arch and promontory, a classic example of coastal erosion (sea arch).
  - Reynisfjara is famous for **Sneaker Waves** (*deadly shorebreak*): Unlike tidal waves, these are suddenly large waves that appear in a train of smaller waves.
- **Context:** Reynisfjara Beach in southern Iceland has witnessed extensive erosion.
- **Reason for Diminishing:**
  - **Persistent Easterly Winds**.
  - **Natural Barrier Effect**.
  - **High-Energy Atlantic Swells**
  - **Landslide & Structural Collapse**
  - **Climate Variability**

2.67 Army Ant Species

- Army ants are highly social, nomadic predatory ants known for their coordinated mass raids. The newly identified species — *Aenictus chittoorensis* and *Aenictus lankamallensis* — were discovered in the Sri Venkateswara Wildlife Sanctuary in the Southern Eastern Ghats.
- **Significance**
  - Act as keystone predators, regulating arthropod populations.
  - Support ecological balance by driving insects out, making them prey for birds and reptiles.
  - Contribute to nutrient cycling and forest biodiversity.
- **Habitat:**
  - Primarily found in **tropical forest ecosystems**.
  - Thrive in dense forest floors with high arthropod diversity.
  - Do not build permanent nests; instead form temporary living structures called **bivouacs** made from their own bodies.
- **Key Characteristics**
  - **Highly aggressive and coordinated predators**
  - **Large, sharp mandibles and stinging ability**
  - **Completely blind; rely on pheromones**
  - **Move in straight columns during raids**
  - **Form massive colonies**

2.68 Pangolins & Sangtam Community

- **Unique Feature:** They are the only mammals wholly covered in scales. These scales are made of keratin (the same protein in human hair and fingernails).

- **Diet:** Insectivorous. They are often called "scaly anteaters." They lack teeth and use a long, sticky tongue to eat ants and termites.
- **Defense Mechanism:** When threatened, they roll into a tight ball. While effective against lions, this makes them easy for poachers to simply pick up.
- **Nocturnal & Solitary:** Most species are active at night and live alone, meeting only to mate.

Feature	Indian Pangolin	Chinese Pangolin
Range	Throughout India (except high Himalayas & NE)	Northeast India, Himalayan foothills
Size	Larger; larger scales	Smaller; smaller scales
Tail	Thick, muscular tail	Shorter tail with a visible terminal scale
Habitat	Arid, plains, and tropical forests	Prefers more humid, hilly forests

- **IUCN Red List: * Critically Endangered:** Chinese, Sunda, and Palawan.
- **Endangered:** Indian Pangolin (moved from Vulnerable recently).
- **CITES:** Listed under **Appendix I** (Total ban on international commercial trade).
- **Wildlife Protection Act (India), 1972:** Both Indian and Chinese species are under **Schedule I** (highest protection, same as the Tiger).
- **Context:** The apex body of Nagaland's Sangtam community has passed a resolution to protect pangolins within its jurisdiction.
- Sangtam Naga are one of the recognized Naga tribes of Nagaland, primarily inhabiting Kiphire and Tuensang districts in eastern Nagaland.
- They are part of the larger Naga ethnic group of Northeast India and follow strong customary governance traditions.
- The term "Sangtam" is believed to have evolved from "Sangdang", an ancestral village

2.69 India's First Underwater Road-cum-Rail Tunnel

- The Cabinet Committee on Economic Affairs has approved India's first underwater road-cum-rail tunnel under the Brahmaputra River in Assam at a cost of ₹18,662 crore.
- A 33.7 km four-lane access-controlled Greenfield connectivity project, including a 15.79 km twin-tube underwater tunnel beneath the Brahmaputra River in Assam.
- It will connect Gohpur (NH-15) and Numaligarh (NH-715), reducing distance from 240 km to 34 km.
- **Key Features:**
  - **Twin-Tube Underwater Tunnel:** Two parallel tubes ensure traffic segregation, safety redundancy, and easier emergency evacuation.
  - **Road-cum-Rail Connectivity:** Combines highway and railway infrastructure to enable seamless passenger and freight movement.
  - **EPC Mode Development:** Government funds the project while a contractor handles end-to-end execution under fixed timelines.

2.70 Urban Challenge Fund

- The Union Cabinet has approved the launch of the **Urban Challenge Fund (UCF) with ₹1 lakh crore Central assistance to drive market-led urban transformation.**
- **The Urban Challenge Fund (UCF) is a Centrally Sponsored Scheme designed to**

support transformative and bankable urban infrastructure projects through a competitive "challenge mode" framework.

- Paradigm Shift: Transitions urban funding from 100% government grants to a model where cities must "earn" their funding through reforms and market borrowing.
- Ministry: Under the Ministry of Housing and Urban Affairs (MoHUA).
- Funding Corpus: Total Central Assistance of ₹1 Lakh Crore (expected to catalyze a total investment of ₹4 Lakh Crore over 5 years).
- Duration: Operational from FY 2025–26 to FY 2030– 31 (extendable to 2034).
- The 25–50–25 Funding Model- 25%: Central Government assistance.
    - Minimum 50%: Must be raised by the city/state from market sources (Municipal Bonds, Bank Loans, or PPPs).
    - 25%: Contributed by State Governments, UTs, or the Urban Local Bodies (ULBs).
- **Target Cities:** * All cities with a population of **10 lakh (1 million) or more**.
    - All **State and UT capitals**.
    - Major **industrial cities** with a population above **1 lakh**.
- **Credit Repayment Guarantee:** A dedicated **₹5,000 crore corpus** exists specifically to help **smaller cities** (Tier-II, Tier-III), Northeast, and Hilly state ULBs access market finance for the first time.

2.71 Bharat-VISTAAR

- **Full Form:** Virtually Integrated System to Access Agricultural Resources.
- **Nodal Ministry:** Ministry of Agriculture & Farmers' Welfare.
- **Core Architecture (The "Three Layers")-** Bharat- VISTAAR acts as an **intelligent layer** sitting atop existing digital databases:
    - **The Data Layer (AgriStack):** Uses the national digital database of farmers (Farmer ID), digital land records, and geo-referenced village maps.
    - **The Knowledge Layer (ICAR):** Integrates the **Indian Council of Agricultural Research's (ICAR)** "Package of Practices" (scientific standards for crops).
    - **The Intelligence Layer (AI):** A multilingual AI engine that merges real-time data (weather from IMD, mandi prices from Agmarknet) with scientific knowledge to provide **hyper-local** advice.
- **Key Features for Prelims**
    - **Voice-First Interface:** Designed specifically for farmers who may not use smartphones to get voice-based AI assistance (named '**Bharati**').
    - **Multilingual Support:** Launched in Hindi and English; expanding to 11 Indian languages (Tamil, Bengali, etc.).
    - **Interoperability:** Built on **InDEA 2.0 (India Digital Ecosystem Architecture)**. It is an open, federated public network (plug-and-play model) allowing private and public stakeholders to connect.
    - **Services Offered: Advisory:** Sowing times, pest management (via National Pest

Surveillance System), and soil health.
- **Scheme Integration:** Access to 10 major central schemes (PM-KISAN, PMFBY, Soil Health Card, KCC, etc.) for eligibility and grievance redressal.
- **Market Intelligence:** Real-time prices from mandis across India.

2.72 Airbus H125

- **A single-engine, light multi-role utility helicopter.**
- **The Manufacturers:** Developed by **Airbus Helicopters**
- **Indian Context:** PM Modi and French President Emmanuel Macron, **inaugurated the final assembly line for H125 helicopter at Vemagal (Kolar) in Karnataka.**
- It is being manufactured in India via a partnership between **Airbus** and **Tata**
- **First Private Sector FAL:** This is India's first private-sector helicopter final assembly line. It marks a shift from the monopoly of state-owned HAL in rotary-wing manufacturing.
- **Technical & Operational Prowess**
  - **High-Altitude Performance:** The H125 holds the world record for the **highest-altitude landing and takeoff**, performed on the summit of **Mount Everest (8,848m)** in 2005.
  - **Ideal for India:** Its "high and hot" capability makes it perfect for the Indian Himalayas and desert regions.
  - **The Military Variant (H125M):** Airbus pitches the H125M as the "ideal successor" to the aging **Cheetah and Chetak** helicopters currently used by the Indian Armed Forces.

2.73 CBDC based Public Distribution System (PDS)

- The CBDC-based PDS is a digitally enabled ration distribution system that integrates Central Bank Digital Currency into the Public
- Distribution System to ensure secure and transparent food grain delivery. Pilot Launch: February 15, 2026, from Gandhinagar, Gujarat.
- Expansion: Soon to be extended to the Union Territories of Chandigarh, Puducherry, and Dadra & Nagar Haveli and Daman & Diu.
- Motto: "Har Dana, Har Rupiya, Har Adhikar"
- Nodal Authorities: Ministry of Consumer Affairs, Food and Public Distribution, in coordination with the RBI and NPCI.
- **Core Mechanism: Programmable e₹-** The "killer feature" of this system is **Programmability**. Unlike traditional cash or general DBT:
  - **Purpose-Bound:** The digital currency (e₹) is credited as **Digital Food Coupons** in the beneficiary's wallet. It can **only** be spent at authorized Fair Price Shops (FPS) for specific commodities (rice, wheat, etc.).
  - **Time-Bound:** These digital tokens have an expiration period (e.g., 30 days) to prevent subsidy hoarding and identify "ghost" beneficiaries.
  - **Merchant-Bound:** Transactions only trigger when the digital wallet interacts with an authorized FPS merchant platform.

  - **Annapurna Machine for Distribution:** An automated machine dispenses 25 kg of food grains in 35 seconds with accuracy.
- **Critical Advantages** - Elimination of Biometric Failures, Real-time Settlements, Traceability, Financial Inclusion

2.74 6th Gen Aero Engines

- **6th Generation Aero Engines** represent the pinnacle of military propulsion technology. Defence Minister Rajnath Singh's February 2026 directive to DRDO to fast-track these engines (with a 5–7 year goal).
- **Functions:**
  - **Cruise Mode (Fuel Saving Mode):** The engine opens 3rd air stream, behaving like a high-bypass commercial jet to maximise fuel efficiency & extend flight range.
  - **Combat Mode (High Power Mode):** The engine closes the 3rd stream, redirecting airflow for higher thrust, rapid acceleration, and superior combat performance.
  - **Cooling Function:** The additional airflow absorbs excess heat from radars, AI systems, and weapons, preventing overheating during high-intensity missions.
  - **Adaptive Cycle Engine (ACE):** This smart system dynamically shifts between efficiency and power modes, optimising performance based on mission demands.
- **6th Generation vs. 5th Generation**

Feature	5th Gen	6th Gen
Bypass Ratio	Fixed	**Adaptive/Variable**
Stealth	High (Infrared & Radar)	**Ultra-Low** (Integrated heat shielding)
Power Output	Primary propulsion	**Propulsion + Massive Electrical Power**
AI Integration	Limited (FADEC)	**Self-healing & AI-managed** diagnostics
Materials	Superalloys & basic CMC	**High-temp Ceramic Matrix Composites (CMC)**

- **The 2026 Shift:** India is moving beyond the 5th-gen engine for the AMCA Mk1 and aiming directly for 6th-gen technologies for the **AMCA Mk2**.
- **Why 6th Gen Matters for India**
  - **Directed Energy Weapons (DEWs):** These engines generate the massive electricity required to fire high-energy lasers.
  - **Thermal Stealth:** They include advanced cooling to hide the "heat signature" from infrared sensors.
  - **Supercruise:** The ability to sustain supersonic flight without using afterburners (which consume excessive fuel).
  - **Aatmanirbharta:** Ending reliance on the US (GE F414/F404) or Russia for the "heart" of the aircraft.

2.75 Eurasian Otter

- In 2025 and early 2026, direct photographic evidence confirmed its presence in the **Sindh River** (Ganderbal), **Lidder River** (Pahalgam), and **Hirpora Wildlife Sanctuary** (Shopian). It was previously considered locally extinct in the Valley for nearly 30 years.
- **Goa First Record:** In February 2025, the **first-ever** confirmed sighting of a Eurasian Otter

was recorded in **Goa** (Dharbandoda), significantly expanding its known distribution range in the Western Ghats.

Category	Status
IUCN Red List	**Near Threatened** (Globally)
Wildlife Protection Act (India)	**Schedule II**
CITES	**Appendix I**

- **Geographical Distribution**
  - **Global:** Widely distributed across Europe, Asia (Palearctic region), and parts of North Africa.
  - **India:** It has a "patchy" but wide distribution:
  - **Himalayas:** From Jammu & Kashmir to Arunachal Pradesh
  - **Southern India:** Western Ghats (Anamalai Hills, Silent Valley, and now Goa).
  - **Central India:** Recent photographic evidence from Satpura Tiger Reserve and Kanha-Pench Corridor.
- **Bio-indicator:** Known as an **"Ambassador of Wetlands"**, its presence indicates **clean, unpolluted water** and a healthy fish population.
- **Physical Features:** Has a distinctive **W-shaped/zig-zag** naked nose (*rhinarium*).
- Possesses **two layers of fur**: a dense under-layer for insulation and a waterproof outer layer.
- **Crepuscular/Nocturnal:** Mostly active during dawn, dusk, or night.
- **Diet:** Primarily **piscivorous** (fish makes up ~80% of its diet), but also eats amphibians and crustaceans.

2.76 Loggerhead Turtles

- **Scientific Name:** *Caretta caretta*. It is the only living species in its genus.
- Named for its **disproportionately large head**, which supports massive jaw.
- It is the **world's largest hard-shelled turtle**.
- **Diet:** Primarily **omnivorous**.
- **Global Range:** Found in the Atlantic, Pacific, and Indian Oceans, as well as the Mediterranean Sea.
- It is one of the most widely distributed sea turtles in temperate and subtropical oceans.
- Loggerheads are **rarely seen nesting on Indian mainland beaches**.
- The largest nesting site in the Indian Ocean is **Masirah Island, Oman**.
- **Major Nesting Sites –** Florida (USA), Oman, Cabo Verde, Japan, and Australia.
- **Delayed Maturity** – Females mature around 30–35 years of age.
- **Temperature-Dependent Sex Determination** – Warmer sand means more females.
- **Behavioural Patterns:**
  - **Long-Distance Migration**
  - **Natal Homing** – Females return to the same region where they hatched.
  - **Capital Breeders** – Store energy over years before reproducing.
- **Ecological Role: Marine Food Web Regulator**, **Indicator Species, Beach Nutrient Cycling** (Egg remnants enrich coastal ecosystems).

- They prefer temperate and subtropical waters. Females often return to the exact same beach where they hatched to lay their eggs (natal homing).
- **IUCN- Vulnerable, Schedule I in WPA, Appendix I in CITES.**

2.77 Exercise MILAN 2026

- **Edition:** 13th edition.
- **Host:** Indian Navy, under the **Eastern Naval Command**.
- **Nature:** Biennial (every two years) multilateral naval exercise.
- **Origin:** Started in **1995** at the Andaman and Nicobar Command with just 4 countries (Indonesia, Singapore, Sri Lanka, and Thailand).
- **Key Highlights & Participants**
  - **Scale:** Over **70 countries** and **60+ warships** are participating, making it the largest MILAN to date.
  - **First-time Participants:** Germany, the **Philippines**, and the **UAE** are participating with military assets for the first time.
  - **Notable Exclusions:** China and Turkey were not invited (linked to regional strategic considerations and their support for Pakistan).
  - **Indigenous Muscle:** India is showcasing its "Builder's Navy" status with **INS Vikrant** (indigenous aircraft carrier), *Visakhapatnam*-class destroyers, and *Nilgiri*-class stealth frigates.
- **The "Maritime Trifecta" of 2026- For the first time, India is hosting three major international maritime events simultaneously in Visakhapatnam:**
  - Exercise MILAN 2026: The operational war-drills component.
  - International Fleet Review (IFR) 2026: A ceremonial parade of ships reviewed by the President of India (Supreme Commander of the Armed Forces).
  - IONS Conclave of Chiefs: The 9th edition of the Indian Ocean Naval Symposium, where naval chiefs discuss regional security.

2.78 Bee Corridor

- **The National Highways Authority of India (NHAI) has launched a first-of-its-kind initiative to develop pollinator or 'Bee Corridors' along National Highways to promote ecological infrastructure development.**
- **The Concept:** A shift from purely "ornamental" roadside plantations to **"ecological plantations"**. It involves creating continuous linear stretches of bee-friendly vegetation along National Highways.
- The '**Bee Corridor'** will have a continuous stretch of flowering trees, shrubs, herbs and grasses that will provide **year-round nectar and pollen** through staggered seasonal flowering cycles.
- **Spacing Logic:** Flowering clusters will be planted at intervals of **500 meters to 1 km**. This specific distance is chosen because it matches the **average foraging distance** of honeybees and wild bees.
- **Target:** NHAI aims to plant **40 lakh trees** in the 2026–27 financial year, with **60%** of these dedicated to the Bee Corridor initiative.
- **Staggered Blooming:** Species are selected to ensure **near-continuous flowering** throughout the year. This prevents "food deserts" for bees during off-seasons.

2.79 AI-Preneurs of India

- The Atal Innovation Mission under NITI Aayog launched *AI-Preneurs of India* at the India AI Impact Summit 2026.
- AI-Preneurs of India is a flagship coffee table book that documents the journeys of 45 pioneering AI startups solving real-world problems.
- It is the 7th edition of AIM's Innovations For You series and showcases India's growing deep-tech and AI startup ecosystem.
- **Key Features:**
  - **Founder-First Storytelling:** Captures the journeys, challenges, and motivations of entrepreneurs, moving beyond pure technological narratives.
  - **Sectoral Diversity:** Features AI applications across 30+ sectors, reflecting the breadth of India's innovation landscape.
  - **Nationwide Representation:** Showcases startups nurtured through Atal Incubation Centres across multiple states, beyond metro hubs.
  - **Purpose-Led Innovation:** Emphasizes AI solutions solving real-world issues in healthcare, sustainability, education, and governance.
  - **Policy-Ecosystem Linkage:** Demonstrates synergy between public incubation platforms and private AI innovators.

2.80 G7

- **2026 Host: France** (held in **Évian**, June 15–17, 2026).
- French President Emmanuel Macron has invited Prime Minister of India to attend the 52nd G7 Summit (2026) in France.
- **Key 2026 Themes:**
- **Reducing Global Macroeconomic Imbalances:**
- Tackling debt in developing nations.
- **"One Health" Summit:** Focusing on the link between human, animal, and environmental health.
- **AI Governance:** Continuing the "Hiroshima AI Process" (2023) and the "Canada AI Network" (2025).
- **2025 Host (Immediate Past): Canada** (held in Kananaskis). It focused on critical minerals and the "Wildfire Charter."
- **Members:** Canada, France, Germany, Italy, Japan, United Kingdom, and United States.
- **The "Non-Enumerated" Member:** The **European Union (EU)** has participated fully since 1981 but does not host or hold the presidency.
- **Genesis:** Born out of the **1973 Oil Crisis**.
- **G8 History:** Russia joined in 1998 but was **suspended/expelled in 2014** following the annexation of Crimea.
- **Secretariat:** The G7 has **no permanent secretariat** or legal charter. It operates through a rotating presidency and "Sherpas" (personal representatives of leaders).
- India is **not a member** but has been a consistent "Outreach Partner" or **"Guest Country"**,
- **PGII (Partnership for Global Infrastructure and Investment):** The G7's counter to China's Belt and Road Initiative (BRI).

2.81 Beat the Heat Programme

- **The Global Initiative:** "Beat the Heat" is a flagship global programme led by the **United Nations Environment Programme (UNEP)** through its **Cool Coalition**.
- **COP30 Connection:** It was formally integrated as a priority under the **COP30 Presidency (Brazil)** to accelerate the "Global Cooling Pledge."
- **The Indian Context:** In February 2026, **Maharashtra** became a leading participant, with **30 cities** (including Mumbai, Pune, and Nagpur) joining the initiative. Nationwide, **44 Indian cities** have currently signed up.
- **Key Objectives (The "Cooling" Strategy)-** The programme moves beyond simple "awareness" to structural and technical interventions:
    - **Sustainable Cooling:** Reducing greenhouse gas emissions from air conditioning and refrigeration.
    - **Passive Cooling:** Promoting "Cool Roofs" (reflective paints) and climate-sensitive building designs to lower indoor temperatures naturally.
    - **Nature-Based Solutions (NbS):** Aggressive urban greening and the creation of "blue spaces" (restoring water bodies) to combat the **Urban Heat Island** effect.
    - **Urban Resilience:** Mapping heat-vulnerability hotspots to protect informal workers and slum dwellers.
    - **Policy Integration:** Integrates heat resilience into urban planning, building codes, and infrastructure design.
    - **Financial and Institutional Support**: Assists cities in accessing climate finance and strengthening implementation capacity.

2.82 Nilgiri Tahr

- It is the **only mountain ungulate** (hoofed mammal) endemic to the **Western Ghats**.
- **Legal Protection: Schedule-I** of the Wildlife (Protection) Act, 1972 (highest protection).
- **Cultural Significance:** Extensively mentioned in ancient **Sangam Tamil literature**
- **Habitat & Distribution**
- **Geography:** Restricted to a 400 km stretch from the **Nilgiris** in the north to the **Kanyakumari hills** in the south. Found only in **Kerala** and **Tamil Nadu**.
- **Ecosystem:** High-altitude **Montane Grasslands** and **Shola forests** (1,200 m to 2,600 m).
- **Biological Traits**
    - **Saddleback:** Mature adult males develop a distinctive light-grey/white patch on their back, hence the name "Saddlebacks."
    - **Adaptations:** Specialized hooves with a rubbery core for "gravity-defying" grip on steep rocky cliffs (cliff-dwellers).
    - **Behavior:** Diurnal (active during the day) and primarily grazers.
    - **Ecological Role:** Considered a **flagship species** for the conservation of the Western Ghats' shola-grassland mosaic.

2.83 Vibrant Village Programme 2.0 (VVP-II)

- **Purpose:** To improve the quality of life and infrastructure in villages along the **Northern Border**, thereby preventing migration and enhancing security.
- The Centre is set to **launch the Second Phase of VVP,** significantly **expanding its strategic scope beyond the China border to now include 1,954 strategic villages along the borders with Pakistan, Nepal, Bangladesh, Bhutan, and Myanmar.**
- The VVP-II, a Central Sector Scheme was cleared by the Union Cabinet in April 2025.
- **States Covered Under VVP-II:** The programme spans Arunachal Pradesh, Assam, Bihar, Gujarat, Jammu and Kashmir, Ladakh, Manipur, Meghalaya,
- Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tripura, Uttarakhand, Uttar Pradesh, and West Bengal.
- The VVP-II has proposed **expenditure of Rs 3 crore per village**.
- **Role of Border Population:** The initiative seeks to **make local residents the "eyes & ears" of the Border Guarding Forces.**
- The strategy involves the **saturation of existing government schemes, strengthening basic infrastructure, and developing these villages as "growth centres"** to ensure economic and cultural assimilation with the nation.
- **Trust Building:** The MHA emphasizes "culturally sensitive" outreach activities to **build trust between border security agencies and local communities**, **encouraging them to report suspicious activities.**

2.84 SAHI and BODH Initiatives

- The Union Health Minister launched SAHI and BODH initiatives at the India AI Impact Summit 2026 to promote safe and responsible use of AI in healthcare.
- **SAHI (Strategy for Artificial Intelligence in Healthcare for India)**
- **BODH (Benchmarking Open Data Platform for Health AI)**
- Together, they aim to create a safe, transparent, accountable, and evidence-based AI ecosystem in India's healthcare system.
- **Nodal ministry:** Ministry of Health and Family Welfare (MoHFW).
- **SAHI** is a **national governance framework and roadmap for the responsible adoption of Artificial Intelligence in healthcare**.
- It **acts as a policy compass guiding ethical, transparent, and people-centric use of AI** technologies in the health sector.
- **Aim of SAHI:**
- Promote responsible AI in healthcare.
- Align innovation with public health goals.
- **Key Features of SAHI: Governance Framework, Ethical AI Standards, Interoperability Focus, Multi-Stakeholder Collaboration, Policy Roadmap.**
- **BODH** is a national benchmarking platform designed to evaluate and validate AI solutions in healthcare before large-scale deployment. It has been **developed by IIT Kanpur in collaboration with the National Health Authority.**
- **Aim of BODH:**
    - Ensure safe and reliable AI deployment.
    - Promote unbiased and scalable innovation.

- **Key Features of BODH: Open Data Benchmarking, Performance Validation, Bias and Risk Assessment, Clinical Relevance Testing, Standardized Evaluation Framework.**

2.85 The Privileges Committee

- **Structure and Composition**

Feature	Lok Sabha Committee	Rajya Sabha Committee
Membership	**15 Members**	**10 Members**
Nomination	Nominated by the **Speaker**	Nominated by the **Chairman**
Chairman	Appointed by the Speaker	Appointed by the Chairman (usually the **Deputy Chairman** heads it)
Political Ratio	Proportional to party strength	Proportional to party strength

- **Functions & Mandate**
  - **Examination:** It examines every question of "breach of privilege" referred to it by the House or the Presiding Officer.
  - **Fact-Finding:** It functions as a **semi-judicial (quasi-judicial) body**. It can summon witnesses, examine documents, and record evidence.
  - **Reporting:** It determines if a breach has occurred and recommends the nature of punishment or the specific action to be taken.
  - **Final Word:** The House has the ultimate power to accept or reject the committee's recommendations.
- **Article 105:** Specifies the privileges of **Parliament** (Members and Committees).
- **Article 194:** Specifies the privileges of **State Legislatures**.
- **Codification:** Significantly, parliamentary privileges in India are **not yet codified** by law. They are governed by British House of Commons precedents as they existed on January 26, 1950, until Parliament makes a law (which it hasn't).

2.86 AI-for-Energy mission

- **Launched By:** The **International Solar Alliance (ISA)** in partnership with India's **Ministry of Power**, **Ministry of New and Renewable Energy (MNRE)**, and **MeitY**.
- **Context:** Launched at the first-ever "India AI Impact Summit" (2026), which focused on the theme *"Sarvajana Hitaya, Sarvajana Sukhaya"* (Welfare for all).
- A strategic international initiative designed to integrate Artificial Intelligence (AI) into the clean energy infrastructure of developing and emerging economies.
- **Geographic Scope:** Aims to assist over **125 Member Countries** (primarily in the Global South) to "leapfrog" traditional energy infrastructure.
- **Aim:**
  - To assist member countries in digital leapfrogging, bypassing legacy infrastructure hurdles.
  - To transform power grids into smart, bidirecti onal systems capable of absorbing high levels of renewable energy.
  - To ensure equitable and affordable access to electricity through data-driven planning and service delivery.
- **Key Features:**
  - **India Energy Stack:** Using India's interoperable digital platform (like UPI for

payments) as a global template to connect consumers, vendors, and utilities.
  - **Digital Twin Technology:** Showcasing virtual replicas of DISCOMs for real-time simulation, predictive maintenance, and outage management.
  - **Citizen-Centric Tools:** Tools like the One Solar App for transparent net-metering and performance tracking of rooftop solar installations.
  - **Geospatial Mapping (GIS)**: Utilizing GIS-based tools for asset-level visibility and optimized infrastructure planning in rural and urban sectors.
  - **Technical Capacity Building:** A focus on five priorities: AI for distributed energy, start-up innovation, interoperable standards, citizen benefits, and sustainable financing.

2.87 Chhatrapati Shivaji Maharaj

- **Born on 19th February 1630, at Shivneri Fort near Pune, was the founder of the Maratha Empire and a visionary leader who resisted Mughal rule and championed self-governance.**.
- Vision of Hindavi Swarajya: At a young age, Shivaji Maharaj took a pledge to establish Hindavi Swarajya (Self-Rule), a progressive concept of indigenous sovereignty, ethical governance, and political independence free from foreign domination.
- **Central Administration: The Ashta Pradhan-** Shivaji Maharaj established a council of eight ministers to assist him. Crucially, these were **not hereditary** positions and were paid in **cash**.

Designation	Title	Functions
Peshwa	Mukhya Pradhan	Prime Minister; general administration & welfare.
Amatya	Majumdar	Finance Minister; managed state accounts & audits.
Mantri	Waqia-Nawis	Intelligence, posts, and keeping court records.
Sachiv	Shurnavis	Royal correspondence and checking pargana accounts.
Sumant	Dabir	Foreign Secretary; handled diplomacy and war/peace.
Senapati	Sari-i-Naubat	Commander-in-Chief (Military recruitment & training).
Panditrao	Danadhyaksha	High Priest; religious matters and charities.
Nyayadhish	Chief Justice	Handled civil and criminal justice.

- All ministers except the *Panditrao* and *Nyayadhish* were expected to lead military campaigns when required.
- **Revenue System:** He abolished the **Jagirdari** system and replaced it with the **Ryotwari** system (direct contact with peasants). Land was measured using a rod called the **Kathi**.
- **Key Taxes:**
  - **Chauth:** 1/4th of the land revenue paid by non-Maratha territories to avoid Maratha raids.
  - **Sardeshmukhi:** An additional 10% levy on Chauth, claimed as the hereditary head (*Sardeshmukh*) of the Deccan.
- **Navy:** Known as the **"Father of the Indian Navy"**, he built a strong naval fleet (headquartered at **Sindhudurg**) to counter Siddis, Dutch, Portuguese, and British.
- **Forts:** Controlled over 240 forts. Each fort had three officers of equal rank (**Havaldar, Sabnis, and Sar-i-Naubat**) to prevent treachery.

2.88 M.A.N.A.V. Vision for AI

- Unveiled by Prime Minister Narendra Modi at the **India AI Impact Summit 2026** (held in New Delhi), the **M.A.N.A.V. Vision** is India's official framework for human-centric Artificial Intelligence.

- The vision is built on **five foundational pillars designed to ensure AI remains a tool for "human welfare"** rather than just an autonomous force.

Letter	Pillar	Core Objective
M	**Moral & Ethical Systems**	AI must be grounded in fairness, transparency, and human oversight to prevent bias.
A	**Accountable Governance**	Establishing transparent rules, robust oversight, and clear institutional responsibility.
N	**National Sovereignty**	"Whose data, his right"—ensuring data ownership stays with creators and securing domestic compute capacity.
A	**Accessible & Inclusive**	AI should be a "multiplier, not a monopoly"; prioritizing the **Global South** and marginalized communities.
V	**Valid & Legitimate**	Systems must be lawful, verifiable, and safe (e.g., tackling deepfakes and misinformation).

- **Key Context & Strategic Links**
  - **IndiaAI Mission:** The vision is backed by a **₹10,300+ crore** outlay to build indigenous computing power, datasets (AIKosh), and skilling programs.
  - **The "Glass Box" Approach:** Unlike "Black Box" AI (where internal logic is opaque), India advocates for a "Glass Box" model—emphasizing explainability and transparency in algorithms.
  - **Global Public Good:** India pitches its AI models as a "global common good," suggesting that AI succeeding in India's complex diversity can be a blueprint for the world.
  - **Sovereign AI:** This refers to a nation's ability to develop its own AI infrastructure (chips, data, and models) to avoid over-dependence on foreign big-tech silos.

2.89 Nandhaur Wildlife Sanctuary

- **State:** Uttarakhand (Nainital and Champawat districts).
- **Landscape:** Part of the **Terai Arc Landscape (TAL)**, which stretches from the Yamuna River in the west to the Bagmati River (Nepal) in the east.
- **River System:** It is flanked by the **Gola River** (West) and the **Sharda River** (East). The **Nandhaur River** flows through its core.
- **Ecological Corridor:** It serves as a vital link between the **Corbett-Rajaji** landscape in India and the **Shuklaphanta National Park** in Nepal.
- **New Record (Feb 2026):** For the first time, the **Smooth-coated Otter** (*Lutrogale perspicillata*)—listed as **Vulnerable** by IUCN—was officially documented here.

- **Tiger Reserve Status:** As of early 2026, the National Tiger Conservation Authority (NTCA) has recommended its elevation to a **Tiger Reserve** (Uttarakhand's third, after Corbett and Rajaji) due to its high breeding tiger density.
- **Elephant Reserve:** It has been a part of the **Shivalik Elephant Reserve** since 2002.
- **Vegetation:** Primarily **Sal forests** (*Shorea robusta*). It also contains Tropical Moist Deciduous and Riverine forests.

2.90 Salem Sago

- APEDA facilitated the first direct export consignment of GI-tagged Salem Sago from Tamil Nadu to Canada, marking a major milestone for producer-led exports.
- **Origin:** Produced in the **Salem district (**"Sago City" of India) **of Tamil Nadu**.
- **Dominance:** Salem district accounts for over **80% of India's Sago production**.
- **Climate Requirement:** Tapioca thrives in the red loamy soil and tropical climate of the region.
- **Uniqueness of GI Tag:** The GI status was awarded because of the specific processing techniques and the quality of water in the Salem region, which results in the characteristic **pearly white** color and superior texture of the grains.
- **Legal Protection:** Prevents manufacturers outside Salem from using the "Salem Sago" branding.
- **Botanical Source:** *Manihot esculenta* (Tapioca/Cassava).
- **Extraction:** The roots are crushed to extract milk (starch), which is then settled, granulated into globes, and roasted or steamed.
- **Efficient processing:** Around 1 kg of sago can be produced from about 5 kg of tapioca tubers.
- **Multi-sector usage:** Used in food, paper, textile, cosmetic, pharmaceutical, construction and alcohol industries
- **Nutritional Profile:** High in **carbohydrates** and low in protein/fat. It is gluten-free and easily digestible, making it a popular "fasting food" (*Sabudana*) across India.

2.91 Shalimar Wheat

- Traditional wheat varieties in Kashmir mature late, which delays the transplantation of
- **paddy (rice)**, the region's staple.
- **Early Maturity:** These Wheat varieties are specifically bred to mature early, vacating the fields by the **last week of May (SW- 4)** or the **first week of June (SW-3).**
- **Strategic & Biological Advantages**
- **Disease Resistance:** Robust resistance to **Yellow Rust** (*Puccinia striiformis*) and **Brown Rust**, which are major fungal threats in the humid, cool climate of the Kashmir valley.
- **Altitudinal Adaptation:** Unlike varieties sourced from the plains of Punjab or Haryana (sub-tropical), these are specifically adapted to **mid-altitude temperate regions** (up to 1,850 meters).
- **Climate Resilience:** They are designed to withstand the "moisture stress" common in rainfed hilly terrains during the spring transition.
- **Significance: For the first time, high-yielding wheat for the Himalayan region has been**

biofortified with micronutrients.

- **Key Features:**
  - **Early maturity:** Developed to mature earlier than traditional varieties, enabling timely field preparation for rice cultivation.
  - **Suitable for Kashmir climate**
  - **Rice–wheat rotation compatibility:** Ensures smooth crop sequencing by preventing delays in paddy transplantation.
  - **High productivity potential:** SW-3 offers productivity up to 38 quintals per hectare, balancing yield with early maturity.

2.92 KC 390 Aircraft

- Developed by **Embraer** (Brazilian aerospace conglomerate).
- **Type:** A medium-size, **twin-engine jet-powered** military transport aircraft.
- **The "K" Factor:** The "KC" designation indicates its dual role as a **Tanker (K)** and **Cargo (C)** aircraft (it can perform air-to-air refueling).
- **Key Technical Specifications**
- **Payload:** Can carry up to **26 tonnes** (compared to 20 tonnes for the C-130J).
- **Operation:** Capable of operating from **short, unpaved, or semi-prepared runways** (crucial for mountainous regions like Ladakh).
- **Technology:** Features **Full Fly-By-Wire** technology, which reduces pilot workload and improves maneuverability.
- **Indian Context:** The IAF issued a Request for Information (RFI) to procure ~80 aircraft to replace aging Soviet-era **AN-32** and **IL-76** fleets.
- **Embraer has partnered with the Mahindra Group to bid for this project** under the 'Make in India' initiative.
- **Proposed Hub:** If selected, Embraer plans to make India a **primary production and MRO (Maintenance, Repair, and Overhaul) hub** for the Asia-Pacific region.

2.93 Gaganyaan Drogue Parachute

- **Primary Purpose:** To **stabilize** the Crew Module (CM) and perform the **first stage of deceleration** during atmospheric re-entry.
- **Deployment Phase:** They are deployed at high altitudes and high speeds immediately after the "Apex Cover" (the protective lid of the parachute compartment) is removed.
- **Transition Role:** They slow the module to a specific velocity that allows the safe deployment of the larger **Main Parachutes**.
- **Developed by: collaboratively by ISRO and DRDO.**
- These are **conical ribbon-type** parachutes. The ribbon design allows air to pass through, which reduces the "opening shock" (sudden jerk) at high speeds.
- **Mechanism:** They use a **pyro-based mortar** for ejection and a **single-stage reefing mechanism** (which allows the parachute to open in stages to manage mechanical stress).

- **The Gaganyaan deceleration system consists of 10 parachutes (4 types):**
  - Apex Cover Separation Parachutes (2) – Remove protective cover.
  - Drogue Parachutes (2) – Stabilize and reduce velocity at high altitude.
  - Pilot Parachutes (3) – Extract main parachutes.
  - Main Parachutes (3) – Provide final deceleration for safe landing.
- **Key Features:**
  - Tested under qualification loads higher than maximum flight loads
  - Designed for extreme aerodynamic and ballistic conditions

2.94 International Criminal Court (ICC)

- Created by the **Rome Statute** (adopted 1998, entered into force **July 1, 2002**).
- **Status:** It is the world's first and only **permanent** international criminal court.
- It is **NOT** a UN organ. It is an independent intergovernmental organization. It maintains a relationship agreement with the UN.
- **Headquarters:** The Hague, Netherlands.
- The ICC can only prosecute individuals for four specific crimes: **Genocide, Crimes Against Humanity, War Crimes and Crime of Aggression**
- The ICC is a **"court of last resort."**
- It does **not** replace national courts. It only intervenes when a State is
- **unwilling or unable** to genuinely carry out the investigation or prosecution.
- **States Parties:** 125 countries.
- **Non-Members:** Significant powers including **India, USA, China, and Russia** are not parties to the Rome Statute.
- **India's Objection:** India declined to join due to concerns over state sovereignty, the broad powers of the Prosecutor, and the power of the UN Security Council (UNSC) to refer cases to the ICC even if a country is not a member.
- **Context:** Former Philippine President **Rodrigo Duterte** will face a pre-trial hearing at the **ICC** over alleged crimes against humanity related to his anti-drug campaign, in which the number of killings is believed to run into the thousands.

Feature	International Criminal Court	International Court of Justice
UN Body?	**No** (Independent)	**Yes** (Principal UN Organ)
Subject	**Individuals** (Criminal)	**States** (Civil/Legal disputes)
India Member?	**No**	**Yes**
Funding	State parties & voluntary	UN Budget

2.95 INS Krishna

- It is the first of three indigenously designed and built **Cadet Training Ships**.
- **Manufacturer:** Built by **Larsen & Toubro (L&T)**
- **Key Features (The "Floating Classroom")**
  - Primary Role: To provide "sea legs" to officer cadets immediately after their basic shore training.
  - Training Facilities: Unlike older ships, it is a dedicated "floating classroom" and "living lab."
  - A specialized training bridge and chart room for hands-on navigation practice.
  - Can accommodate 200 cadets, 150 sailors, and 20 officers simultaneously.

- **Displacement:** Approximately **4,700 tonnes** and **Speed:** Max speed of **20 knots**.
- **Endurance:** Can remain at sea for up to **60 days**.
- **Category:** Procured under the **Buy (Indian-IDDM)** categor y (*Indigenously Designed, Developed, and Manufactured*).
- **Defensive Suite**: Armed with a 76mm naval gun, two AK-630M Close-In Weapon Systems (CIWS), and 12.7mm stabilized remote-controlled guns.

2.96 Operation Chivalrous Knight 3

- The Ruler of Ajman has launched a humanitarian air bridge to Gaza for Ramadan under Operation Chivalrous Knight 3, while the UAE pledged an additional billion at the inaugural Board of Peace meeting in Washington.
- **Leading Country: United Arab Emirates (UAE)**.
- **Target Region:** The **Gaza Strip**, Palestine.
- **Nature:** A comprehensive, multi-phased humanitarian mission to provide emergency relief, medical aid, and infrastructure support.
- **Key Features:**
- **"Birds of Goodness":** A specialized initiative within the operation focused on **airdropping aid** to northern Gaza and other areas inaccessible by land.
- **Strategic Logistics:** Operates via a dedicated sea and air bridge.
- **Medical Infrastructure:** Includes the establishment of a field hospital within Gaza and a floating hospital in Al Arish, Egypt, to perform specialized surgeries.
- **Basic Needs**: Development of desalination plants in Rafah and large-scale distribution of winter clothing and Warmth and Safety kits.

2.97 Indian Ocean Naval Symposium (IONS)

- **Conceived by:** The **Indian Navy** in 2008.
- A **voluntary, non-binding**, and inclusive initiative.
- **Objective:** To increase maritime cooperation among the navies of the **littoral states** of the Indian Ocean Region (IOR).
- **Inaugural Edition:** Held in **2008 in New Delhi**, with India as the first Chair.
- India officially assumed the Chairmanship of IONS on **February 20, 2026**, during the **9th Conclave of Chiefs (CoC)** in **Visakhapatnam**.
- **Chair:** India took over from the **Royal Thai Navy** (held the chair for 2023–2025).
- **The "Maritime Trifecta":** The 2026 Conclave was held simultaneously with two other major events in Vizag:
    - **Exercise MILAN 2026** (The largest-ever multilateral naval exercise).
    - **International Fleet Review (IFR) 2026**.
- **CORE Principles:** Under India's 2026–2028 tenure, the focus is on four pillars: **C**ooperation, **O**perational awareness, **R**esilience, and **S**ustained Engagement.
- The forum is divided into **four sub-regions** (crucial for "choose the correct" questions):
- **South Asian Littorals:** India, Bangladesh, Maldives, Pakistan etc.
- **West Asian Littorals:** Iran, Oman, Saudi Arabia, UAE.
- **East African Littorals:** France (Reunion), Kenya, Mauritius, Mozambique etc.

- **SE Asian & Australian Littorals:** Australia, Indonesia, Malaysia, Myanmar etc.
- **Current Strength: 25 Member** nations and **10 Observers**.
- **Working Groups (The Functional Core)**
  - **Humanitarian Assistance and Disaster Relief (HADR): Oman** joined this group in 2026.
  - **Maritime Security (MARSEC):** on anti-piracy and counter-trafficking.
- **Information Sharing and Interoperability (IS&I):** Currently co-chaired by **Australia and France** (2024–2026).

2.98 Neurotoxin

- Neurotoxins are substances that are poisonous or destructive to **nerve tissue**. They disrupt the normal signaling process between neurons (nerve cells), which can lead to paralysis, respiratory failure, or cognitive impairment.
- Neurotoxins enter the body primarily through **inhalation** (breathing fumes/dust), **ingestion** (eating/drinking contaminated food or water), **skin absorption** (direct contact with chemicals), and **injection** (bites, stings, or medical procedures)
- Neurotoxins generally attack the nervous system in one of three ways:
- **Ion Channel Blockers:** Prevent sodium (Na+) or potassium (K+) ions from moving across cell membranes, stopping electrical impulses (e.g., Tetrodotoxin).
- **Neurotransmitter Interference: Inhibition of Release:** Stopping the signal from leaving the neuron (e.g., Botulinum toxin).
- **Receptor Blocking:** Sitting on the "docking station" so the signal can't be received (e.g., Curare).
- **Enzymatic Disruption:** Breaking down the chemicals that clean up signals, leading to overstimulation (e.g., Sarin gas).
- **Major Neurotoxins to Know**

Toxin	Source	Mechanism / Effect
Botulinum (Botox)	*Clostridium botulinum* bacteria	Blocks Acetylcholine release; causes **flaccid paralysis**.
Tetrodotoxin (TTX)	Pufferfish, Blue-ringed octopus	Blocks Sodium channels; causes rapid respiratory failure.
Batrachotoxin	Golden poison frog	Forces Sodium channels to stay open; causes cardiac arrest.

- **Blood-Brain Barrier (BBB):** Many neurotoxins are ineffective if they cannot cross this protective semi-permeable membrane. However, small molecules or fat-soluble toxins (like ethanol or certain pesticides) cross it easily.
- **Medical Use:** In micro-doses, neurotoxins are used therapeutically. **Botox** treats migraines and muscle spasms; **Ziconotide** (snail venom) is a potent painkiller.

2.99 E175 Jet

- In a major push for "Make in India" in the aviation sector, **Adani Defence & Aerospace and Brazil's Embraer have signed an enhanced MoU** to establish a Final Assembly Line (FAL)

for E175 regional jets in India.

- The **partnership aims to build a comprehensive Regional Transport Aircraft** ecosystem, covering manufacturing, supply chain management, and pilot training.
- **E175 Jet:** The E175 jet, with a seating capacity of **up to 88 passengers**, is specifically designed for high-frequency operations connecting Tier-2 and Tier-3 cities.
- India is projected to require at least 500 aircraft in the 80–146 seat segment over the next two decades.
- **Support for UDAN Scheme:** The project aligns with the Regional Connectivity Scheme (RCS-UDAN), addressing the critical need for an indigenous aviation ecosystem to support economic expansion in underserved markets.
- **Industrial Scope:** Beyond assembly, the collaboration focuses on aftermarket services and securing orders to sustain the viability of the proposed assembly line.
- **Ceiling:** Maximum service ceiling of 41,000 ft.
- **Climb Performance**: Can reach its cruising altitude in roughly 18 minutes.

2.100 Namo Bharat Rapid Rail and Meerut Metro

- The **Namo Bharat Rapid Rail** (part of the RRTS) and the **Meerut Metro** are landmark projects in Indian urban transit, notable for their unique "integrated" model.
- **The Integrated Model (First in India)- Infrastructure Sharing:** In a first-of-its-kind initiative, the **local Meerut Metro runs on the same tracks** and use the same signaling system as the high-speed Namo Bharat trains.
- **Common Stations**: Within Meerut city, both services share four key stations: Meerut South, Shatabdi Nagar, Begumpul, and Modipuram.
- **Namo Bharat:** Focuses on inter-city travel (Delhi to Meerut) with fewer stops.
- **Meerut Metro:** Focuses on intra-city travel (within Meerut) with frequent stops.
- **Namo Bharat (Regional Rapid Transit System - RRTS)**
    - **Project Lead:** Implemented by the **National Capital Region Transport Corporation (NCRTC)** (a joint venture of the Government of India and the states of Delhi, Haryana, Rajasthan, and UP).
    - **Key Specs:**
        - **Design Speed:** 180 km/h, **Operational Speed:** 160 km/h.
        - **Length:** 82.15 km total (Delhi–Ghaziabad–Meerut).
- **Meerut Metro**
    - **Speed:** It is now **India's fastest metro system**, with an operational speed of **120 km/h**.
    - **Signaling:** Uses the **ETCS Level-2 (European Train Control System)**, essential for high-speed interoperability on shared tracks.

2.101 C. Rajagopalachari

- **C. Rajagopalachari** statue was installed at **Rashtrapati Bhavan**, replacing a statue of British architect Edwin Lutyens.
- **The Only Indian Governor-General:** He was the first and last Indian to hold the office of

Governor-General (1948–1950) before it was abolished.

- **Last Governor-General:** He succeeded Lord Mountbatten.
- **First Recipient of Bharat Ratna:** He was one of the three original recipients of India's highest civilian award in **1954** (alongside C.V. Raman and S. Radhakrishnan).
- **Ministerial Roles:** Served as the **Union Home Minister** (succeeding Sardar Patel) and the **Chief Minister of Madras State** (1952–54).
- **Vedaranyam Salt March (1930):** Rajaji led a parallel Salt Satyagraha from **Trichinopoly (Tiruchi) to Vedaranyam** on the Tanjore coast.
- **Vaikom Satyagraha:** He was actively involved in this movement for temple entry rights for Dalits in Kerala.
- **The "C.R. Formula" (1944):** Proposed a plan to end the Congress-Muslim League deadlock.
- **Opposition to Quit India (1942):** Believed that it was better to negotiate with the British during WWII.
- **Swatantra Party (1959):** Disillusioned by Nehru's socialist policies (the "License Permit Raj"), he founded the Swatantra Party, which advocated for **free-market economics**, individual liberty, and limited government interference.

2.102 Takeshima/Dokdo Islands

- The **Takeshima/Dokdo Islands** are a pair of small islets and surrounding rocks in the **Sea of Japan** (referred to by South Korea as the **East Sea**).
- In this region, tensions remain high following Japan's annual "Takeshima Day" (February 22) and South Korea's subsequent military drills near the islands.
- **Coordinates:** Located roughly halfway between the Korean Peninsula and the Japanese archipelago.
- **Distance:** Closer to South Korea's **Ulleungdo Island**
- (approx. 87 km).
- **Composition:** Two main islets (**Dongdo/East Islet** and **Seodo/West Islet**) and about 89 smaller rocks.
- **Economic Importance:** Surrounded by rich **fishing grounds** and potential deposits of **methane clathrates** (gas hydrates).
- The islands are currently **administered by South Korea**, but the claim is contested by Japan.
- **History and Origin:**
    - **Ancient Records**: South Korea traces its claim back to the 6th-century **Silla Kingdom**, citing various historical maps and documents (like the Sejong Sillok Jiriji) that describe the islets as part of Korean territory.
    - **1905 Annexation:** Japan officially incorporated the islands into Shimane Prefecture in 1905, declaring them terra nullius (nobody's land) during the Russo-Japanese War. South Korea views this as an illegal act.
    - **Post-WWII (1945-1954):** Following Japan's defeat in 1945, the islands were placed under Allied control. In 1954, South Korea established a permanent coast guard presence on the islands, effectively regaining control.

2.103 Human Papillomavirus (HPV)

- It is a **DNA virus** (specifically, a double-stranded DNA virus).
- **Strains:** There are over 200 strains.
- **They are categorized into:**
- **Low-risk:** Cause skin warts (verrucae) and genital warts (Types 6 and 11).
- **High-risk:** Cause cancers (Types 16 and 18 are the most prevalent, causing ~70% of cervical cancers).
- **Transmission:** Primarily via skin-to-skin contact, most commonly through sexual activity. It can also be transmitted from mother to child during childbirth (rare).
- **Cervical Cancer:** HPV is the primary cause. In
- India, cervical cancer is the **second most common cancer** among women.
- **Other Cancers:** It is linked to anal, vulvar, vaginal, penile, and oropharyngeal (throat) cancers.
- **Asymptomatic Nature:** Most HPV infections are cleared by the immune system naturally within two years without the person ever knowing they had it.
- **Cervavac:** India's first **indigenous Quadrivalent HPV vaccine (qHPV)**, developed by the Serum Institute of India (SII) in collaboration with DBT and BIRAC.
- **Target Group:** The Indian government targets girls aged **9 to 14 years** for the national rollout, as the vaccine is most effective before the onset of sexual activity.
- **National Vaccination Campaign:** The government has announced plans to encourage HPV vaccination for girls in the 9–14 years age group.
- **U-WIN Portal:** Vaccination records are expected to be managed via the U-WIN platform (modeled after Co-WIN).
- While **not yet a "routine" universal shot like Polio** in every state, there is a strong push to integrate it into the national schedule.

2.104 Anjadip Vessel

- **Type:** Anti-Submarine Warfare Shallow Water Craft (**ASW-SWC**).
- **Series:** It is the **third** in a series of eight vessels being built for the Indian Navy.
- **Class:** Part of the **Arnala-class** of ships (named after strategically important islands).
- **Nickname:** Specifically engineered and referred to as a **"Dolphin Hunter"** due to its role in tracking and neutralizing enemy submarines.
- **Builder:** Garden Reach Shipbuilders & Engineers (**GRSE**), Kolkata.
- **Collaborative Model:** Built under a **Public-Private Partnership (PPP)** model between GRSE and **L&T Shipyard, Kattupalli**.
- **Indigenization:** Boasts over **80% indigenous content**.
- **Design Standards:** Constructed according to the Classification Rules of the **Indian Register of Shipping (IRS)**.
- It marks another key milestone in the transformation of the Indian Navy into a formidable

'**Builder's Navy',** emphasizing self-reliance in warship construction.

- **Propulsion:** High-speed **Water-Jet Propulsion** system. It is part of the largest class of Indian naval warships to use this technology, providing high maneuverability in shallow waters.
- **Speed:** Capable of a top speed of **25 knots**.

2.105 National Monetisation Pipeline 2.0

- **National Monetisation Pipeline 2.0 (NMP 2.0)** is the second phase of India's asset recycling program.
- **Timeframe:** A five-year period from **FY 2026 to FY 2030**.
- **Total Monetisation Value:** Estimated at **₹16.72 lakh crore** (>2.6x of NMP 1.0).
- **Asset Type:** Exclusively focuses on **brownfield assets**
- **Goal:** "Asset Recycling"—unlocking capital from existing assets to fund new infrastructure (Greenfield projects) without increasing the fiscal deficit.
- **Ownership:** The government **retains ownership**; only the
- rights to operate and manage are transferred for a specific period.
- **New in NMP 2.0:** Greater emphasis on **Ropeways**, **Multi-Modal Logistics Parks (MMLPs)**, and **Tourism** infrastructure compared to the first phase.
- **Nodal Agency:** Developed by **NITI Aayog** in consultation with line ministries.
- **Monitoring Body: Core Group of Secretaries on Asset Monetisation (CGAM)**, chaired by the **Cabinet Secretary**.
- Implemented under the guidance of the Ministry of Finance and monitored by the Core Group of Secretaries on Asset Monetisation (CGAM).
- **Digital Tracking:** Managed via a specialized dashboard to provide visibility to private investors.

2.106 Maritime Labour Convention

- **Organization:** Established by the **International Labour Organization (ILO)**.
- **The "Fourth Pillar":** It is considered the fourth pillar of international maritime law, alongside **SOLAS** (Safety), **MARPOL** (Pollution), and **STCW** (Training / Watchkeeping).
- **India's Status:** India **ratified** the MLC in 2015.
- **Aim:**
  - To create a single, coherent instrument embodying as many up-to-date standards of existing maritime labour Conventions as possible.
  - To ensure that all seafarers, regardless of their nationality or the flag of the ship, have access to decent working and living conditions.
  - To level the playing field for responsible shipowners by preventing unfair competition from substandard ships
- **Key Features of the Convention:**
  - **Minimum Requirements for Seafarers:** Sets clear standards for minimum age, medical certification, and necessary training/qualifications for working on a ship.
  - **Conditions of Employment:** Regulates seafarers' employment agreements, wages, hours of work and rest, and entitlement to leave and repatriation.
  - **Accommodation and Recreational Facilities:** Mandates specific standards.

- **Health Protection and Medical Care**.
- **Social Security Protection**
- **Compliance and Enforcement**

2.107 International Energy Agency (IEA)

- **Established:** 1974, in the wake of the **1973–74 oil crisis** (Arab oil embargo).
- **Status:** An autonomous intergovernmental organization within the **OECD** framework.
- **Headquarters:** Paris, France.
- **The "3 E's" Mandate:** Originally focused on **Energy security**, **Economic development**, and **Environmental protection**.
- **Current Strength:** 32 Full Members, 13 Association Countries, and 5 Accession Countries.
- **Full Membership Rule:** Traditionally, a country **must be a member of the OECD** to become a full member of the IEA.
- **The 90-Day Rule:** Members must maintain emergency oil reserves equivalent to at least **90 days of their net imports** from the previous year.
- **India's Status:** Joined as an **Association Member** in 2017. Formally applied for **Full Membership** in October 2023.
- **Latest (Feb 2026):** IEA Ministers have officially welcomed progress on India's request. Since India is not an OECD member, the IEA is considering **amending its founding legal framework** (the IEP Agreement) to accommodate India—a historic shift in global energy governance.
- The IEA is the world's most influential energy data source. Remember these flagship reports:
  - **World Energy Outlook (WEO), Net Zero by 2050, World Energy Investment Report, Oil Market Report** etc.
- **Collective Action:** Members coordinate to release emergency oil stocks during major supply disruptions.

2.108 'Speaker of The Knesset' Medal

- The Israeli Parliament (Knesset) established and conferred its first-ever **"Speaker of the Knesset Medal" to Indian PM Narendra Modi**.
- **Significance:** It is now considered the **highest honor** bestowed by the Israeli Parliament (Knesset).
- The medal was established to honor individuals for **"exceptional contributions"** to the State of Israel and the Jewish people.
- In PM Modi's case, it recognized his "personal leadership" in strengthening the **strategic alliance** between India and Israel, specifically in fields like security, technology, innovation, and cyber- cooperation.
- **N. Modi** is the **first Indian Prime Minister** to address the Israeli Parliament.
- PM Modi is a rare global leader to hold the highest honors from both Israel and Palestine (having received the **Grand Collar of the State of Palestine** in 2018).

2.109 Eurasian Diving Duck

- **Common Pochard (*Aythya ferina*)**
  - **IUCN Status: Vulnerable**
  - **Distribution:** Breeds in temperate Eurasia; winters in South Asia (including India), Southern Europe, and Northern Africa.
  - **Habitat:** Large, shallow freshwater marshes & lakes with abundant vegetation.
  - **Key Features: Sexual Dimorphism:** Males have a striking **chestnut-red head**, black breast, and pale grey body. Females are dull brown.
  - **Feeding:** Dives to eat aquatic plants, seeds, snails, and small fish. They are often **nocturnal feeders**.
- **Tufted Duck (*Aythya fuligula*)**
  - **IUCN Status: Least Concern**.
  - **Distribution:** Widespread across northern Eurasia; a common winter visitor to India (found in wetlands like Keoladeo National Park, Chilika Lake, etc.).
  - **Key Features: Appearance:** Named for the **drooping crest (tuft)** on the back of the head.
  - **Coloration:** Males are black with white flanks and **bright yellow eyes**.
  - **Behavior:** Gregarious birds that form large "rafts" (flocks) on open water during winter.

2.110 Green Bonds

- Green bonds are fixed-income instruments specifically earmarked to raise money for projects with environmental benefits
- **Purpose:** Exclusively for **"Green Projects"** (e.g., renewable energy, clean transport, sustainable water management).
- **Greenium (Green Premium):** The yield advantage where green bonds offer a **lower interest rate** than conventional bonds because investors are willing to pay a premium for sustainability.
- **Asset-Linked:** They are backed by the issuer's entire balance sheet (usually) but the proceeds are "ring-fenced" for specific projects.
- **Verification:** Requires a "Second Party Opinion" (SPO) or third-party certification to prevent "Greenwashing" (misleading claims about environmental benefits).
- **Sovereign Green Bonds (SGrBs) in India**
  - **Issuance:** Issued by the RBI on behalf of the Government of India.
  - **Institutional Framework:** Green Finance Working Committee (GFWC): Chaired by the Chief Economic Adviser; selects eligible projects.
  - **Fund Management:** Proceeds are deposited into the Consolidated Fund of India (CFI) and then allocated to projects.
  - **Exclusions:** Projects involving fossil fuels, nuclear power, and direct waste incineration are strictly excluded.
  - **Maturity:** Range from 5-year and 10-year tenures to long-term 30-year and 50-year bonds (introduced in 2024-25).

2.111 Double Taxation Avoidance Convention (DTAC)

- It is designed **to ensure that the same income is not taxed in both the country where it is earned** (the Source Country) and the country where the taxpayer resides (the Resident Country).
- **Working Principle:** The convention allocates taxing rights between the two contracting nations based on the type of income. It typically utilizes two main methods to provide relief:
    - **Exemption Method:** The income is taxed in only one country and is entirely exempt in the other.
    - **Tax Credit Method:** The income is taxed in both countries, but the resident country allows the taxpayer to claim a credit for the taxes already paid in the source country.
- **India and France have signed an Amending Protocol** to update their 1992 Double Taxation Avoidance Convention (DTAC) to align with international tax standards.
- **Key Features of the Amended India-France DTAC:**
- **Capital Gains Taxation**: Provides full taxing rights to the country where a company is resident (Source State) for gains arising from the sale of its shares.
- **Revised Dividend Rates:** Replaces the flat 10% rate with a split rate: 5% for those holding at least 10% of the company's capital and 15% for all other cases.
- **MFN Clause Deletion:** Formally removes the Most-Favoured-Nation (MFN) clause, ending interpretational disputes and ensuring treaty benefits are limited to the specific agreed terms.
- **BEPS Integration:** Incorporates provisions from the Base Erosion and Profit Shifting (BEPS) Multilateral Instrument (MLI) to prevent tax avoidance.
- **Enhanced Cooperation:** Updates provisions for the Exchange of Information and introduces a new article on Assistance in Collection of Taxes to combat fiscal evasion.
- **Service Permanent Establishment (PE):** Expands the scope of Permanent Establishment by adding Service PE and aligns the definition of Fees for Technical Services with international models.

2.112 Exercise DHARMA GUARDIAN (India–Japan) and Exercise VAJRA

- Εξερχισε ΔΗΑΡΜΑ ΓΥΑΡΔΙΑΝ (Ινδια□Θαπαν)
    - This is an annual Land Forces (Army) exercise focused on interoperability in counter-terrorism and urban warfare.
    - **Current Edition (2026):** The 7th Edition commenced at Foreign Training Node, Chaubattia, Uttarakhand.
    - **Key Focus Areas:** * Joint operations in semi-urban environments.
    - **Reciprocity:** It is conducted alternately in India and Japan. The 6th edition (2025) was held at the East Fuji Training Area, Japan.

- **Exercise VAJRA PRAHAR (India–USA)**
    - This is a Special Forces exercise aimed at sharing best practices and tactics for elite operations.
    - **Current Edition (2026):** The 16th Edition commenced at Special Forces Training School (SFTS), Bakloh, Himachal Pradesh.
    - **Key Focus Areas:** Mountainous terrain operations
    - The **15th edition** was held in Idaho, USA in November 2024.

2.113 Mai Ndombe and Tumba- Lakes in Congo

- Lakes Mai Ndombe and Tumba are large, **shallow blackwater lakes characterized by their dark, tea-like color.** This **unique appearance is caused by high concentrations of dissolved organic matter and humic acids leached from the surrounding dense swamp forests and peatlands**.
- **Region:** Situated within the **Cuvette Centrale** (Central Basin), a vast depression in the heart of the Congo Basin.
- **Wetland Status:** They form part of the **Tumba-Ngiri-Maindombe** area, the world's largest Wetland of International Importance recognized by the **Ramsar Convention**.
- These lakes are primarily floodplain and wetland-origin lakes, **formed through riverine processes associated with the Congo River system.**
- **Blackwater Ecosystem:** The high acidity (pH 4.0–5.5) and low oxygen levels in the surrounding flooded forests create a unique habitat for endemic fish species.
- Continuous **waterlogging led to the accumulation of organic plant material over thousands of years, forming deep peat deposits around the lakes.**
- Peat formation occurs when dead vegetation accumulates faster than decomposition under oxygen-poor conditions.
- A recent scientific study has found that lakes (Mai Ndombe and Tumba) in the Congo Basin are releasing ancient carbon stored for thousands of years in surrounding peatlands, raising fresh climate concerns.
- Research shows up to 40% of CO_2 emissions from these lakes originate from ancient peat carbon (over 3,000 years old).

2.114 Fields Medal

- It is popularly known as the **"Nobel Prize of Mathematics"**.
- **Awarding Authority:** The **International Mathematical Union (IMU)**.
- **Frequency:** Awarded once every **four years** at the International Congress of Mathematicians (ICM).
- **Origin:** Named after Canadian mathematician **John Charles Fields**, who established the award in 1936.
- **Prize:** A gold medal (featuring Archimedes) and **15,000 Canadian dollars**.
- **Eligibility & Criteria**
    - **Age Limit:** Recipients must be **under 40 years of age** on January 1 of the year in which the medal is awarded. This is to encourage "future achievement."
    - **Number of Winners:** At each congress, **two to four** mathematicians are selected.
- **Manjul Bhargava (2014):** First person of Indian origin to win, for his work in the geometry of numbers.
- **Akshay Venkatesh (2018):** Second person of Indian origin, for his work in analytic number theory and topology.

2.115 India-Sweden SITAC Partnership

- **Nature:** A flagship platform designed to promote structured engagement between the AI ecosystems of both nations.
- **Key Agreement:** Launched via a **Statement of Intent (SoI)** signed between the **IndiaAI Mission** (under MeitY) and **Business Sweden**.
- **Occasion:** Signed on the sidelines of the **India AI Impact Summit 2026**.
- **Core Objectives**
  - **Ecosystem Connectivity:** Linking startups, industry stakeholders, government agencies, and research institutions.
  - **Real-world Outcomes:** Focusing on the development and deployment of AI solutions for **industrial and societal challenges** (e.g., healthcare, climate etc.)
  - **Responsible AI:** Both nations emphasize "value-based" and "trusted" AI, aligning India's talent pool with Sweden's expertise in responsible AI implementation.
- **Key Features & Activities**
  - **The "Triple Helix" Model:** Engagement involves three main pillars: Government, Academia, and Industry.
  - **Institutional Framework:** It includes thematic workshops, exchange programs for researchers, and field visits to innovation hubs.
  - **Sectoral Focus:** Identification of joint investment corridors and innovation platforms specifically for AI deployment in priority sectors.

2.116 Switch Auction

- It is a debt management tool used by the **RBI** to help the government manage its repayment burden. In this process, the government replaces **short-term bonds that are nearing maturity** with **new long-term bonds**, thereby postponing repayment obligations.
- It is **essentially a "swap"**. The government buys back bonds that are due to be paid soon and issues new bonds that will mature much later.
- **Core Objectives**
  - **Debt Consolidation:** Reduces the number of outstanding small-value securities by merging them into larger, liquid "benchmark" securities.
  - **Smoothing the Redemption Profile:** Prevents a "bunching" of repayments. For instance, if ₹5 lakh crore of debt is due in 2027, the RBI "switches" some of it to 2035 or 2050 to avoid a sudden massive cash outflow.
  - **Reducing Rollover Risk:** By extending the maturity, the government avoids the risk of having to borrow a huge amount all at once at potentially high-interest rates in the future.
  - **Liquidity Management:** It helps improve liquidity in the secondary market by increasing the "float" of specific long-term benchmark bonds.

2.117 Large Language Models (LLMs)

- A LLM is a type of Artificial Intelligence trained on vast amounts of text data to understand, generate, and manipulate human language.
- They are large because they contain billions of parameters—internal variables that the model learns during training to make predictions.

- **Functioning:**
  - **Breaking text into tokens**: An LLM doesn't read whole words like humans; it splits text into tokens (word pieces/characters).
  - **The Transformer "map":** Tokens get turned into vectors (embeddings) in a high-dimensional space, where semantic + syntactic similarity makes tokens closer helping the model generalize meaning.
  - **Self-attention mechanism:** For each token, the model assigns attention weights to other tokens to decide what matters most, letting it link references.
  - **Predicting the next token:** The model outputs a probability distribution over possible next tokens; generation is choosing tokens step-by-step.
  - **Layers of refinement:** Many stacked transformer layers progressively build richer representations—lower layers catch form/grammar, higher layers capture relationships, intent, and reasoning patterns—then a final layer converts that into the next-token prediction.
- **Key Features:**
  - **Generative Capability:** Can create original text, code, poems, and summaries.
  - **In-context Learning:** Can follow instructions or replicate a style based on a few examples provided in a prompt.
  - **Multilingualism:** Can translate and understand multiple languages, though performance varies based on the training data.
  - **Zero-shot Reasoning:** Ability to solve problems it has never explicitly been trained for by using general logic.

2.118 Carbon Capture and Utilisation Technologies

- **CCS (Storage):** Captures CO_2 and injects it into deep geological formations (depleted oil wells, saline aquifers) for permanent storage.
- **CCU (Utilisation):** Captures $CO_2$and recycles it as a **feedstock** to create valuable products. It supports a **Circular Carbon Economy**.
- Unlike Carbon Capture and Storage (CCS), which permanently stores CO_2 underground, CCU puts the captured carbon to economic use.
- **Union Budget 2026-27 Allocation:** A massive **₹20,000 crore** outlay was announced for the next five years to scale CCUS technologies.
- India is **world's 3rd-largest CO_2 emitter** (after China, the United States.
- **Target Sectors:** Five "hard-to-abate" sectors where electrification is difficult: **Power, Steel, Cement, Refineries, and Chemicals.**
- **Key Utilisation Pathways**
  - Captured CO_2 is converted using various chemical/biological processes:
  - **Chemicals & Fuels:** Combined with **Green Hydrogen** to produce **Green Methanol**,

Ethanol, and Sustainable Aviation Fuel (SAF).
  - **Construction:** Mineralisation into building materials (e.g., carbon-cured concrete, lightweight blocks).
  - **Agriculture:** Used as a fertilizer in greenhouses or for **algae cultivation** (which can then be used for biofuels).
  - **Direct Use:** Enhanced Oil Recovery (EOR), though this is often classified under CCS.

2.119 M23

- March 23 Movement (named after the **March 23, 2009 peace treaty** between the Democratic Republic of the Congo government and a former rebel group, the CNDP).
- **Origins (2012):** Formed by former soldiers of the National Congress for the Defence of the People (CNDP) who mutinied, claiming the government failed to honor the 2009 agreement.
- **Composition:** Primarily ethnic Tutsi fighters.
- **Objective:** Claims to protect the Tutsi minority in eastern DRC from Hutu militias & to overthrow the central government in Kinshasa, citing corruption & discrimination.
- **Location:** Operations are concentrated in Eastern DRC, specifically the provinces of North Kivu and South Kivu. Strategic Hubs:
- **Goma:** Capital of North Kivu; a strategic border city on the shores of Lake Kivu. (Fell to M23 in early 2025).
- **Bukavu:** Capital of South Kivu; another key city recently contested.
- **Borders:** The conflict involves the "triple-border" area of **DRC, Rwanda, and Uganda**.
- **Rwanda & Uganda:** UN reports and the DRC government consistently accuse Rwanda of providing "de facto control," troops, and advanced weaponry (drones/SAMs) to M23. Rwanda denies this, accusing the DRC of backing Hutu rebels (FDLR).
- **Peace Initiatives (2025–2026):**
  - **Doha Framework (Nov 2025):** Mediated by Qatar; aimed at a direct ceasefire between DRC and M23.
  - **Washington Agreements (Dec 2025):** Mediated by the US; a deal between Presidents Tshisekedi (DRC) and Kagame (Rwanda) to de-escalate.
  - **Luanda Process:** An ongoing African Union-led mediation by Angola.

2.120 52 Reforms in 52 Weeks Initiative

- **About:** Launched in early 2026 it is an ambitious, time-bound program committing Indian Railways to implement one major structural reform per week throughout the calendar year 2026, aiming for a comprehensive and transparent transformation of the national transporter.
- **Vision Alignment:** The initiative aligns with broader "Reforms Express" vision and builds upon previous reforms implemented in the railways over the preceding decade.
- **Few Initiatives:**
  - **Rail Tech Policy -** is a dedicated, high-tech, round-the-clock digital single-window

platform that enables end-to-end digital submission and processing of proposals..

- **Rail Tech Portal:** A dedicated Rail Tech Portal will be established for innovators, startups, industry, and institutions to promote innovation in Railways.
- **Railway Claims Tribunal (e-RCT) Digitization-** It introduces end-to-end computerization and digitization of the Railway Claims Tribunal (RCT), making claim filing, processing, and adjudication faster and transparent.
  - E-Filing: 24x7 online filing with instant acknowledgement through SMS and email.
  - Case Information System (CIS): Centralized database for real-time case tracking from filing to final disposal.
  - Document Management System (DMS): Digital storage of pleadings, orders, and judgements with digitally signed records.
  - It has 23 benches across India (Principal Bench at Delhi).
  - All 23 RCT benches across India are targeted to be fully digitized within the next 12 months. If successful, this model could be extended to other tribunals like the Central Administrative Tribunal.

2.121 State of India's Environment 2026

- The **State of India's Environment 2026** report, published by the
- **Centre for Science and Environment (CSE)** and *Down To Earth*.
- **7 out of 9 Breached:** The report warns that India and the world have now breached **seven** of the nine planetary boundaries.
- **The New Entrant: Ocean Acidification** has joined the list of breached boundaries in 2026, alongside Climate Change, Biosphere Integrity etc.
- **Human-Tiger Conflict:** The report notes an intensification of conflict.
- *Lantana camara* now occupies **50% of India's forest and scrublands**.
- Only **15% of India's population** (approx. 200 million) lives within 10 km of a real-time (continuous) air pollution monitor.
- **Policy Shift:** The report advocates for a **"Hybrid Network Design"** combining high-grade monitors with low-cost sensors and satellite data.
- The report warns that if the average of the last three years (2023–2025) is taken, the world is effectively breaching the **1.5°C global warming safety guardrail**.
- **Atmospheric Rivers:** Emerging as a major driver of extreme precipitation and flash floods in India beyond the tropical zones.
- **Climate Risk:** India is ranked as the **9th most affected country** by extreme weather events globally.
- **Life Expectancy Reversal:** For the first time in decades, India's life expectancy at birth saw a slight decline—from **70 years (2016-20)** to **69.8 years (2017-21)**—primarily due to the long-term impacts of the COVID-19 pandemic.
- **Eco-Anxiety:** A new focus on "Youth and Eco-anxiety," noting a rise in mental health concerns among young Indians regarding climate insecurity.

2.122 Druzhba Oil Pipeline

- **Origin:** Starts at **Almetyevsk** in Tatarstan, Russia. It collects oil from Western Siberia, the Urals, and the Caspian Sea.
- **Transit Hub:** Flows to **Mazyr (Mozyr)** in Belarus, where it splits into two primary branches.

- **The Northern Branch:** Crosses Belarus and Poland to reach Germany (supplying the Schwedt refinery).
- **The Southern Branch:** Crosses Ukraine to supply landlocked Hungary, Slovakia, and the Czech Republic.
- **Length:** One of the world's longest at approx. 4,000 km (5,500 km including all branches).

- **Current Context (2026 Disruption)**
  - **Complete Halt (Jan-Feb 2026):** Flows through the **Southern Branch** were completely suspended starting **January 27, 2026**.
  - **Cause:** Russia and Ukraine trade blame. Ukraine cites a **Russian missile strike** on pumping stations in Western Ukraine (Brody hub), while Russia claims Ukrainian drone strikes targeted infrastructure (Tambov region).
  - **Diplomatic Fallout: Hungary and Slovakia** have threatened to veto new EU sanctions and loans to Ukraine.
  - Slovakia suspended **emergency electricity exports** to Ukraine in retaliation.
  - **The Adria Pipeline** (via Croatia) is being used as a critical alternative for sea-borne crude to bypass the Druzhba stoppage.

2.123 New GDP Series

- **The Change:** The base year has been shifted from **2011–12** to **2022–23**.
- **Revision History:** This is the **9th revision** of India's GDP base year.
- **The 2026 series introduces several technical changes that are:**
  - **Double Deflation (Manufacturing & Agriculture):** This is a major shift. Instead of using a single price index (Single Deflation), the new series separately deflates the value of **outputs** and **inputs** to calculate real Gross Value Added.
  - **Proportional Denton Method:** Used to align quarterly estimates with annual benchmarks, eliminating "artificial jumps" in data that occurred under the old pro-rata approach.
  - **FISIM Adoption:** Financial services are now valued using **Financial Intermediation Services Indirectly Measured**, aligning with IMF standards.
- The new series moves away from "proxy" data to real-time administrative datasets:
  - **GST Data:** Used to track regional output and corporate value addition.
  - **e-Vahan:** Used for estimating transport-related economic activity.
  - **PFMS (Public Finance Management System):** Used to capture actual government expenditure rather than relying on revised estimates.
  - **Informal Sector Capture:** For the first time, regular annual surveys like **ASUSE** (Annual Survey of Unincorporated Sector Enterprises) and **PLFS** are integrated to estimate the household and informal sectors.