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Chapter- 1

HISTORY & CULTURE

Maharani Avantibai Lodhi

Context:

Defence Minister unveiled a statue of Rani Avantibai Lodhi in Lucknow, drawing a direct parallel between the valor of 1857 warrior queens and modern Indian women armed forces personnel who executed combat roles during Operation Sindoor.

Maharani Avantibai Lodhi

About Maharani Avantibai Lodhi:

Who She Was?

- Maharani Avantibai Lodhi (16 August 1831 – 20 March 1858) was the queen-regent of the princely estate of Ramgarh and a legendary warrior leader during the Indian Rebellion of 1857. She is revered alongside Rani Lakshmibai of Jhansi, Rani Durgavati, and Jhalkari Bai as one of India's foremost Veeranganas (heroic warrior women).



Region & Geographic Base:

- Birthplace: Mankedi village, Seoni district, Madhya Pradesh.
- Kingdom/Seat of Power: Ramgarh (located in present-day Dindori and Mandla districts of Madhya Pradesh).

Historical Background:

- Marriage and Early Regency: Born into a Lodhi family to Zamindar Rao Jujhar Singh of Seoni, she married Raja Vikramaditya Singh of Ramgarh. When her husband became incapacitated by illness, she assumed the mantle of queen-regent to protect the inheritance of her minor sons, Aman Singh and Sher Singh.
- Opposition to British Court of Wards: Capitalizing on the king's illness and death, the British East India Company refused to recognize the minor heirs and placed Ramgarh under administrative seizure via the Court of Wards, appointing external supervisors (Sarbarahkars).
- Defiance of Colonial Administrators: Viewing British intervention as an insult to sovereign honor, Rani Avantibai expelled the colonial administrators from Ramgarh and reclaimed direct administration of the state.
- Agrarian Revolt and Popular Governance: She urged farmers to defy British revenue orders and introduced pro-people reforms, gaining strong support across Mahakoshal's tribal and farming communities.

Contribution to the 1857 Freedom Movement:

- Regional Coalition & the Bangle Appeal: Collaborating with Gond ruler Raja Shankar Shah, she spearheaded the regional anti-British coalition by sending glass bangles alongside letters to neighboring kings and zamindars.
- Decisive Victory at the Battle of Kheri: In late 1857, she raised an army of 4,000 troops leading a charge against British Deputy Commissioner Waddington at the Battle of Kheri near Mandla, forcing British forces to flee the district.
- Tactical Guerrilla Warfare: When reinforced British forces counter-attacked Ramgarh with the help of the neighboring King of Rewa, Avantibai relocated to hilly forests of Devhargarh, launching surprise guerrilla strikes against colonial camps.
- Supreme Martyrdom (Veergati): On 20 March 1858, encircled by superior British firepower at Sukhi-Talaiya between Balapur and Ramgarh, she chose death over dishonor and capture, unsheathing her own sword and embracing martyrdom.

The Ramon Magsaysay Award

Context:

On the 119th birth anniversary of Ramon Magsaysay, the Ramon Magsaysay Award Foundation (RMAF) announced the 68th batch of Ramon Magsaysay Award laureates, comprising Tommy Koh, Runa Khan and Bo Kyi.



RAMON MAGSAYSAY
AWARD FOUNDATION

The Ramon Magsaysay Award

About The Ramon Magsaysay Award:

What It Is?

- The Ramon Magsaysay Award is widely regarded as Asia's Nobel Prize and the region's highest honour and premier prize. It celebrates persons and institutions in Asia who have demonstrated exceptional leadership, courage, and integrity in public life, selflessly transforming their societies regardless of race, creed, sex, or nationality.

Established In:

- Year of Establishment: 1957, created by the trustees of the Rockefeller Brothers Fund (RBF) based in New York City with the concurrence of the Philippine government to commemorate Ramon Magsaysay, the 7th President of the Philippines, who died in a plane crash in March 1957.
- Aim: To honor and perpetuate the legacy of President Ramon Magsaysay by recognizing greatness of spirit shown in selfless service to the peoples of Asia, and to spotlight innovative, humanitarian solutions to the most intractable problems of human development.

Key Features of the Award:

- Category Evolution: From 1958 to 2008, awards were conferred across six distinct fields: Government Service, Public Service, Community Leadership, Journalism/Literature/Creative Communication Arts, Peace and International Understanding, and Emergent Leadership.
- Category-Free Format: Starting in 2009, fixed categories were abolished (except for Emergent Leadership), allowing the Foundation to evaluate candidates flexibly across intersecting domains of social development, governance, human rights, and environmental protection.
- Rigorous Independent Selection: Laureates are selected through an independent, confidential nomination and vetting process executed solely by the RMAF Board of Trustees.
- Permanent Insignia: Awardees receive an embossed medallion bearing the right-facing profile of President Ramon Magsaysay, a formal calligraphy certificate, and an institutional cash grant.
- Continental Scale and Pedigree: Over six decades, the award has recognized more than 350 outstanding leaders and organizations across Asia.

2026 Winners & Contributions:

- Tommy Koh (Singapore): Recognised for six decades of diplomacy and international law, notably leading negotiations for UNCLOS and promoting global environmental cooperation.
- Runa Khan (Bangladesh): Recognised for delivering floating healthcare, education and disaster relief to climate-vulnerable communities through her NGO Friendship.
- Bo Kyi (Myanmar): Recognised for defending political prisoners and human rights, documenting abuses and providing legal, medical and psychological support through Assistance Association for Political Prisoners (AAPP).

Dr. Sarvepalli Radhakrishnan

Context:

President Droupadi Murmu extended greetings across the nation on the eve of Teachers' Day, observed annually on September 5.

- The day marks the birth anniversary of celebrated philosopher, educationist, and former President of India, Sarvepalli Radhakrishnan.



Dr. Sarvepalli Radhakrishnan

About Dr. Sarvepalli Radhakrishnan:

Who He Was?

- A distinguished philosopher, scholar, author, and statesman who served as the first Vice President of India (1952–1962) and the second President of India (1962–1967).

Early Days and Education:

- Born on September 5, 1888, in Tiruttani (near Madras), he spent his formative years in pilgrimage towns like Tirupati.
- He earned his Master's Degree in Arts from Madras University, presenting a pathbreaking dissertation titled "The Ethics of the Vedanta and Its Metaphysical Presuppositions", which defended the ethical depth of Indian philosophical thought.
- He started his academic career in 1909 at Madras Presidency College, later serving as Professor of Philosophy at the University of Mysore and occupying the King George V Chair of Mental and Moral Science at the University of Calcutta.

Contributions to India:

- Institutionalizing Higher Education: Led Banaras Hindu University (BHU) as Vice-Chancellor from 1939 to 1948, protecting academic integrity and nationalist ideas during critical freedom movement years.
- Radhakrishnan Commission (1948–1949): Chaired the University Education Commission, which established the foundational policy architecture for modern higher education in post-independence India and led to the creation of the University Grants Commission (UGC).
- Diplomatic Service: Represented India as the leader of its UNESCO delegation and served as India's Ambassador to the Soviet Union (1949–1952) during early Cold War tensions, securing vital geopolitical respect for non-aligned India.
- Constitutional Leadership: Upheld democratic principles with non-partisan authority while serving a decade as Chairman of the Rajya Sabha (Vice President) and subsequently as President of India during the 1960s wars.

Major Achievements and Honors:

- Inaugural Bharat Ratna (1954): Conferred India's highest civilian honor in the first year of its institution.
- Global Academic Recognition: Appointed the Spalding Professor of Eastern Religions and Ethics at Oxford University and elected Fellow of the British Academy (1939).
- International Honors: Awarded the German Pour le Mérite for Sciences and Arts (1954), Goethe Plaque (1959), Peace Prize of the German Book Trade (1961), and the Templeton Prize (1975).
- Knighthood (1931): Knighted by the British Crown for his scholarly contributions, later setting it aside post-independence.

Shekhawati Havelis

Context:

The historic, fresco-adorned havelis of Rajasthan's Shekhawati region across 14 key locations have been included in UNESCO's Tentative List.

Shekhawati Havelis

About Shekhawati Havelis:

What They Are?

- Large, elaborately decorated ancestral merchant mansions (havelis) renowned for their courtyard architecture, ornate carved wooden doorways, overhanging balconies (jharokhas), and extensive fresco murals.



- Often referred to as the world's largest open-air art gallery, their walls and ceilings depict mythological epics, folktales, royal courts, and early modern technologies like railways and motorcars.
- Located In: The semi-arid Shekhawati region in northern Rajasthan, primarily spanning the districts of Sikar, Jhunjhunu, and Churu.

History:

- Named after Rao Shekha (a 15th-century Rajput chieftain), the region emerged as a vital staging post along historical overland caravan trade routes linking northern India to sea ports on the Arabian Sea.
- Between the 18th and early 20th centuries, wealthy Marwari merchants (traders who made fortunes in major trading hubs like Calcutta and Bombay) channeled their wealth back home to build opulent, multi-courtyard residences as symbols of status and social prestige.
- Local artisans (chiteras) developed a distinct fresco technique (arā'ish and fresco-secco) using natural mineral and vegetable pigments that bonded directly into wet lime plaster.

Key Places and Clusters:

- The UNESCO tentative submission covers havelis and heritage properties across 14 prominent settlements:
- Mandawa: Often termed a living art museum, famed for structures like the Hanuman Prasad Goenka and Murmuria havelis.
- Nawalgarh: Renowned for the dense clustering of well-preserved frescoes at the Poddar Haveli Museum, Anandilal Poddar Haveli, and the Aath Haveli complex.
- Fatehpur: Recognized as a premier cultural hub of the region, featuring the Nadine Le Prince cultural centre and Jagannath Singhania Haveli.
- Churu & Ramgarh: Known for monumental architecture, stepped wells (joharas), and mansions like Kanhaiyalal Bagla Haveli.
- Other Covered Locations: Alsisar, Bissau, Chirawa, Dundlod, Jhunjhunu, Khetri, Laxmangarh, Mahansar, and Sikar.

Significance:

- Features climate-responsive dual courtyards (chowks) separating public and private spaces while enabling natural ventilation.
- Murals trace the shift from religious and Rajput themes to colonial-era modernity, depicting aeroplanes, locomotives and phonographs.

Ramnathswamy Temple

Context:

During Day 1 of the 18th BRICS Summit at Bharat Mandapam in New Delhi, Prime Minister of India and Chinese President shook hands in front of a high-definition projection of the iconic 1,212-pillar corridor of Tamil Nadu's Ramanathaswamy Temple.

Ramnathswamy Temple

About Ramnathswamy Temple:

What it is?

- A world-renowned Hindu temple constructed in the classical Dravidian architectural style, dedicated to Lord Shiva (enshrined as Ramanathaswamy). It is revered as one of the sacred 12 Jyotirlingas across India and forms the southernmost anchor of the foundational Char Dham pilgrimage circuit.
- Located in: Situated in the pilgrim island town of Rameswaram on Pamban Island, Ramanathapuram district, Tamil Nadu (flanked by the Palk Strait and Gulf of Mannar).

History:

- Sacred Mythology: Believed to be established by Lord Rama, who consecrated a lingam of sand (Ramalingam) to worship Lord Shiva upon returning from Lanka.



- Evolution of Structure: Managed by ascetic monks until the 10th century; the inner sanctum was constructed in the 12th century by King Parakramabahu of Sri Lanka (Ceylon).
- Patronage of the Sethupathis & Nagarathars: Extensively expanded from the 15th to 18th centuries by the Sethupathi kings of Ramanathapuram. The 126-foot-high, nine-tiered East Rajagopuram was completed between 1897 and 1904 by the AL. AR. Nagarathar family of Devakottai.

Key Features of the Temple:

- World's Longest Pillared Corridor: The outer (third) corridor features 1,212 meticulously carved granite pillars rising roughly 6.9 metres, forming an architectural avenue spanning a cumulative perimeter of approximately 3,850 feet.
- Linear Perspective and Symmetrical Grid: Built on elevated platforms with perfectly aligned columns, beams, brackets, and capitals that create a mesmerizing optical effect where parallel lines visually converge toward a vanishing point.
- Intricate Dravidian Sculptural Detailing: Each individual column is ornamented with dynamic bas-reliefs, floral carvings, seated yalis (mythical leonine beasts), and dynastic sculptural portraits of the Sethupathi rulers.
- Monumental Monolithic Nandi: Houses a colossal monolithic statue of Nandi the Bull, measuring an impressive 17 feet in height, 22 feet in length, and 12 feet in width.
- Network of Sacred Theerthams: Contains 22 consecrated freshwater theerthams (wells and tanks) within the temple precincts, where pilgrims undergo ceremonial purification baths believed to possess mineral and spiritual potency.

Significance:

- Bridges the two major streams of Hinduism by linking the worship of Lord Shiva directly with the epic journey of Lord Rama, making it an enduring symbol of national spiritual unity.
- Represents an extraordinary achievement in transport and stone masonry, as massive granite blocks were ferried across ocean waters to Pamban Island centuries before the advent of modern rail or bridge infrastructure.

Saratchandra Chattopadhyay

Context:

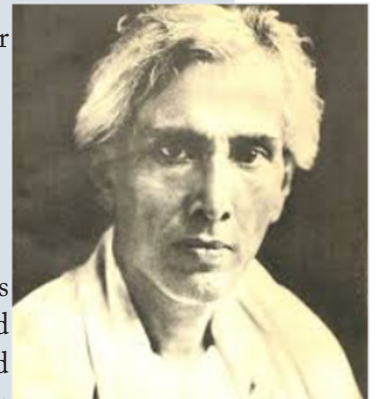
Prime Minister of India paid tribute to iconic Bengali novelist and short story writer Saratchandra Chattopadhyay on his 150th birth anniversary.

Saratchandra Chattopadhyay

About Saratchandra Chattopadhyay:

Who He Was?

- Born on September 15, 1876, Saratchandra Chattopadhyay was one of India's most celebrated novelists, humanists, and short story writers. Renowned for his deep psychological realism, empathy for the marginalized, and bold exploration of women's inner lives against orthodox social codes, his works have been translated into nearly every major Indian and several foreign languages, inspiring over 40 cinematic adaptations.



Early Days:

- Born in Debanandapur, Hooghly district, Sarat Chandra grew up in a literary environment. His father, Motilal Chattopadhyay, was an aspiring writer whose unfinished works influenced his early imagination.
- In 1903, he moved to Burma (Myanmar) and worked in Rangoon for nearly a decade. The loss of his first wife and infant son to plague deeply shaped the emotional depth of his writing before he returned to Bengal in 1916.

Contribution to the Freedom Movement:

- Revolutionary Literature: His 1926 novel Pather Dabi, centred on revolutionary resistance to British rule, was banned by the colonial government.

- Political Association: Served as President of the Howrah District Congress (1921–1936) and participated in the Non-Cooperation Movement and grassroots mobilisation.

Literary Works

- Major Works: Parineeta, Devdas, Charitraheen, Nishkriti, Srikanta, Biraj Bou, and Sesh Prashna.
- Women's Agency: His works portrayed widows, courtesans and independent women with dignity, emotional depth and individual agency.
- Honours: Received the Jagattarini Gold Medal (1923) and an honorary D.Litt. from the University of Dacca (1936).

Last Days:

- Spent his later years writing and undertaking philanthropic work in Samtaber and Calcutta.
- He passed away on January 16, 1938, aged 61, leaving a lasting influence on Indian literature and cinema.

The Tulu Language

Context:

The Karnataka State Cabinet approved according additional official (administrative) language status to Tulu in the coastal districts of Dakshina Kannada and Udupi, fulfilling a long-standing regional demand.

The Tulu Language

About The Tulu Language:

What it is?

- A major Southern Dravidian language spoken predominantly in the cultural region known as Tulu Nadu (comprising Dakshina Kannada and Udupi districts of Karnataka, alongside northern parts of Kasaragod district in Kerala). It is treated by the Census of India as an independent, non-scheduled language with approximately 1.85 to 2 million native speakers.

History:

- Boasts a documented literary, epigraphic, and oral tradition spanning over 2,000 years, historically recognized by linguists as one of the earliest branches to diverge from Proto-Dravidian.
- Possesses its own indigenous historical script known as Tigalari (or Tulu script), which is closely related to the Grantha script and was extensively used by Vedic Brahmins for Sanskrit and Tulu manuscripts before the modern Kannada script was widely adopted for printed Tulu literature.
- Anchors rich traditional folk artforms and oral literature, most notably Paddanas (sung epics of heroes and spirits), Bhoota Kola (spirit worship rituals), and traditional coastal Yakshagana

Key Features:

- Independent Dravidian Linguistic Classification: Recognised since the establishment of the Office of the Registrar General & Census Commissioner as a distinct non-scheduled language rather than a dialect of Kannada.
- Dual Script Heritage: Historically inscribed using the archaic Tigalari script and contemporary regional administrative communication rendered in the Kannada script.
- Vibrant Oral Epic Tradition: Backed by an extensive repertoire of unwritten folk mythology, ballads (Paddanas), rituals, and distinct agricultural proverbs passed down orally across generations.
- School Curriculum Integration: Taught as a third optional language from Class 6 to Class 10 in schools across Dakshina Kannada and Udupi districts since the 2010–11 academic cycle.

Statutory & Constitutional Procedure

- Constitutional Framework —Article 345: It empowers a State Legislature, by law, to adopt one or more languages used in the State, or Hindi, for the State's official purposes.



- **Legislative Amendment:** Since the Karnataka Official Language Act, 1963 declares Kannada as the State's official language, giving Tulu comparable statutory status would require legislative action, not merely a Cabinet decision.
- **Assent & Notification:** Any amendment passed by the State Legislature would follow the applicable constitutional assent process; its implementation could then be operationalised through the Act and relevant official notifications.

The Musical Instrument Mandar

Context:

Jharkhand's traditional folk percussion instrument, the 'Mandar', has officially been granted the Geographical Indication (GI) tag by the Geographical Indications Registry in Chennai.

The Musical Instrument Mandar

About The Musical Instrument Mandar:

What it is?

- A traditional, centuries-old double-headed barrel/cylindrical folk drum (percussion instrument) crafted primarily from red clay and leather, recognized as one of the oldest musical heritage instruments of eastern India.
- **Region Associated:** Across Jharkhand (prominently across the Chotanagpur plateau), with its traditional artisanal production centered in Jarjatta village, Raidih block, Gumla district, where generational families preserve the craft.



Origin:

- Deeply rooted in indigenous folklore and rituals, historically cited in anthropologist Sarat Chandra Roy's 1915 ethnographic studies, Tarak Chandra Das's 1931 research, W.G. Archer's 1940 work 'The Blue Grove' documenting Oraon traditions, and the Patna Museum's 1920 records.
- Traditionally used across seasonal crop celebrations, nature festivals (such as Sarhul and Karma), marriages, and community folk dances by tribal communities (including the Oraon, Munda, Santhal, and Ho) and non-tribal rural groups alike.

Key Characteristics:

- **Earthen Barrel Body:** The hollow cylindrical shell is molded from locally sourced red clay, featuring a characteristic bulge in the middle that provides acoustic warmth and depth.
- **Asymmetrical Dual Drum-Heads:** Constructed with openings of unequal size—a narrower right side producing a higher pitch and a broader left side delivering a deep, booming bass rhythm.
- **Braided Leather Tensioning:** The animal-hide membranes covering both heads are stretched and bound tightly along the barrel using braided leather thongs and cords.
- **Application of 'Kiran' Tuning Paste:** The smaller drumhead is treated with a specialized black tuning paste known locally as Kiran, which regulates resonance and gives the Mandar its characteristic tonal frequency.
- **Mobile Shoulder-Slung Playing Style:** Played while hanging from the musician's shoulder via an attached rope or strap, enabling performers to dance dynamically and move in rhythm with dancers during processions.

Significance:

- Provides GI protection to Jarjatta's traditional drum-makers, preventing imitation and safeguarding indigenous livelihoods.
- Expands Jharkhand's GI portfolio, promoting tribal craftsmanship and performing arts nationally and globally.

Corporate Governance in India: Pillars, Challenges and the Way Forward

Context:

Union Minister of State for Personnel, Public Grievances, and Pensions, stated that good corporate governance is central to India's national development during an interaction with a delegation from the Institute of Company Secretaries of India (ICSI).

Corporate Governance in India: Pillars, Challenges and the Way Forward

About Corporate Governance in India: Pillars, Challenges and the Way Forward

What it is?

- Corporate governance refers to the framework of rules, relationships, systems, and processes by which corporations are directed, administered, and controlled. It balances the interests of a company's many stakeholders—including shareholders, senior management, financiers, suppliers, customers, the government, and the community.

Key Data & Institutional Profile:

- Professional Base:** ICSI represents a growing network of over 80,000 qualified members guiding boardrooms and regulatory filings.
- Student Pipeline:** Approximately 2,50,000 students are enrolled in professional training programs covering corporate law, securities governance, and dispute resolution.
- ICSI National Awards:** The upcoming 26th ICSI National Awards for Excellence in Corporate Governance (scheduled for 2027) evaluates corporate disclosure, sustainability reporting, CSR impact, and secretarial audit standards.
- Grassroots Expansion:** Expanding standard governance frameworks beyond large listed entities to include Panchayat and Local-Body Governance, producing multilingual training manuals to raise grassroots administrative standards.

Core Pillars of Corporate Governance in India:

- Transparency & Timely Disclosures:** Mandating clear, machine-readable disclosures of financial accounts, related-party transactions (RPTs), and operational risks under SEBI (LODR) Regulations and the Companies Act, 2013.
- Independent Board Oversight:** Appointing Independent Directors (IDs) and specialized Board Committees (Audit, Nomination & Remuneration, Stakeholder Relationship) to mitigate conflict-of-interest risks.
- Protecting Minority Shareholder Rights:** Ensuring equitable treatment of small investors through e-voting mechanisms, postal ballots, and class-action litigation avenues under Section 245 of the Companies Act.
- Secretarial Audit & Compliance Verification:** Comprehensive non-financial audits conducted by practicing Company Secretaries to certify adherence to applicable statutory laws, industrial regulations, and Secretarial Standards (SS-1 and SS-2).
- Sustainability & ESG Reporting:** Integrating non-financial indicators through the mandatory Business Responsibility and Sustainability Report (BRSR) framework for top listed entities.

Key Challenges in India's Corporate Governance Landscape:

- Promoter Dominance & Weak Board Independence:** In family-owned and promoter-driven corporations,



independent directors often function as passive observers rather than challenging management on questionable capital allocations.

- Abuse of Related-Party Transactions (RPTs): Siphoning capital, circular trading, and transferring profits to unlisted promoter subsidiaries through complex corporate layering.
- Compliance in Form vs. Compliance in Substance: Viewing corporate governance as a mechanical, check-the-box regulatory exercise rather than embedding ethical culture into everyday business strategy.
- Audit Lapses & Delayed Fraud Detection: Inadequate coordination between financial auditors and internal compliance officers, delaying the detection of corporate fraud and accounting irregularities.
- Governance Gaps in Startups & Unlisted Entities: High-growth, unlisted startups often prioritize hyper-scaling over internal controls, risk management, and formal board oversight.

Way Ahead:

- Empowering Independent Directors: Strengthen the institutional autonomy of Independent Directors by introducing objective evaluation mechanisms and shielding whistleblowers on company boards.
- Expanding the Scope of Secretarial Audits: Make independent secretarial audits mandatory for large unlisted public companies, high-debt private firms, and public sector enterprises.
- Deepening Digital Governance Tools: Scale up the use of AI, digital forensics, and distributed ledger systems for real-time tracking of related-party transactions and automated compliance filings on MCA21.
- Instilling Governance in the Startup Ecosystem: Introduce lightweight, stage-appropriate governance codes for early-stage and venture-funded firms before they tap public markets via Initial Public Offerings (IPOs).
- Extending Governance Frameworks to Local Bodies: Leverage ICSI's local governance initiatives to standardize accounting, auditing, and administrative transparency in Municipal Corporations and Panchayati Raj Institutions.

Conclusion:

As India advances toward becoming a multi-trillion-dollar economy by Viksit Bharat@2047, professional institutions like ICSI and skilled Company Secretaries will play an essential role in bridging regulatory oversight and ethical entrepreneurship. Embedding transparency and fiduciary responsibility across both private enterprises and public institutions is fundamental to ensuring inclusive and long-term economic development.

Mission Zero: Depalpur's Legacy Waste Transformation

Context:

Depalpur, Madhya Pradesh, became the first city under the Swachh Shehar Jodi initiative to achieve Zero Legacy Waste, remediating 1,250 metric tonnes of legacy waste accumulated over five years under SBM-U 2.0.

Mission Zero: Depalpur's Legacy Waste Transformation

About Mission Zero: Depalpur's Legacy Waste Transformation

What It Is?

- It is a scientific legacy-waste remediation and urban waste-management initiative undertaken by Depalpur Nagar Parishad with Indore Municipal Corporation under the Swachh Shehar Jodi initiative of Swachh Bharat Mission-Urban 2.0 (SBM-U 2.0).
- It follows the Each One Teach One model, where experienced mentor cities transfer waste-management practices to mentee cities.

Key Findings:

- Zero Legacy Waste: Depalpur completely remediated 1,250 metric tonnes of waste accumulated at its dumpsite over five years.
- Four-Bin Segregation: Achieved 100% door-to-door collection with segregation of municipal waste into four categories.
- Resource Recovery: Around 4.5 tonnes of plastic, metal and glass were recovered and supplied to authorised recyclers.



- **RDF Processing:** Around 50–60 tonnes of Refuse Derived Fuel (RDF) was sent to the NEPRA plant in Indore and subsequently to cement factories for co-processing.
- **Mentor–Mentee Model:** Over 500 ragpickers from Indore participated alongside Depalpur's machinery, demonstrating structured peer learning and inter-city cooperation.

Significance:

- Converts legacy waste into recyclables and RDF, reducing landfill dependence and promoting resource recovery.
- Depalpur demonstrates how the Swachh Shehar Jodi Each One Teach One model can transfer successful waste-management practices between cities.
- The remediated dumpsite is being transformed into a green public space, beginning with the plantation of 200 saplings and planned community activities.

The Distinguished Jurist Provision

Context:

At NLU Delhi, Supreme Court Judge Justice Ujjal Bhuyan highlighted Article 124(3)(c), calling the provision to appoint a distinguished jurist as a Supreme Court judge an unused mandate for over 76 years.



The Distinguished Jurist Provision

About The Distinguished Jurist Provision:

What It Is?

- A distinguished jurist refers to an eminent legal scholar, academician, author, or researcher of exceptional juristic learning and repute who is eligible for direct elevation as a judge of the Supreme Court of India, even without prior experience as a practicing advocate or a High Court judge.

Constitutional Articles:

- **Article 124(3)(c) (Supreme Court):** Lays down that a citizen of India who is, in the opinion of the President, a distinguished jurist is qualified for appointment as a Judge of the Supreme Court.
- **Article 217 (High Courts):** The 42nd Constitutional Amendment Act (1976) briefly introduced a similar distinguished jurist clause for High Court appointments, but it was subsequently repealed by the 44th Constitutional Amendment Act (1978). Thus, the route exists exclusively for the Supreme Court.

History & Constituent Assembly Debates:

- **Kamath Amendment (1949):** V. Kamath proposed allowing eminent legal scholars, not just judges and advocates, to join the Supreme Court, drawing from ICJ practice.
- **Ayyangar & Ambedkar's Support:** Ananthasayanam Ayyangar backed the idea, citing Felix Frankfurter's US Supreme Court appointment, while B. R. Ambedkar accepted the proposal, favouring the term distinguished jurist.

Key Features of the Provision:

- **Academic and Theoretical Pathway:** Creates a non-litigation eligibility channel for constitutional thinkers, jurists, and law professors who do not meet the 10-year active Bar practice or 5-year High Court bench criteria.
- **Subjective Presidential Opinion / Collegium Initiation:** Appointment is constitutionally anchored to the opinion of the President, which under contemporary jurisprudence is filtered through the binding recommendation of the Supreme Court Collegium.
- **Exclusivity to the Apex Court:** Applies solely to Supreme Court appointments under Article 124(3)(c) and is not available for appointments to state High Courts.
- **Institutional Non-Utilization (Dead Letter):** Despite being in force since January 26, 1950, not a single distinguished jurist has been appointed to the Supreme Court; elevations have remained confined to sitting High Court judges and practicing Senior Advocates.

- **Bar Council and Professional Constraints:** Bar Council of India regulations generally prohibit full-time academic law teachers from practicing in courtrooms, creating an institutional divide between the legal academy and active judicial selection networks.

The Motor Vehicles (Amendment) Act, 2019

Context:

Marking seven years of the Motor Vehicles (Amendment) Act, 2019, experts reviewed its implementation as road deaths reached nearly 1.77 lakh in 2024, highlighting the need for better engineering, enforcement and behavioural change.

The Motor Vehicles (Amendment) Act 2019

About The Motor Vehicles (Amendment) Act, 2019:

What It Is?

- The Motor Vehicles (Amendment) Act, 2019 is a comprehensive statutory framework that overhauled the Motor Vehicles Act, 1988. It shifted India's road safety paradigm toward a Safe Systems approach—incorporating steep electronic-monitored penalties, statutory protection for Good Samaritans, cashless Golden Hour emergency trauma care, mandatory vehicle recall standards, automated vehicle fitness testing, and contractor accountability for faulty road engineering.



Key Data & Crash Statistics (MoRTH 2024 Report)

- **High Fatalities & Crash Volume:** India recorded 4,87,707 road accidents and 1,77,175 fatalities in 2024 (averaging ~485 deaths daily or ~20 lives lost every hour).
- **Increasing Crash Severity:** Accident severity (deaths per 100 accidents) climbed from 21.6 in 2005 to 36.3 in 2024, indicating that crashes are becoming deadlier.
- **High-Speed Highway Vulnerability:** National Highways accounted for only 31% of total accidents but 36.6% of all fatalities.
- **Impact on Working-Age Population:** The economically productive age group of 18–45 years accounted for 66.1% of all road deaths (and 83.3% for the 18–60 group), causing an estimated 3% loss to national GDP.
- **Vulnerable Road Users (VRUs):** Two-wheeler riders (46.2%) and pedestrians (20.6%) comprised over two-thirds of all road fatalities.
- **Safety Restraint Non-Compliance:** Non-wearing of helmets accounted for 54,122 deaths, while non-use of seatbelts claimed 14,466 lives in 2024.

Core Pillars of the Motor Vehicles (Amendment) Act, 2019:

- **Stricter Deterrence & Automated Enforcement:** Increased monetary penalties up to 10-fold for severe violations supported by Electronic Monitoring & Enforcement (Section 136A).
- **Good Samaritan Protections (Section 134A):** Insulates bystanders providing voluntary emergency medical assistance from civil or criminal liability, police harassment, and forced courtroom appearances.
- **Cashless Treatment in the Golden Hour (Section 162):** Mandates a government scheme for cashless trauma care during the first critical hour after a crash, alongside enhanced hit-and-run death compensation (2 lakh).
- **Infrastructure Contractor Accountability (Section 198A):** Empowers authorities to impose penalties up to 1 lakh on road design consultants, contractors, or concessionaires for failure to build and maintain safe roadway standards.
- **Vehicle Safety Standards & Compulsory Recall (Section 110A):** Enables the Union Government to order mandatory recalls of defective vehicles and penalize manufacturers for non-compliance with vehicle safety norms.

Key Challenges in Implementation:

- **Uneven State-Level Enforcement:** Transport being administered primarily by state machineries, several states diluted notified penalty rates or delayed notifications under political pushback.

- Gaps in Child Restraint Systems (CRS) & School Transit: Poor enforcement of child helmets and rear-seat CRS standards for children under 12, alongside unregulated private school vans.
- Persistent Road Engineering Deficits & Black Spots: Delay in scientific crash investigation and black-spot rectification; roads frequently lack segregated pedestrian pathways and cycling lanes.
- Under-Resourced Emergency Medical Networks: Golden-hour trauma care networks remain concentrated around tier-1 cities, leaving rural highway corridors with long ambulance response times.
- Behavioural Inertia & Informal Compromises: Widespread non-compliance with rear seatbelts, substandard helmet usage, and high prevalence of overspeeding and distracted driving.

Way Ahead:

- Adopting the Safe Systems Approach: Shift from solely blaming driver error to engineering self-explaining, forgiving roads where human errors do not result in fatal impacts.
- Expanding Intelligent Transportation Systems (ITS): Scale up automated speed detection cameras, LIDARs, and AI-enabled traffic monitoring linked to the Integrated Road Accident Database (iRAD / eDAR).
- Mandating Nationwide Child Safety Standards: Enforce rigorous certification for child safety harnesses on two-wheelers, booster seats in four-wheelers, and statutory safety audits of all school transit fleets.
- Universalizing Cashless Golden-Hour Trauma Care: Fully operationalize the pan-India cashless trauma scheme with designated highway trauma stabilization centers linked to dynamic GPS ambulance routing.
- Auditing Infrastructure Contractor Accountability: Enforce Section 198A by holding road engineers and construction firms legally and financially liable for crashes caused by design flaws, missing signage, or unscientific diversions.

Conclusion:

Eliminating over 1.7 lakh annual crash deaths requires treating road safety as an integrated shared responsibility—combining forgiving road engineering, technology-driven enforcement, and rapid trauma response. Shifting from fragmented enforcement toward a comprehensive safe-mobility culture is essential to protecting citizens and supporting India's economic growth.

Article 142 of the Constitution of India

Context:

Invoking its plenary powers under Article 142 of the Constitution, the Supreme Court directed the quashing and closure of all nationwide police FIRs registered against students and protesters during the NEET-UG paper leak demonstrations.



Article 142 of the Constitution of India

About Article 142 of the Constitution of India:

What It Is?

- Article 142 is an extraordinary constitutional provision that equips the Supreme Court of India with inherent, plenary powers to pass any decree or make any order necessary for doing complete justice in any cause or matter pending before it.

Constitutional Provisions:

- Article 142(1): Empowers the Supreme Court to issue such orders/decrees as are essential to ensure complete justice between parties; decrees passed under it are enforceable across the entire territory of India as prescribed by Parliament or presidential order.
- Article 142(2): Confers extensive procedural and investigatory authority upon the Court to secure witness attendance, demand discovery or production of documents, and investigate or punish contempt of court.

Key Features of Article 142

- Power to ensure complete justice: Article 142 gives the Supreme Court wide powers to pass any order necessary to ensure complete justice in a case before it. This power flows directly from the Constitution.
- Not restricted by ordinary laws: The Supreme Court has held in *Union Carbide Corporation v. Union*

of India and Delhi Judicial Service Association that ordinary statutory limitations cannot restrict its constitutional power under Article 142.

- Available only to the Supreme Court: Article 142 is an extraordinary constitutional power exclusive to the Supreme Court. High Courts cannot exercise the same power while deciding cases under Article 226 (*Anil Kumar Jain v. Maya Jain*).
- Helps address gaps in law: Where the existing legal framework is inadequate, the Court can use Article 142 to provide appropriate remedies until the legislature or executive acts.
- Subject to constitutional limits: Article 142 is wide but not unlimited. In *Prem Chand Garg* (1963) the Court clarified that the power cannot be exercised in a manner that violates fundamental rights or ignores substantive provisions of law.

Significance:

- It enables the Court to provide fair and case-specific remedies, particularly in exceptional situations where ordinary legal remedies may prove inadequate.
- The provision enables the Supreme Court to respond effectively when executive inaction, administrative failure or exceptional circumstances threaten justice.

Semicon 2.0

Context:

The Ministry of Electronics and Information Technology (MeitY) notified the operational framework for the 1.27 lakh crore (1,27,500 crore) Semicon 2.0 programme.

Semicon 2.0

About Semicon 2.0:

What It Is?

- Semicon 2.0 (India Semiconductor Mission 2.0) is a comprehensive national policy framework and financial incentive scheme structured across 6 pillars and 10 categories.
- It is designed to support the entire semiconductor value chain—encompassing fabless chip design, silicon and compound wafer fabrication, advanced packaging (ATMP/OSAT), equipment, materials, specialty chemicals, R&D, and specialized talent development.

Nodal Organisations Involved

- Nodal Agency: India Semiconductor Mission (ISM) under the Ministry of Electronics and Information Technology (MeitY).
- Design & Technical Partner: Centre for Development of Advanced Computing (C-DAC).
- Aim: To build technological self-reliance by promoting Indian-owned IP, fabless chip design, domestic chip adoption, local semiconductor supply chains, and global electronics manufacturing.

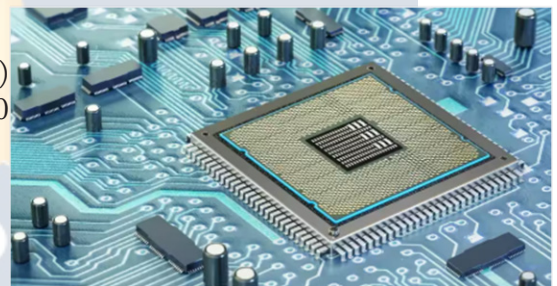
Key Features of Semicon 2.0:

Strategic & Commercial Chip-Design Tracks:

- Strategic Track: C-DAC funds and co-owns IPs/SoCs critical for national security, defense, compute, memory, RF, and sensors.
- Commercial Track: Provides EDA tool access, multi-project wafer (MPW) services, milestone-linked seed funding (up to 15 crore or 50% project cost) for startups/MSMEs, and royalty financing for larger firms, while opening eligibility to OCI-owned enterprises incorporated in India.
- Deployment-Linked Incentive (DLI): Offers a direct reimbursement of 9% on net sales for 5 years (capped at 30 crore per application and 120 crore per company) on newly launched Indian IP cores, chips, and SoCs to help startups overcome commercial adoption hurdles.

Calibrated Capex Support for Fabs & Packaging:

- Provides 40% fiscal support for large 300-mm silicon wafer fabs (minimum 20,000 crore investment).



- Provides 35% fiscal support for compound semiconductor, photonics, MEMS, sensor, and display fabs.
- Grants 35% support for advanced 2.5D/3D packaging and 25% for legacy ATMP/OSAT units.
- Supply Chain Localization (Materials & Machines): Extends 30% capex support for plants manufacturing wafers, photomasks, photoresists, substrates, specialty gases, and equipment, alongside a tapering 10% to 2% PLI over 5 years on domestically sourced bills of materials.
- Targeted Talent & R&D Development: Backs advanced semiconductor R&D and clean-room training infrastructure with up to 75% project cost support, setting an expanded target to train 1,00,000 additional semiconductor engineers across universities and tier-II/III technical colleges.

India Hub-And-Spoke Aviation Strategy

Context:

The Ministry of Civil Aviation has rolled out India's hub-and-spoke international aviation strategy, operationalised by Air India's Easy Connect service connecting cities like Varanasi, Amritsar, and Ahmedabad to Delhi.

India Hub-And-Spoke Aviation Strategy

About India Hub-And-Spoke Aviation Strategy:

What it is?

- In air transport, a hub-and-spoke model is a network architecture where smaller regional airports (the spokes) funnel passenger traffic into major central airports (the hubs). Instead of running costly, low-frequency direct international flights from every regional city, the model consolidates travelers at world-class gateway hubs like Delhi, connecting them seamlessly to long-haul global flights.



Background and History:

- Historically, travelers from Indian Tier-2 and Tier-3 cities faced cumbersome journeys when flying abroad. They had to fly domestically to a metro city, collect their luggage, change terminals, check in again, and stand in long immigration lines.
- Because of this friction, nearly 35% of international passengers from India chose to connect through overseas hubs such as Dubai, Doha, London, and Singapore.

Aim:

- To establish India as a global aviation transit crossroads by 2047, leveraging its geographic position between Europe, Africa, and East Asia.
- To democratize international travel for citizens in smaller cities by removing layover hassles.

How it Works (The Immigration and Transit Shift)?

- At the Spoke (Origin Airport): A passenger flying, for example, from Varanasi to London checks in at Varanasi, receives boarding passes for both legs, and drops their luggage, which is tagged straight through to London. The traveler clears international immigration and security checks right at Varanasi.
- At the Hub (Transfer Airport): Upon landing at Delhi, the traveler does not exit the terminal, pick up baggage, or queue for immigration again. They simply walk through the secure airside transit corridor directly to their international departure gate while their luggage is transferred automatically between aircraft.
- Inbound Return Trips: Returning passengers clear their customs and final entry formalities when they land at their destination spoke airport.

Key Features:

- Through-Ticketing and Baggage Handling: Complete baggage transfer from origin to final overseas destination without passenger intervention at the hub.
- Synchronized Flight Banks: Regional feeder flights are tightly timed to arrive within two to four hours of major international departures to Europe, North America, Southeast Asia, and the Gulf.

- Tiered Expansion: Delhi functions as the initial mega-hub, with Mumbai, Bengaluru, Hyderabad, Kolkata, and Chennai earmarked as future hubs linking over 40 regional spoke airports nationwide.
- Digital Clearance: Utilizes facial recognition and paperless boarding platforms like DigiYatra to verify identity and streamline passenger transit through regional security checkpoints.

Significance:

- By keeping passengers on domestic carriers and inside Indian airports, it reduces reliance on foreign airlines and overseas transit airports.
- Long-term projections estimate the international transit strategy could generate millions of direct and indirect jobs and contribute significantly to India's GDP toward the Viksit Bharat 2047 target.

The Bar Council of India (BCI)

Context:

The Supreme Court ruled that the Bar Council of India (BCI) and State Bar Councils possess no statutory power or jurisdiction to take disciplinary or punitive actions against law students.

The Bar Council of India (BCI)

About The Bar Council of India (BCI):

What It Is?

- The Bar Council of India (BCI) is a statutory, apex regulatory and representative body established by Parliament to oversee the legal profession and legal education in India.
- It prescribes uniform standards of professional conduct and etiquette for advocates, exercises disciplinary jurisdiction over the Bar, and inspects and recognizes universities whose law degrees qualify graduates for professional enrolment.
- Established in: Formed under the authority of the Advocates Act, 1961, enacted by the Indian Parliament.



Historical Background:

- Post-Independence Need (1950): Following the commencement of the Constitution and the creation of the Supreme Court, legal and academic bodies, including the Inter-University Board and the Madras Provincial Lawyers Conference, called for a unified All-India Bar and common standards for legal examinations.
- The All-India Bar Committee (1951–1953): In August 1951, the Government of India constituted a Committee of Inquiry headed by Supreme Court Judge Justice S. R. Das. In March 1953, the committee recommended the creation of state bar councils and an apex national council to supervise the legal profession and legal education.
- Enactment (1961): Integrating the recommendations of the All-India Bar Committee and reports from the Law Commission of India, Parliament passed the comprehensive Advocates Act in 1961, establishing a unified bar.

Key Functions:

- Professional Standards & Discipline: Prescribes strict rules of professional conduct, etiquette, and decorum for enrolled advocates and exercises appellate disciplinary jurisdiction over State Bar Councils.
- Regulation of Legal Education: Establishes standards of legal education across universities in consultation with State Bar Councils and inspects institutions granting recognized law degrees.
- Recognition of Degrees: Accords recognition to Indian and foreign universities whose law degrees serve as valid qualification for enrolment as an advocate in India.
- Advocate Rights & Legal Aid: Safeguards the rights, privileges, and statutory interests of advocates, manages welfare funds, and organizes legal aid programs for underprivileged sections of society.
- All-India Bar Examination (AIBE): Administers the post-graduation professional qualification test mandatory for law graduates to obtain their certificate of practice.

Supreme Court Stand on BCI Powers:

- **No Jurisdiction Over Students:** The Supreme Court affirmed that under the Advocates Act, 1961, the BCI's disciplinary and regulatory control begins only after a law graduate is officially enrolled as an advocate.
- **University Autonomy:** Disciplinary and administrative authority over law students rests exclusively with their parent educational institutions, universities, and respective university bylaws.
- **Protection of Free Speech:** The Court held that statutory regulators cannot penalize lawful dissent, run intimidation campaigns, or threaten to withhold professional enrolment simply because students exercise their constitutional rights to speech and peaceful protest.

Autonomous Hill Development Councils (LAHDCs)

Context:

Ladakh Lieutenant Governor Vinai Kumar Saxena approved a notification extending Autonomous Hill Development Councils to all seven districts of the Union Territory.

- This move expands elected local self-governance from Leh and Kargil into the five newly carved districts: Sham, Nubra, Changthang, Zaskar, and Drass.



Autonomous Hill Development Councils (LAHDCs)

About Autonomous Hill Development Councils (LAHDCs):

What it is?

- Decentralized, elected statutory district-level governance bodies established to provide local self-rule, plan socioeconomic development, and manage land and resources in Ladakh's mountainous terrain.

History:

- Conceived on the pattern of West Bengal's Darjeeling Gorkha Hill Council following prolonged agitations by the people of Ladakh for regional autonomy.
- Formally enabled by the Ladakh Autonomous Hill Development Council Act, 1995 (later consolidated under the LAHDC Act, 1997).
- LAHDC Leh was established in 1995, followed by LAHDC Kargil in July 2003 under the J&K coalition government headed by Mufti Mohammad Sayeed.
- With the reorganization of Ladakh into a Union Territory in 2019 and the creation of five new districts in 2026, the governance framework was expanded to cover all seven districts.

Governance Structure:

- **Council Composition:** Typically consists of 30 members serving a five-year term: 26 directly elected through universal adult suffrage and 4 nominated by the Lieutenant Governor/administration to represent women and principal religious minorities.
- **Executive Hierarchy:** Led by a Chairman designated as the Chief Executive Councillor (CEC), holding the rank and status of a Cabinet Minister, assisted by four Executive Councillors with the rank of Deputy Ministers.
- **Administrative Interface:** The Deputy Commissioner of the district acts ex-officio as the Chief Executive Officer (CEO) of the council to direct administration, enforce law and order, and oversee the execution of development works.

Key Functions:

- **Land Allocation & Resource Use:** Exercises executive control over the allotment, occupation, and use of land vested in the council, as well as the management of un-demarcated forests.
- **District Planning & Scheme Implementation:** Formulates annual budgets, prioritizes centrally sponsored schemes, and oversees local rural development programs tailored to high-altitude terrain.
- **Essential Public Services:** Administers primary and secondary education, vocational institutes, public health centers, sanitation, and local road networks (excluding national highways).

- Agrarian & Livestock Development: Oversees agriculture, water canals, fisheries, pasture management, and veterinary care for regional livestock, such as pashmina goats and yaks.
- Cultural & Heritage Preservation: Designs regulations and initiatives to promote eco-tourism, safeguard indigenous languages, and preserve local traditions and monastic heritage.

The Offline Verification Seeking Entity (OVSE) Framework

Context:

The Punjab School Education Board (PSEB) has become India's first school education board, and Maharishi Dayanand University (MDU), Rohtak, the first university, to onboard UIDAI's Offline Verification Seeking Entity (OVSE) framework.



The Offline Verification Seeking Entity (OVSE) Framework

About The Offline Verification Seeking Entity (OVSE) Framework:

What it is?

- A secure, regulatory framework established by the Unique Identification Authority of India (UIDAI) that authorizes eligible organizations to carry out local, offline identity verification of individuals using verifiable digital credentials rather than querying central identity databases.
- Nodal Organisation: Unique Identification Authority of India (UIDAI), Ministry of Electronics and Information Technology (MeitY).
- Aim: To provide a tamper-evident, contactless, and privacy-preserving identity verification ecosystem that reduces operational costs, eliminates physical document submissions, and prevents identity fraud across sectors.

How it Works?

- An authorized organization initiates an offline verification request through a web portal, kiosk, or QR code trigger.
- The user authorizes the request and explicitly consents to share specific credentials via the official identity application.
- Verification takes place locally on the device (which can include offline biometric/face-match checks) without establishing a live connection to UIDAI's Central Identities Data Repository (CIDR).
- The consented, digitally signed credentials are then securely returned to the verifying organization's system via a secured callback URL.

Key Features:

- Zero Dependency on Central Databases (No CIDR Query): Verification occurs locally through encrypted, verifiable credentials, eliminating the need for real-time lookups on central servers and shielding central databases from system loads.
- Strict Consent and Selective Sharing: Users maintain complete control over what information is revealed, retaining the option to share either full or selective demographic credentials based on necessity.
- Privacy by Design (No Number Storage): Verifying entities are strictly prohibited from retaining plain national identity digits; data must be masked or redacted, minimizing data-leak exposure.
- Enterprise-Ready Interoperability: Easily connects to mobile apps, enterprise portals, self-service kiosks, and physical counters via standardized API protocols and application-to-application intent calls.
- Proof-of-Presence Integration: Incorporates secure, on-device face authentication and digital signatures to confirm physical presence without transmitting raw biometrics across the network.

Significance:

- Eliminates the circulation and photocopying of physical documents, directly addressing privacy risks and identity theft in public and private institutions.
- Eliminates repetitive physical document verification and manual data entry, dramatically speeding up institutional lifecycles like school admissions, exam registrations, and certificate issuance.

The Central Consumer Protection Authority (CCPA)

Context:

The Central Consumer Protection Authority (CCPA) has intensified regulatory action against food companies for using misleading 100% marketing claims.

The Central Consumer Protection Authority (CCPA)

About The Central Consumer Protection Authority (CCPA):



What it is?

- The apex regulatory body established to regulate matters relating to the violation of consumer rights, unfair trade practices, and false or misleading advertisements that are prejudicial to public and consumer interest.
- Established in: Constituted in July 2020 under Section 10(1) of the Consumer Protection Act, 2019.
- Aim: To protect, promote, and enforce the rights of consumers as a collective class, preventing exploitative commercial conduct and ensuring marketplace integrity.

Key Functions and Powers:

- **Suo Motu Inquiries and Investigations:** Holds broad investigative powers to inquire into consumer rights violations, either suo motu, upon receiving complaints, or upon directions from the Central Government, supported by a dedicated Director-General-led Investigation Wing.
- **Discontinuation and Penalties for Misleading Ads:** Empowered under Section 21 to order the modification or withdrawal of false advertisements and impose financial penalties on manufacturers, traders, and endorsers.
- **Product Recalls and Refunds:** Can direct the recall of dangerous, hazardous, or unsafe goods, mandate the withdrawal of deficient services, and order full refunds to consumers.
- **Enforcement of Guidelines and Safety Alerts:** Issues binding guidelines to curb deceptive practices (such as dark patterns, surrogate advertising, and hidden service charges) and issues consumer safety notices.
- **Class Action Advocacy:** Authorized to file interventions and formal complaints on behalf of consumers before the District, State, or National Consumer Disputes Redressal Commissions.

Significance:

- Moves consumer dispute resolution from a purely reactive, post-injury adjudicatory process to an institutional regulatory regime capable of intervening before mass harm occurs.
- Empowers the state to take legal action on behalf of all consumers collectively, eliminating the burden on individual citizens to litigate against corporate deceptive practices.

Totaliser

Context:

A three-judge Supreme Court Bench led by Chief Justice of India Surya Kant directed the Central government to clearly state its position on introducing totaliser machines for counting Electronic Voting Machine (EVM) votes.

Totaliser

About Totaliser:

What is a Totaliser?

- A totaliser is a specialized hardware interface designed to aggregate and count votes recorded across a cluster of approximately 14 EVMs simultaneously. It was jointly engineered by public sector undertakings Bharat Electronics Limited (BEL), Bengaluru, and Electronics Corporation of India Limited (ECIL), Hyderabad.



How It Works and Preserves Voter Secrecy?

- **Cluster Connection:** The control units of up to 14 EVMs from different polling stations are connected via cables to the totaliser interface.

- **Consolidated Tally:** When the result button on the totaliser is pressed, it displays the combined votes obtained by each candidate across the entire group of 14 booths as a single consolidated figure.
- **Masking Booth Trends:** By pooling the results, it eliminates individual, booth-by-booth vote tallies. Because polling booths in India are organized geographically, individual booth counts make it easy to identify how specific neighborhoods, villages, or demographic clusters voted. Totalisers effectively obscure these micro-level voting patterns.

Centre's Position: Why It Opposes Totalisers

- **Targeted Governance:** Booth-level results help representatives identify areas needing greater development and welfare attention.
- **Limited Risk of Victimisation:** The Centre argues that widespread voter intimidation is unlikely amid strong media and public scrutiny.
- **Technical Concerns:** Linking totalisers may require de-sealing EVMs, creating potential security and data-leak risks.

Election Commission of India's Stand:

- **Supports Ballot Secrecy:** The ECI proposed totalisers in 2008 and supported them before the Supreme Court in 2018 to strengthen voter secrecy.
- **Legal & Audit Challenges:** Implementation requires amendments to the Conduct of Elections Rules, 1961. Aggregated counting may also complicate VVPAT verification, Form 17C reconciliation, and identification of booth-specific discrepancies.

Supreme Court's Stand

- **Protect Voter Secrecy:** The Court observed that revealing booth-wise voting patterns could expose communities to harassment or retaliation.
- **Asked for Review:** It sought the Centre's technical, legal and logistical concerns and asked the ECI to submit its updated proposal.

Significance:

- Eliminates the vulnerability of isolated or caste-segregated rural settlements and urban slums that are prone to selective deprivation of municipal amenities when voting trends are revealed.
- Removes leverage from local political leaders who attempt to intimidate residents with threats of water, electricity, or welfare fund cutoffs.

Digital Hawala

Context:

The Financial Action Task Force (FATF) has flagged the growing use of digital hawala for money laundering and terror financing.

- Its latest report notes that nearly 70% of surveyed jurisdictions have detected the use of new technologies in underground banking networks.

Digital Hawala

About Digital Hawala:

What is it?

- Digital hawala is the technology-enabled evolution of the traditional informal hawala system, where money or value is transferred through networks of intermediaries without necessarily moving funds directly through conventional banking channels.
- It combines traditional hawala settlement methods with encrypted messaging, fintech platforms, mobile wallets, virtual assets, AI tools and other digital services.



How Does it Work?

- A customer gives cash or digital funds to a hawala operator.
- Instructions are transmitted to another operator through encrypted apps, online platforms or shared digital ledgers.
- The recipient receives the equivalent amount through cash, wallets, fintech platforms or virtual assets.
- Hawala operators later settle balances through cash, trade, formal payment infrastructure or crypto-assets such as stablecoins.
- Transactions may be concealed through front businesses, mule accounts, charities or layered digital transfers.

Key Findings of the FATF Report:

- **Rapid Digitisation:** Nearly 70% of surveyed jurisdictions reported integration of new technologies into hawala and underground banking networks.
- **Six Digital Forms:** FATF identified six configurations, ranging from digital coordination and customer interfaces to virtual-asset settlement, fintech integration, AI tools and dedicated hawala apps.
- **Virtual Assets:** Stablecoins and other virtual assets are increasingly being used to settle balances between hawala operators.
- **AI-enabled Transactions:** AI tools can automate transaction structuring, mule-account routing and rapid fiat-to-crypto conversion, making detection harder.
- **Cash Remains Important:** Digitalisation has supplemented rather than replaced traditional hawala, with cash continuing to dominate collection and final payout points.

Implications:

- Faster and more opaque cross-border transactions make tracing illicit funds and terror financing more difficult.
- Integration of crypto, fintech, gaming platforms and encrypted communications complicates AML/CFT enforcement and requires stronger cross-border coordination.

Key Constitutional Doctrines: How the Supreme Court Shapes Indian Democracy

Context:

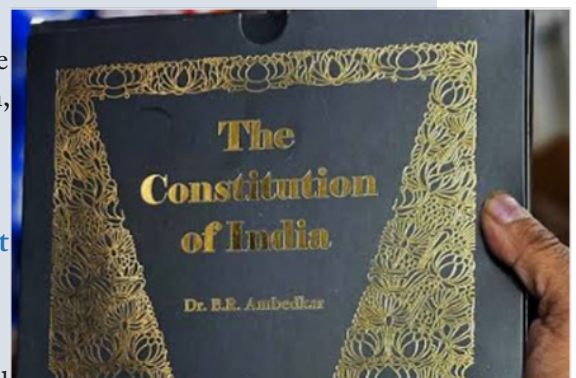
Sansad TV's In-Depth examined the Indian Constitution's resilience and key Supreme Court doctrines balancing democracy, federalism, fundamental rights and institutional checks.

Key Constitutional Doctrines

About Key Constitutional Doctrines: How the Supreme Court Shapes Indian Democracy

What it is?

- Constitutional doctrines are judicially crafted rules and principles of interpretation formulated by the superior judiciary to resolve ambiguities, harmonize conflicting provisions, determine legislative competence, and safeguard foundational democratic
- They serve as interpretive guardrails, ensuring that while the Constitution adapts to changing socio-economic realities as a living document, its core integrity remains intact.



Foundational Constitutional Pillars:

- **Constitutional Supremacy:** The Constitution is the supreme law of the land; all state organs (legislature, executive, and judiciary) derive their powers from it and are bound by its limitations.
- **Parliamentary Form of Government:** Establishes executive accountability to the legislature, where the Council of Ministers headed by the Prime Minister is collectively responsible to the Lok Sabha.
- **Checks and Balances:** Avoids rigid compartmentalization while preventing excessive concentration of authority through judicial review, parliamentary oversight, and constitutional limitations.
- **Judicial Review:** Entrusts the apex judiciary with the power to examine legislative enactments and executive orders for constitutional conformity.

Core Constitutional Doctrines: Principles, Applications & Landmark Cases

Doctrine of Basic Structure:

- Concept: Establishes that while Parliament exercises broad constituent power under Article 368 to amend the Constitution, it cannot alter, damage, or destroy its foundational framework.
- Pillars Included: Constitutional supremacy, democratic republican structure, federalism, secularism, separation of powers, and judicial review.
- Landmark Cases: *Kesavananda Bharati v. State of Kerala* (1973) first established the doctrine. It was reaffirmed in *Indira Nehru Gandhi v. Raj Narain* (1975), which struck down the 39th Constitutional Amendment Act for placing election disputes of the Prime Minister beyond judicial review.

Doctrine of Separation of Powers:

- Concept: Distributes state authority across the executive, legislature, and judiciary so that no single branch exercises unchecked power.
- Constitutional Mandate: Governed partly by Article 50 (separation of judiciary from the executive in public services).
- Landmark Cases: In *Ram Jawaya Kapur v. State of Punjab* (1955), the Supreme Court ruled that while the Constitution does not mandate a rigid separation, functions are sufficiently differentiated. Reaffirmed as an integral part of the basic structure in *Indira Nehru Gandhi* (1975).

Doctrine of Pith and Substance:

- Concept: Applied when a law enacted by one legislature is challenged for encroaching upon the legislative domain of another. Courts examine the true nature and essential character (pith and substance) of the enactment rather than its incidental effects.
- Constitutional Mandate: Tied to Article 246 (Three Legislative Lists in the Seventh Schedule) and Article 254.
- Landmark Cases: *Prafulla Kumar Mukherjee v. Bank of Commerce* (1946), where a Bengal state moneylending law was held valid despite incidentally affecting promissory notes (a central subject).

Doctrine of Incidental or Ancillary Powers:

- Concept: Supplements the Doctrine of Pith and Substance by establishing that the legislative power to make laws on a primary subject includes the implicit authority to legislate on reasonably connected, incidental matters necessary for effective enforcement.
- Constitutional Mandate: Illustrated under provisions like Article 4 and Article 169.
- Landmark Cases: In *State of Rajasthan v. G. Chawla* (1958), the Supreme Court affirmed that legislative entries must be given wide interpretation to include all ancillary powers.

Doctrine of Severability (Separability):

- Concept: Protects constitutional validity by invalidating only the unconstitutional portions of a statute while preserving the legal and valid provisions, provided the two are not inseparably linked.
- Constitutional Mandate: Rooted in Article 13(1) and 13(2), which declare laws void only to the extent of the inconsistency with Fundamental Rights.
- Landmark Cases: *A.K. Gopalan v. State of Madras* (1950) invalidated only Section 14 of the Preventive Detention Act, leaving the remainder intact. In *State of Bombay v. F.N. Balsara* (1951), specific unconstitutional sections of the Bombay Prohibition Act were excised while saving the broader act.

Doctrine of Eclipse:

- Concept: Dictates that pre-constitutional laws inconsistent with Fundamental Rights are not void ab initio (dead from inception), but remain dormant or eclipsed for citizens. If the relevant constitutional limitation is removed or amended, the law regains full operational validity.
- Constitutional Mandate: Flowing from Article 13(1) regarding existing pre-1950 laws.
- Landmark Cases: Introduced in *Bhikaji Narain Dhakras v. State of Madhya Pradesh* (1955) regarding state monopolization of motor transport services, which revived once constitutional amendments accommodated state-run business operations.

Doctrine of Territorial Nexus:

- Concept: Restricts state legislatures from enacting laws with extraterritorial operation unless a real, sufficient connection (nexus) exists between the enacting state and the subject matter/object being regulated.
- Constitutional Mandate: Grounded in Article 245 regarding the territorial limits of legislative enactments.
- Landmark Cases: A.H. Wadia v. Commissioner of Income Tax (1948) and State of Bombay v. R.M.D. Chamarbaugwala (1957), where prize competitions printed outside Bombay had a sufficient business nexus within the state to validate local taxation.

Doctrine of Colorable Legislation:

- Concept: Derived from the maxim what cannot be done directly cannot be done indirectly (fraud on the Constitution). Prevents legislatures from disguising laws under authorized entries to enact provisions outside their substantive competence.
- Constitutional Mandate: Applied under Article 246 to check indirect jurisdictional transgressions.
- Landmark Cases: In K.C. Gajapati Narayan Deo v. State of Orissa (1953) and R.S. Joshi v. Ajit Mills (1977), the Supreme Court clarified that colorable legislation pertains strictly to legislative competence, not legislative motive.

Doctrine of Pleasure:

- Concept: Derived from English common law, providing that civil servants hold office during the pleasure of the Crown. In India, it is subject to substantive constitutional due-process safeguards rather than absolute executive discretion.
- Constitutional Mandate: Anchored in Article 155 (tenure of Governors), Article 310 (civil service tenure), and circumscribed by Article 311 (mandatory reasonable opportunity of hearing prior to dismissal).
- Landmark Cases: State of Bihar v. Abdul Majid (1954) clarified that English feudal concepts were not adopted in entirety, while Union of India v. Tulsiram Patel (1985) grounded the doctrine in public policy and constitutional necessity.

Doctrine of Harmonious Construction:

- Concept: Applied when two provisions of a statute or different constitutional clauses appear contradictory. Courts interpret them in a manner that gives effect to both, avoiding any interpretation that renders either clause redundant.
- Landmark Cases: Shankari Prasad v. Union of India (1951), In Re: Kerala Education Bill (1958) (harmonizing Fundamental Rights with Directive Principles of State Policy), and CIT v. Hindustan Bulk Carriers (2003) (codifying five fundamental principles of harmonious reading).

Significance for Democratic Governance:

- Preserving Constitutional Equilibrium: Prevents institutional overreach and arbitrariness by demarcating clear operational domains for the union, states, and the three branches of government.
- Protecting Fundamental Liberties: Shields citizens from legislative overreach by testing statutes against constitutional limits via severability, eclipse, and basic structure doctrines.
- Maintaining Federal Flexibility: Prevents rigid jurisdictional gridlock through doctrines like pith and substance, territorial nexus, and harmonious construction, enabling state and union governments to address emerging socio-economic needs without invalidating legitimate laws.

Conclusion:

The constitutional doctrines evolved by the Supreme Court reflect the adaptive strength of the Indian Constitution as a living instrument. By establishing functional tests for legislative competence, administrative authority, and fundamental rights, these principles provide the operational framework that allows Indian democracy to navigate contemporary governance challenges while holding fast to its foundational values.

Proposed Article 371(K)

Context:

The Ministry of Home Affairs (MHA) has proposed inserting a new constitutional provision, Article 371(K) (or Chapter K under Part XXI), to establish a directly elected governing body with legislative powers for the Union Territory of Ladakh.



Proposed Article 371(K)

About Proposed Article 371(K):

What it is?

- A proposed constitutional amendment under Part XXI of the Constitution (Temporary, Transitional and Special Provisions) intended to create a sui generis (unique) model of governance for the Union Territory of Ladakh. It provides for a directly elected UT-level governing body vested with legislative authority over specified subjects.

Background:

- Following the bifurcation of the erstwhile state of Jammu and Kashmir under the J&K Reorganisation Act, 2019, Ladakh was carved out as a Union Territory without a legislative assembly.
- The transition resulted in governance largely led by bureaucrats and the Lieutenant Governor rather than elected representatives, sidelining the existing Autonomous Hill Development Councils (LAHDC Leh and Kargil).
- In response, the Leh Apex Body (LAB) and Kargil Democratic Alliance (KDA) joined forces, demanding full statehood, protection under the Sixth Schedule, dedicated public service commissions, and parliamentary representation.
- Aim: To restore democratic governance in Ladakh, protect tribal rights, land and ecology, and address political alienation without granting statehood or Sixth Schedule status.

Key Features:

- Directly Elected UT-Level Legislative Body: Mandates the creation of a territorial governing body elected through direct universal franchise, transitioning Ladakh away from purely bureaucratic administration.
- Legislative Domain over Critical Subjects: Grants legislative authority over ecologically and culturally sensitive domains, including land rights, transfer of property, culture and language, forests, environment, and natural resources.

- Concurrence with Article 240 Regulations: Entails powers over subject matters otherwise reserved for presidential regulations for Union Territories under Article 240 of the Constitution.
- Tailored Constitutional Safeguards (Sui Generis Model): Mirrors the protective mechanisms found in Articles 371A (Nagaland) and 371G (Mizoram), where central laws on land and local traditions do not apply automatically without local legislative assent.
- Pending Crucial Jurisdictions: The proposed framework currently leaves critical domains undecided—notably financial autonomy, budget allocations, executive decision-making, and command over police and public order.

Criminalisation of Politics: Why Special MP/MLA Courts Are Failing to Clear the Backlog

Context:

An August 2026 amicus curiae report to the Supreme Court revealed that criminal cases against sitting and former MPs/MLAs increased from 4,075 in 2018 to 4,266 in July 2026, despite dedicated Fast Track Courts.

Criminalisation of Politics

About Criminalisation of Politics: Why Special MP/MLA Courts Are Failing to Clear the Backlog

What it is?

- Special MP/MLA Courts were instituted following the Supreme Court's landmark order on December 14, 2017, in *Ashwini Kumar Upadhyay v. Union of India*. Disturbed by the deepening criminalization of politics, the apex court directed the setting up of 12 dedicated Fast Track Courts across 10 States/UTs to fast-track long-pending criminal trials involving elected representatives.

Key Findings:

- Persistent Backlog: Despite special courts, pending cases against MPs/MLAs rose from 4,075 in 2018 to 4,266 in July 2026.
- Prolonged Trials: Around 1,838 cases have remained pending for over five years, including 746 for more than a decade.
- Fresh Cases Offset Disposal: In 2025, special courts disposed of 1,454 cases, but 1,234 new cases substantially offset the reduction.
- Legislators Face Significant Pendency: Cases involve 401 sitting MPs, 1,393 sitting MLAs, and several former legislators, while 14 State Chief Ministers also face pending cases.
- Regional Concentration: Uttar Pradesh (1,220) has the highest pendency, followed by Kerala (543), Bihar (373), Maharashtra (364) and Odisha (330).

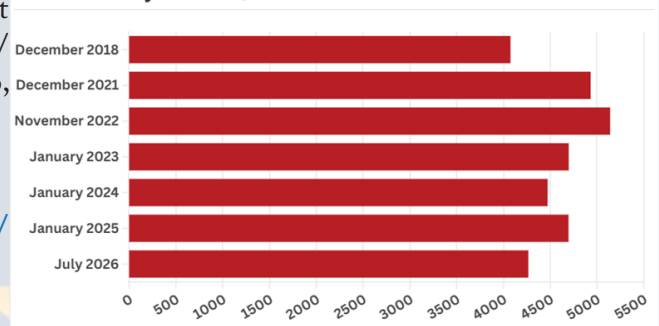
Extent of Criminalization: Current Legislative Landscape (ADR Data)

- 18th Lok Sabha: Out of 543 members, 251 MPs (46%) have declared criminal cases in their election affidavits; 170 MPs (31%) face serious criminal charges punishable with imprisonment of 5 years or more.
- Rajya Sabha: Out of 233 members, 75 MPs (33%) have declared criminal cases, with 40 MPs (18%) facing serious criminal charges.
- State Legislative Assemblies: Across 4,111 sitting MLAs nationwide, 2,098 MLAs (51%) have criminal cases pending, with 1,286 MLAs (31%) facing serious criminal allegations.

Why Fast Track Courts Never Got Fast?

- Non-Dedicated Courts: Many designated special courts are not exclusively earmarked for legislator trials; presiding judges concurrently handle routine sessions trials, and narcotics matters, diluting time allocated to high-profile cases.
- Frequent High Court Stays (Section 482 CrPC / Section 528 BNSS): Accused politicians frequently approach High Courts to quash charges or challenge interlocutory trial orders, obtaining interim stays that stall trial court proceedings for years.
- Subordination of State Investigative & Prosecution Wings: State police agencies and public prosecutors

Pendency of MP/MLA cases from 2018 to 2026



operate under the administrative control of the state home department (executive), resulting in delayed chargesheets, slow summons execution, and deliberate procedural foot-dragging.

- **Witness Vulnerability & Hostility:** The extended length of trials—often spanning decades—operates in favor of influential politicians who use administrative clout to wear down complainant resolve, leading to witnesses turning hostile or evidence deteriorating.
- **Liberal Adjournments by Trial Judges:** Despite apex court directives against casual adjournments, trial courts frequently grant routine postponements due to the non-appearance of accused lawmakers or failure of police to produce material witnesses.
- **Inadequate High Court Supervision:** Special monitoring benches headed by High Court Chief Justices have been irregular in their oversight, frequently adjourning the mandatory suo motu monitoring proceedings.

Statutory & Electoral Reform Debates:

Disqualification on Framing of Charges:

- The Law Commission of India (170th Report, 1999) recommended disqualifying individuals from contesting elections immediately upon the framing of charges by a competent court for serious election offences or offences punishable with life imprisonment.
- The Election Commission of India (2004 Proposals) reiterated that candidates against whom charges have been framed for offences carrying 5+ years imprisonment should be debarred from contesting elections.
- **Challenging the 6-Year Disqualification Limit:** The Supreme Court is currently examining the constitutionality of Section 8 of the Representation of the People Act, 1951, which limits disqualification to the period of imprisonment plus an additional six years from release. Public interest petitions seek a permanent lifetime electoral ban for convicted politicians, matching the lifetime disqualification rules governing civil servants and judges.

Way Ahead:

- **Exclusively Dedicated Special Courts:** Mandate that MP/MLA fast-track courts hear legislator cases exclusively on a day-to-day basis until full disposal, prohibiting the transfer of general trial dockets to these benches.
- **Time-Bound High Court Stay Petitions:** As recommended by judicial experts, High Courts must exercise extreme restraint in staying trials, mandating that any interim stay application be disposed of within a strict 30 to 60-day deadline.
- **Independent Directorate of Prosecution:** Structurally insulate prosecuting officers and investigating officers in MP/MLA cases from the state executive, placing them under independent judicial supervision.
- **Strict Non-Appearance Penalties:** Implement amicus curiae recommendations to mandate the automatic issuance of Non-Bailable Warrants (NBWs) if an accused legislator fails to appear for two consecutive trial dates without medical justification.
- **Day-to-Day Trial Hearings for 3+ Year-Old Cases:** Enforce continuous day-to-day trial proceedings for all cases pending for more than three years until prosecution and defense witness cross-examinations are concluded.

Conclusion:

The growing pendency of criminal cases against lawmakers undermines public confidence in democratic institutions and the rule of law. When individuals facing serious criminal charges continue to legislate and govern, judicial delays inadvertently reinforce political impunity. Establishing truly dedicated trial benches, capping interlocutory stays, and enforcing day-to-day trial procedures are essential to ensuring that Fast Track Courts deliver timely justice and sever the nexus between crime and legislative power.

The Foreign Contribution Regulation Act (FCRA) & the 2026 Amendment Bill

Context:

The proposed Foreign Contribution (Regulation) Amendment Bill, 2026 has raised concerns over tighter regulation of NGOs and provisions relating to assets created from foreign contributions when FCRA registration ceases.



The Foreign Contribution Regulation Act

About The Foreign Contribution Regulation Act (FCRA) & the 2026 Amendment Bill:

What it is?

- It is an Indian law that regulates the acceptance and utilisation of foreign contributions and foreign hospitality by individuals, associations and organisations, including NGOs.
- It is administered by the Ministry of Home Affairs (MHA). Its broad objective is to ensure that foreign funds do not adversely affect India's sovereignty, security, public interest or democratic processes.

Historical Evolution of FCRA:

- FCRA, 1976: Enacted during the Emergency to prevent foreign intelligence apparatuses and external entities from covertly influencing India's electoral politics, public policy, and democratic institutions.
- FCRA, 2010: Replaced the 1976 Act to consolidate regulations governing foreign hospitality and contributions, ensuring funding aligned with national security and public interest.
- 2020 Amendments: Significantly tightened operational compliance by barring sub-granting/re-granting of foreign funds, reducing administrative expense caps from 50% to 20%, and mandating that all primary foreign inflows pass through a designated FCRA account at the State Bank of India (SBI), New Delhi Main Branch.

Core Provisions of the Proposed FCRA Amendment Bill, 2026:

- Asset Vesting in a Designated Authority: If an NGO's FCRA certificate is cancelled, surrendered, or automatically lapses (deemed cessation), all unutilized foreign contributions and physical assets created out of foreign funds provisionally vest in a government-appointed Designated Authority.
- Permanent Confiscation & Liquidation: If registration is not restored within a prescribed statutory window, the assets permanently vest with the Authority, allowing the government to transfer them to public departments or auction them, crediting the sale proceeds to the Consolidated Fund of India.
- Judicial Recourse: Provides a provision for revision and allows an aggrieved organisation to appeal the Designated Authority's orders before a District Judge within 90 days.
- Deemed Cessation: Introduces automatic cessation of registration if renewal applications are denied, not submitted, or unresolved before license expiration.
- Rationalized Penalties: Proposes reducing the maximum prison term for specific FCRA compliance violations from five years to one year.

Key Data & Civil Society Realities:

- Sharp Shrinkage in Active Registrations: The Union Ministry of Home Affairs (MHA) has cancelled the FCRA registrations of 22,496 NGOs since 2015, leaving only 14,466 active registered associations eligible to receive foreign grants as of September 2026.
- Volume of Foreign Aid: Despite the regulatory tightening, total annual foreign inflows received by eligible NGOs remain substantial, surpassing the 12,289.6 crore recorded in FY 2006–07.
- Indian Billionaires & Private Wealth: The Forbes 2026 list identifies 229 billionaires in India (part of 3,332 globally), placing the country 3rd worldwide behind the United States and China.

The Domestic Philanthropic Landscape (Bain & Co. Report):

- Private domestic philanthropy was projected to reach 1.43 lakh crore (\$16 billion) in FY 2025.
- Everyday retail giving by individual citizens accounts for approximately 37,000 crore annually.
- The Structural Deficit: The funding gap between civil society demand and domestic philanthropic supply is projected to widen to 18 lakh crore (\$210 billion) by 2030.
- Corporate Social Responsibility (CSR) Inflows: Under Section 135 of the Companies Act, 2013, CSR expenditure by listed companies reached 22,563 crore in FY 2025 (a 17.5% year-on-year rise according to CRISIL).

Primary Concerns Raised Against the 2026 Bill:

- Disruption of Essential Grassroots Services: Minority-run charities and Christian organizations—which receive a notable portion of foreign religious and social grants—operate extensive networks of schools,

health clinics, and elderly care homes. In remote tribal belts and the Northeast, these institutions often serve as the sole service providers.

- **Inability to Exit Without Asset Forfeiture:** The Bill creates a regulatory dilemma where an NGO cannot voluntarily choose to let its FCRA registration lapse to rely exclusively on domestic funding without surrendering physical infrastructure built with past foreign funds.
- **Discretionary Executive Authority:** Civil society groups argue that vesting private charitable property in an executive-appointed authority without prior judicial sanction raises concerns regarding procedural fairness and property rights.
- **Chilling Effect on Democratic Advocacy:** Strict reporting and asset vulnerability risk disincentivizing NGOs from engaging in rights-based advocacy, public accountability campaigns, and environmental assessments.

Shifts in Domestic Philanthropy & Funding Mismatches:

- **New Wealth Priorities:** Modern Indian tech entrepreneurs and venture philanthropists increasingly direct capital toward higher education, scientific research, climate deep-tech, and ecosystem building.
- **Neglect of Traditional Welfare Sectors:** While advanced institutional funding is vital for economic modernization, it reduces the share of domestic grants flowing to frontline, labor-intensive charities providing basic primary health, non-formal education, and rural poverty relief.
- **Limitations of CSR Funding:** CSR allocations remain strictly bound by Schedule VII mandates of the Companies Act, making corporations risk-averse and hesitant to fund organizational overheads, investigative social research, or marginalized civil rights causes.

Way Ahead:

- **Establishing Balanced Statutory Safeguards:** Introduce clear legal thresholds and independent administrative tribunals to ensure that property created from foreign donations is not seized or liquidated for minor technical reporting lapses.
- **Incentivizing Domestic Foundation Endowments:** Overhaul domestic tax incentives under Sections 11, 12A, and 80G of the Income Tax Act to encourage ultra-high-net-worth individuals (UHNWIs) to build long-term, unrestricted corpus endowments for non-profit organizations.
- **Evolving Corporate CSR Partnerships:** Encourage corporate boards to move beyond short-term, transactional compliance by providing multi-year unrestricted grants that cover NGO operational capacity and staff training.
- **Fostering Transparent Funder-NGO Dialogues:** Bridge the trust deficit between civil society, domestic philanthropists, and the state by creating institutional consultation forums that address governance standards and grassroots priorities.
- **Diversifying Community and Retail Giving:** Leverage India's Digital Public Infrastructure (UPI, Social Stock Exchange) to scale transparent, direct micro-donations, reducing dependence on both foreign aid and corporate CSR monopolies.

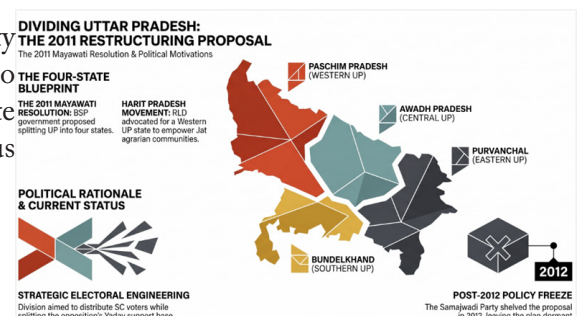
Conclusion:

The debate surrounding the FCRA Amendment Bill, 2026 highlights the challenge of balancing national security oversight with the operational autonomy of civil society. While the state seeks to prevent illicit foreign influence, an overly restrictive framework risks weakening charitable institutions that serve millions of vulnerable citizens. Transitioning to a resilient social sector will require pairing proportional legal regulations with a mature domestic philanthropic ecosystem that actively supports grassroots welfare.

Regionalism in India: The Debate Over Dividing Uttar Pradesh into Four States

Context:

Uttar Pradesh cabinet minister and Suheldev Bhartiya Samaj Party (SBSP) chief claimed that Uttar Pradesh could soon be divided into four separate states following the conclusion of the ongoing caste census, reigniting debate over reorganizing India's most populous state.



Regionalism in India

About Regionalism in India: The Debate Over Dividing Uttar Pradesh into Four States

What it is?

- Regionalism refers to the political, cultural and territorial aspirations of people sharing a distinct regional identity. In India, it emerges from common language, history, geography and perceptions of economic or administrative neglect.

Evolution of Regional Reorganisation in India:

- Colonial Legacy: Colonial boundaries reflected administrative convenience rather than linguistic identities. After independence, India initially classified its states into Part A, B, C and D.
- Linguistic Reorganisation (1953): Potti Sreeramulu's death following a prolonged fast accelerated the creation of Andhra State, marking a turning point in linguistic statehood.
- States Reorganisation Act (1956): Based on the Fazl Ali Commission, it reorganised India into 14 states and six Union Territories, balancing linguistic identity with administrative efficiency.
- Subsequent Reorganisation: Maharashtra and Gujarat emerged in 1960, followed by northeastern states. Chhattisgarh, Jharkhand and Uttarakhand were created in 2000, and Telangana in 2014.

Constitutional Mechanism of State Division (Article 3):

- The reorganization of states in India is governed by Article 3 of the Constitution, which empowers Parliament to form new states, alter areas, boundaries, or names of existing states by law:
- Presidential Recommendation: A Bill for reorganizing a state can be introduced in either House of Parliament only on the prior recommendation of the President.
- Reference to State Legislature: Before recommending the Bill, the President must refer it to the concerned State Legislature to express its views within a specified timeframe.
- Non-Binding State Views: The views or resolutions passed by the State Legislature are purely consultative and not binding on Parliament or the President; Parliament may accept or reject them.
- Legislative Threshold: The Bill requires only a simple majority of members present and voting in both Houses of Parliament, giving the Union legislature plenary authority over internal territorial reorganisation.

Major Causes of Regionalism:

- Centralisation of Power: Perceived excessive central control over fiscal resources, legislation, and administration can intensify demands for greater state autonomy.
- Example: Southern states protesting against fiscal centralisation under the GST regime and declining horizontal tax devolution shares from the 15th Finance Commission.
- Uneven Regional Development: Disparities in infrastructure, investment, and resource distribution generate resentment in economically neglected regions, as illustrated by Vidarbha.
- Example: The persistent demand for separate statehood for Vidarbha in Maharashtra due to acute agrarian distress and infrastructure deficits compared to the Western Maharashtra belt.
- Resource-Based Inequality: Mineral-rich regions may experience inadequate local industrialisation and environmental degradation, reinforcing demands for equitable resource distribution.
- Example: Jharkhand and Chhattisgarh's long-standing grievances regarding the resource curse—mining coal and iron ore for national industry while bearing displacement and pollution.
- Cultural and Linguistic Identity: Communities mobilise to protect their language, traditions, and historical identity when they perceive threats to regional distinctiveness.
- Example: Protests across Tamil Nadu and Karnataka against perceived Hindi imposition in central bank recruitment exams, official signage, and railway announcements.
- Political Mobilisation: Regional parties organise cultural and economic grievances into political demands, increasing regional representation within democratic institutions.
- Example: The Telangana Rashtra Samithi (now BRS) channelled regional grievances over employment, water, and funds into mass mobilization, leading to the creation of Telangana in 2014.

Positive Impacts of Regionalism:

- **Accommodation of Diversity:** Recognition of linguistic and cultural identities enables regional aspirations to be expressed within India's constitutional and democratic framework.
- **Example:** Linguistic reorganisation of states via the States Reorganisation Act (1956) diffused ethnic fault lines and integrated states like Andhra Pradesh smoothly into the Union.
- **Political Inclusion:** Regional movements can strengthen the representation of historically marginalised communities, including tribal populations and socially disadvantaged groups.
- **Example:** Autonomous District Councils under the Sixth Schedule in Meghalaya, Mizoram, and Assam providing direct administrative and legislative voice to tribal communities.
- **Decentralised Development:** Smaller administrative units may improve governance accessibility and facilitate targeted investment in historically neglected regions.
- **Example:** The bifurcation of Uttarakhand from Uttar Pradesh in 2000, which enabled higher per-capita infrastructure spending and focused policy targeting for Himalayan hill districts.

Challenges Associated with Regionalism:

- **Restrictions on Mobility:** Exclusionary local-preference policies can create tensions with constitutional guarantees of equality, employment opportunities, and freedom of movement.
- **Example:** State laws mandating 75% local quotas in private sector jobs, which faced constitutional challenges under Article 19(1)(d) and Article 16.
- **Inter-State Disputes:** Competition over river waters, territorial boundaries, and financial resources can intensify political tensions and delay negotiated settlements.
- **Example:** The ongoing Cauvery river water sharing dispute between Karnataka and Tamil Nadu, frequently triggering regional bandhs and border blockades.
- **Weak Federal Coordination:** Underutilisation of the Inter-State Council and Zonal Councils can limit institutional dialogue and prolong regional disputes.
- **Example:** The Inter-State Council (Article 263) meeting only 11 times since its 1990 inception, leaving crucial Centre–state disputes to escalate to the Supreme Court instead of political resolution.
- **Delimitation Concerns:** Differences in population growth across states raise questions about equitable parliamentary representation and the balance between demographic and regional interests.
- **Example:** Southern states' apprehensions of losing parliamentary seats and political leverage post-2026 delimitation despite effectively implementing national family planning targets.

Way Forward:

- **Strengthen Cooperative Federalism:** Revitalise the Inter-State Council under Article 263 and Zonal Councils through regular dialogue on fiscal, territorial, and resource disputes.
- **Ensure Equitable Development:** Promote balanced regional investment, infrastructure development, and fiscal transfers that account for economic disparities and demographic differences.
- **Evidence-Based State Reorganisation:** Evaluate demands for new states through transparent assessments of administrative viability, population, economic capacity, and public service delivery.
- **Promote Inclusive Regional Identity:** Protect linguistic and cultural diversity while upholding constitutional equality, freedom of movement, and equal citizenship.

Conclusion:

The debate over dividing Uttar Pradesh reflects the classic federal dilemma between administrative efficiency and political power. While smaller administrative units can deliver more responsive public delivery and address acute regional inequalities in Bundelkhand and Purvanchal, the state's collective size remains its greatest political asset in national governance. Any future reorganization will require balancing the administrative imperative for governance with economic viability and consensus across federal stakeholders.

The Chief Election Commissioner and Other Election Commissioners Act, 2023

Context:

A two-judge bench of the Supreme Court of India delivered a split verdict regarding whether petitions challenging the Chief Election Commissioner and Other Election Commissioners Act, 2023, must be adjudicated by a five-judge Constitution Bench.

The Chief Election Commissioner and Other Election Commissioners Act, 2023

About The Chief Election Commissioner and Other Election Commissioners Act, 2023:



What it is?

- A parliamentary statute that repeals the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991, establishing a formal statutory framework governing the appointment process, qualifications, service conditions, tenure, and transaction of business for the Chief Election Commissioner (CEC) and other Election Commissioners (ECs).
- Aim: To implement Article 324(2) of the Constitution by establishing a law governing appointments to the Election Commission of India (ECI) and replacing the longstanding practice of appointments made on the advice of the Union executive.

Background:

- Constitutional Gap: Article 324(2) empowers Parliament to legislate on ECI appointments. In the absence of such a law for over seven decades, appointments were made on the advice of the Union executive.
- Anoop Baranwal Judgment: To safeguard ECI independence, the Supreme Court established an interim selection committee comprising the PM, Lok Sabha LoP and CJI, pending parliamentary legislation.
- Legislative Response: Parliament enacted the 2023 Act, establishing a statutory selection process that replaced the CJI with a Union Cabinet Minister nominated by the PM.

Key Features of the Act:

Two-Tier Selection Mechanism:

- Search Committee: Chaired by the Union Minister of Law and Justice, alongside two senior bureaucrats (not below the rank of Secretary to the Government of India), tasked with preparing a panel of five eligible candidates.
- Selection Committee: Recommends appointments to the President, comprising the Prime Minister (Chairperson), a Union Cabinet Minister nominated by the PM, and the Leader of the Opposition (or leader of the single largest opposition party) in the Lok Sabha.
- Selection Flexibility: The Selection Committee is empowered to regulate its own procedure transparently and may consider candidates beyond the five shortlisted by the Search Committee.
- Prescribed Eligibility Criteria: Candidates must be persons of proven integrity, possess extensive experience in the management and conduct of elections, and be currently holding or have held a post equivalent to Secretary to the Government of India.

Tenure, Salary, and Reappointment Bar:

- Appointees serve a term of six years or until attaining the age of 65 years, whichever is earlier, with a combined cap of six years if an EC is elevated to CEC.
- Reappointment is strictly prohibited.
- The salary, allowances, and service conditions are statutorily pegged to those of a Supreme Court Judge (restored from an earlier draft that proposed parity with the Cabinet Secretary).
- Protection from Legal Proceedings: Protects serving and former CECs and ECs from civil or criminal proceedings in any court for acts, words, or actions taken during the official discharge of their statutory or constitutional functions.

Political Funding in India: The RUPP Conundrum

Context:

Former Election Commissioner Ashok Lavasa, highlighted unaccounted political funding following a BBC investigation into suspicious RUPP donations. He called for action against shell parties, independent audits and tax-exemption reforms.

Political Funding in India: The RUPP Conundrum

About Political Funding in India: The RUPP Conundrum

What is an RUPP?

- A Registered Unrecognised Political Party (RUPP) is a political party registered with the Election Commission of India (ECI) under Section 29A of the Representation of the People Act, 1951, but which has not fulfilled the electoral performance criteria required for recognition as a national or state party.

Constitutional and Legal Framework:

- **Constitutional Status:** Political parties are not comprehensively defined in the Constitution, though the Tenth Schedule recognises them under anti-defection provisions. Their formation is protected by Article 19(1)(c).
- **Registration and Deregistration:** Section 29A of the RPA, 1951 governs party registration. The Supreme Court's 2002 ruling permits deregistration only in exceptional circumstances, including fraudulent registration.
- **Delisting and Deregistration:** The ECI can delist RUPPs that fail to contest elections for six consecutive years. Delisting removes them from its operational list but differs from formal statutory deregistration.
- **Income-Tax Exemptions:** Section 13A provides conditional tax exemptions to registered political parties, subject to audited accounts, prescribed donation records, contribution reporting and timely tax returns.

Scale of Political Wealth and the RUPP Conundrum:

- **Rising RUPP Income:** According to the cited ADR figures, RUPP income increased by 223% in FY 2022–23, while only 739 of 2,764 parties submitted audited accounts.
- **Enforcement Gaps:** The ECI delisted 334 of 2,854 RUPPs in August 2025 for prolonged electoral inactivity and related non-compliance, highlighting limitations in party oversight.
- **2024 Election Finances:** The cited CHRI study reports that 22 parties held 18,742.31 crore, received 7,416.31 crore in fresh donations and spent 3,861.57 crore during the election period.
- **Unspent Political Funds:** According to the same figures, the 22 parties retained 14,848.46 crore in reserves, including bank deposits and cash, after their election expenditure.
- **Revenue Implications:** The cited estimate places revenue forgone through tax exemptions on political contributions at 11,813 crore over a decade, raising questions about fiscal transparency.
- **Changing Donor Patterns:** In FY 2022–23, individuals and HUFs reportedly claimed 2,275.85 crore in tax deductions, compared with 514.4 crore by companies and 115.71 crore by firms and associations.
- **Unclaimed Tax Deductions:** Of 28,287 crore in reported political donations over nine years, only 41.76% reportedly attracted tax-deduction claims. The remaining share warrants examination but does not itself establish wrongdoing.

Structural Vulnerabilities in Political Finance:

- **Inactive Political Parties:** RUPPs that neither contest elections nor submit financial disclosures can create regulatory vulnerabilities, including potential misuse of donations and inflated expenditure reporting.
- **Post-Electoral Bonds Transparency:** The Supreme Court invalidated the Electoral Bond Scheme in 2024 on constitutional grounds. Questions remain about donor transparency, corporate influence and safeguards against potential conflicts of interest.
- **RTI Compliance Dispute:** The CIC's 2013 ruling classified certain national political parties as public authorities under the RTI Act. Its implementation remains contested, limiting the intended disclosure framework.



- **Uncapped Party Expenditure:** Although individual candidates face statutory election expenditure limits, political parties have no equivalent overall statutory ceiling, allowing substantial spending on campaigning and advertising.

Way Ahead:

- **Independent Financial Audits:** One proposal is to establish independent audits of political parties through CAG-empowered auditors, with appropriate legislation defining the ECI's supervisory authority.
- **Statutory Deregistration Powers:** Parliament could amend Section 29A to establish explicit deregistration grounds, including prolonged inactivity, proven financial fraud and persistent non-compliance with disclosure requirements.
- **Campaign Expenditure Regulation:** A statutory ceiling on party expenditure, accompanied by clearly defined tax-exemption rules, could be considered to regulate campaign financing.
- **Standardised Financial Reporting:** A unified digital portal could require registered parties to publish audited accounts, itemised expenditure and donor disclosures in standardised, publicly accessible formats.
- **Independent Investigation:** Credible evidence of suspicious donations or financial irregularities could trigger independent investigations, with judicial oversight where legally warranted and appropriate safeguards for due process.

Conclusion:

The unchecked proliferation of inactive RUPPs highlights how the lack of statutory deregistration powers has turned the electoral registry into a potential vehicle for tax evasion and opaque funding. Reclaiming the integrity of elections requires closing statutory loopholes under the Representation of the People Act, subjecting party accounts to public audits, and strictly conditioning tax exemptions on transparent democratic participation.

The Collegium System

Context:

The Supreme Court Collegium headed by Chief Justice of India recommended Gujarat High Court Chief Justice Sunita Agarwal, Delhi High Court Chief Justice Devendra Kumar Upadhyaya, and Telangana High Court Chief Justice Aparesh Kumar Singh for appointment as apex court judges.



The Collegium System

About The Collegium System:

What it is?

- The institutional mechanism in India through which a closed council of senior judges recommends appointments, elevations, and transfers of judges to the Supreme Court and the High Courts. It is an extraconstitutional body not explicitly mentioned in the text of the Constitution of India or established by an Act of Parliament, but developed entirely through judicial pronouncements.

History & Judicial Evolution:

- **First Judges Case (P. Gupta v. Union of India, 1981):** The Supreme Court held that “consultation” did not mean “concurrence”, giving the executive greater say in judicial appointments.
- **Second Judges Case (Supreme Court Advocates-on-Record Association v. Union of India, 1993):** The Court reversed this position and established the Collegium system, giving the judiciary primacy in appointments.
- **Third Judges Case (In re Special Reference 1 of 1998):** The Court expanded the Supreme Court Collegium to five members: the CJI and four senior-most judges, shaping its present structure.
- **Fourth Judges Case (2015):** The Supreme Court struck down the 99th Constitutional Amendment and NJAC Act, holding that they compromised judicial independence, and restored the Collegium system.
- **Aim:** To protect judicial independence from political and executive interference and ensure appointments and transfers are based on legal competence, integrity and peer assessment.

Key Features:

- **Tiered Collegium Structure:** The Supreme Court Collegium comprises the CJI and four senior-most judges, while High Court Collegiums comprise the Chief Justice and two senior-most judges.
- **Judicial Primacy:** The government may return a recommendation for reconsideration, but a reiterated Collegium recommendation carries binding effect under the established appointments framework.
- **Consultation with Judges:** For High Court candidates, the Collegium consults relevant Supreme Court judges familiar with the concerned High Court.
- **Memorandum of Procedure:** The MoP governs the appointment process, including background verification, government inputs and procedural stages.
- **High Court Transfers:** The Collegium recommends transfers of High Court Chief Justices and judges under Article 222 to serve judicial administration.

Significance:

- **Judicial Independence:** Limits executive dominance in judicial appointments, reinforcing the independence of the judiciary and separation of powers.
- **Institutional Autonomy:** Enables the higher judiciary to exercise independent constitutional review and scrutinise executive action without undue political influence.

J&K's Evolving Constitutional Status

Context:

Jammu and Kashmir Chief Minister Omar Abdullah introduced a resolution in the Legislative Assembly demanding the immediate restoration of full statehood.

J&K's Evolving Constitutional Status

About J&K's Evolving Constitutional Status:

What It Is?

- It refers to the legal, political, and institutional evolution of Jammu and Kashmir within the Indian federal structure—transitioning from an autonomous princely state with an asymmetrical constitutional setup, its own constitution, and special citizenship definitions, to complete integration and reorganization as a Union Territory, and currently toward the demand for restored full statehood.



Historical Genesis:

- **Instrument of Accession (1947):** Following an invasion by armed Pakistani tribal irregulars (Kabailis), Maharaja Hari Singh signed the Instrument of Accession on October 26, 1947, acceding defense, external affairs, and communications to India.
- **UN Intervention & Stalled Plebiscite (1948):** India took the matter to the UN Security Council in January 1948; UNSC Resolution 47 proposed a truce and plebiscite contingent on complete Pakistani demilitarization, which never occurred.
- **Adoption of Article 370 (1949):** Framed in the Constituent Assembly by N. Gopalaswami Ayyangar as an interim, transitional mechanism because the region was not yet ripe for full integration amid external conflict and UN entanglement.
- **Delhi Agreement (1952):** Signed between Jawaharlal Nehru and Sheikh Abdullah, accepting the appellate jurisdiction of the Supreme Court, the primacy of the National Flag, and emergency provisions under Article 325/352, while retaining the state flag.
- **The 1954 Presidential Order & Article 35A:** The Constitution (Application to Jammu and Kashmir) Order, 1954 formally inserted Article 35A into the Constitution, empowering the J&K Assembly to define permanent residents and restrict land ownership and public employment to them.

Constitutional Status: Pre-2019 Architecture

- Asymmetrical Autonomy under Article 370: Only Article 1 (territory of India) and Article 370 applied automatically; parliamentary laws on non-accession subjects required the concurrence or consultation of the state government.
- Separate State Constitution: J&K operated under its own Constitution (adopted in 1956), which declared the state an integral part of India while maintaining a distinct institutional executive and legislature.
- Exclusionary Citizenship Rights (Article 35A): Conferred exclusive rights to permanent residents regarding immovable property purchases, state scholarships, voting in assembly elections, and public sector employment, barring outside citizens.
- Dual Flags & State Identity: Recognized a separate state flag alongside the Indian tricolor and shielded local customary personal laws and land tenures from general constitutional amendments.
- Internal Security & Emergency Nuance: Proclamation of internal Emergency under Article 352 within the state required prior concurrence from the J&K government, limiting direct central executive interventions.

The 2019 Constitutional Changes & Reorganisation:

- Use of Article 370(1) & Article 367: Through Constitutional Order (CO) 272 on August 5, 2019, the President amended Article 367, construing Constituent Assembly of the State in Article 370(3) to mean the Legislative Assembly of the State.
- Governor's Concurrence during President's Rule: Because the J&K Assembly was dissolved and the state was under President's Rule under Article 356, the Governor's administrative concurrence was treated as the requisite recommendation of the state legislature.
- Declaration of Inoperability (CO 273): All clauses of Article 370 were rendered inoperative, abrogating Article 35A and extending the Indian Constitution in its entirety to the territory.
- Bifurcation into Union Territories: The Jammu and Kashmir Reorganisation Act, 2019 divided the state into two Union Territories—Jammu & Kashmir (with a legislative assembly) and Ladakh (without a legislature).

Present Demand for Statehood:

- Assembly Resolution for Restoration: The elected J&K Assembly has formally resolved to demand the immediate rollback of its Union Territory status and the reinstatement of full, democratic statehood.
- Electoral Self-Determination: Local political formations emphasize that a UT administration leaves legislative authority subordinate to the centrally appointed Lieutenant Governor, diluting the democratic mandate of elected representatives.
- Protection of Land and Employment: Demands center on securing protective domiciliary and economic safeguards (analogous to Article 371 or Sixth Schedule provisions) to protect local youth from outside competition in jobs and land holdings.
- Enforcing Judicial Commitments: Regional leaders cite the Supreme Court's December 2023 verdict (In Re: Article 370), where the Union Government gave a solemn assurance that statehood would be restored at the earliest feasible time.

Key Implications:

- Restoration of Federal Parity: Elevating J&K from a Union Territory back to a full state would restore federal equilibrium, expanding state legislative competence over public order and police.
- Rebalancing Executive Authority: Shifts primary administrative control from the Union-appointed Lieutenant Governor back to the Chief Minister and Council of Ministers under Article 163.
- Investor Confidence & Economic Integration: Clear constitutional permanence eliminates regulatory uncertainty, boosting tourism, cold-chain agro-logistics, and industrial investment across the Jammu and Kashmir divisions.
- Regional Political Dynamics: Resolving statehood provides political closure on post-2019 reorganization debates, helping channel democratic energy toward economic governance, employment, and grassroots development.

Conclusion:

Jammu and Kashmir's constitutional journey from asymmetrical autonomy under Article 370 to complete integration has altered its position within the Indian Union. While the abrogation of special provisions stands affirmed by the Supreme Court, the constitutional pledge to restore full statehood remains the primary democratic expectation. Transitioning J&K from an administratively centralized Union Territory back to a self-governing federal state will be crucial to fulfilling the aspirations of its people and strengthening India's democratic framework.

The Report: Status of Policing in India Report (SPIR) 2026

Context:

The Status of Policing in India Report (SPIR) 2026 was released, based on a 16-State survey of 8,306 citizens mapping cybercrime exposure, vulnerability patterns, and police redressal mechanisms.

The Report: Status of Policing in India Report (SPIR) 2026

About The Report: Status of Policing in India Report (SPIR) 2026:

What It Is?

- An empirical, multi-state study evaluating the everyday interface between citizens and the police, tracking the lifecycle of cyber frauds from digital exposure and victimization to formal reporting and financial recovery.
- Published by: Conducted and published jointly by Lokniti–Centre for the Study of Developing Societies (CSDS) and Common Cause.

Key Findings in the Report:

- Divergent National Crime Trend: Cybercrime surged 17.9% (from 86,420 cases in 2023 to 1,01,928 in 2024 according to NCRB data), sharply contrasting with a 6% decline in overall registered crime nationwide.
- Pervasive Exposure to Scams: Fraudulent phone calls were common: 33% received calls regarding unordered deliveries, 31% faced high-return investment scams, and 27% encountered fake bank officials seeking personal account details.
- ScreenTime Directly Correlates with Risk: Citizens spending higher time online faced significantly greater exposure: 46% of high-usage respondents reported moderate-to-high scam encounters, compared to 19% among non-internet users.
- Prevalence of Financial Loss: Approximately 13% of surveyed citizens were direct victims of cybercrime within the last 2–3 years; among them, 54% experienced financial fraud, with 23% losing upwards of 20,000.
- Socio-Economic Skew in Fraud: Financial fraud was higher among privileged groups: 57% of affluent respondents were victims compared to 47% of the poor, and 59% of college graduates were targeted compared to 40% of non-literate citizens.
- Low Formal Reporting: Only 49% of victims lodged a formal police complaint, while 39% did not complain at all and 9% dropped out after the initial visit.
- Bribery as an Enforcement Catalyst: More than a quarter (27%) of complainants paid a bribe to the police; 41% of bribe-payers recovered their full lost money compared to just 12% who did not pay.
- Asymmetric Burden on Marginalized Groups: Poor victims were more than four times as likely to pay a bribe (51%) as the affluent (12%), and 55% of poor victims relied on informal networks of influence to move their cases forward.

Vulnerabilities in India:

- The Connectivity Tax: Increased digital inclusion and digital footprint without matching digital literacy make citizens accessible targets for social engineering, delivery scams, and institutional impersonation.
- Deepening Class and Education Targets: While fraudsters exploit illiterate users through fear, educated and high-income demographics are targeted with sophisticated investment, corporate, and banking frauds.

Informal routes

Bribery and personal influence function as parallel, unofficial channels through which cybercrime victims try to secure police action

Table 1: Women, poor and rural victims were more likely to pay a bribe to the police

Gender	Victims who paid bribes (in %)
Male	22
Female	35
Locality	
Rural	36
Urban	24
Economic class	
Poor	51
Lower	18
Middle	17
Rich	12

Note: The responses include only the victims who made a payment to the police.

Question asked: Did you have to make a payment to the police at any point?

Table 3: Social status of victims who used personal contacts to enable/ expedite police action

Gender	Victims contacting their personal network (in %)
Male	35
Female	41
Locality	
Rural	44
Urban	35
Economic class	
Poor	55
Lower	28
Middle	31
Rich	30

Note: The responses include only the victims who contacted someone in their personal network.

Question asked: Did you have to contact someone in your personal network to put pressure on the police to deal with your case properly?



Table 4: Recovery of money by cybercrime victims who used personal contacts to seek police action and those who did not (in %)

- Severe Disenfranchisement of the Poor: Lower-income households lack formal institutional leverage, leaving them dependent on informal channels or bribery to secure standard police intervention.
- Incentives for Extortion & Fake Authority: Criminal networks leverage public fear of law enforcement through fake arrest warrants, police impersonation calls, and extortion schemes.

Initiatives Taken So Far:

- National Cybercrime Reporting Portal (NCRP) & 1930 Helpline: Centralized citizen portal and emergency helpline (1930) operated under the Indian Cyber Crime Coordination Centre (I4C) for real-time reporting of financial frauds.
- Citizen Financial Cyber Fraud Reporting and Management System (CFCFRMS): An inter-agency integration mechanism enabling instantaneous freezing of defrauded funds across banks and digital wallets before cashouts occur.
- Sanchar Saathi Portal: Launched by the Department of Telecommunications (DoT) to trace and block stolen mobile handsets (CEIR) and disconnect fraudulently acquired SIM cards using facial recognition tools (ASTR).
- I4C Joint Coordination Framework: The Ministry of Home Affairs set up I4C to facilitate intelligence sharing, build capacities in state police units, and coordinate inter-state operational takedowns.

Challenges Associated:

- Informal Gatekeeping and Corruption: High incidence of bribery (27%) and reliance on personal connections create parallel justice pathways, penalizing marginalized citizens seeking statutory redress.
- Under-Reporting & Procedural Fatigue: Due to low police responsiveness and complex paperwork, 39% of victims abandon the legal process without lodging a complaint.
- Inter-Jurisdictional Delays: Frauds orchestrated across state or national boundaries create coordination bottlenecks between local police stations, out-of-state telecom providers, and financial intermediaries.
- Inadequate Local Cyber Forensics: Ground-level police stations lack dedicated forensic specialists and automated digital tools, resulting in delayed First Information Reports (FIRs) and lost recovery windows.

Way Ahead:

- Standardizing Automated FIR Registration: Make online complaint registration through the 1930/NCRP network an automatic, statutory Zero-FIR without requiring discretionary clearance at local police stations.
- Statutory Mandate for Bank-Police Freezing: Institutionalize a binding, automated protocol requiring banks and payment gateways to freeze suspicious mule accounts within minutes of a complaint, without manual paperwork.
- Anti-Corruption Oversight in Cyber Redressal: Deploy internal vigilance mechanisms, digital tracking of complaints, and independent audits to eliminate demands for bribes during the recovery and return of defrauded funds.
- Grassroots Cyber Literacy Campaigns: Shift public awareness from simple password protection to recognizing psychological manipulation, such as courier scams, fake institutional authority, and get-rich-quick investment schemes.

Conclusion:

The SPIR 2026 report demonstrates that cyber fraud has transformed from a mere hazard of carelessness into a structural penalty on digital connectivity itself. When the formal justice delivery mechanism demands bribes or informal connections for financial recovery, it reinforces inequality against vulnerable and marginalized citizens. Establishing automated, accountable, and transparent cyber policing is essential to safeguard citizen trust in India's digital economy.

ECI's Electoral Roll Management Systems

Context:

Maharashtra's Chief Electoral Officer sought changes to the ECI's ECINET platform to preserve EROs' statutory discretion in resolving voter-data discrepancies during the Special Intensive Revision (SIR), amid concerns over centralised software controls.

About ECI's Electoral Roll Management Systems:

About ECINET:

What it is?

- A unified digital umbrella platform and mobile application launched by the Election Commission of India in January 2026, consolidating more than 40 disparate portals, websites, and mobile applications into a single digital architecture for voters, candidates, political parties, and election administrators.
- Aim: To streamline the electoral tech ecosystem, enhance administrative transparency, eliminate software fragmentation across departments, and provide citizens with seamless single-window access to electoral roll services, candidate profiles, and polling booth details.

Key Features:

- **Comprehensive Super-App Integration:** Consolidates citizen-facing services (electoral roll search, Form 6/7/8 submissions, and e-EPIC downloads) alongside administrative modules for returning officers, observers, and security personnel.
- **Integrated Electoral Roll Module:** Subsumes and absorbs the backend functionalities of ERONET, operating as the overarching interface through which field staff and citizens process voter registrations and revisions.
- **Automated Logical Discrepancy Detection:** Deploys algorithmic cross-matching to flag anomalies between old and new rolls—such as parent-child age gaps under 15 or over 50 years, mismatched lineage names, or documentation gaps.
- **Role-Based Dynamic Access Control:** Employs mobile authentication and role-specific credential hierarchies to dictate which administrative actions can be initiated, modified, or approved across constituency, district, state, and national tiers.

Parameter	ERONET (Electoral Roll Management)	ECINET (Integrated Election Platform)
Scope	Dedicated backend system for electoral roll management .	Unified platform integrating 40+ election-related apps, portals and services .
Launch	Rolled out from around 2017 , replacing fragmented State/UT voter databases.	Formally launched on January 22, 2026 as ECI's integrated digital platform.
Functions	Processes Forms 6, 6A, 7 and 8 , deduplication and voter migration.	Covers the entire election lifecycle , including nominations, MCC monitoring, permissions, results and voter services.
Electoral Rolls	Earlier the standalone system for preparing and updating electoral rolls .	Hosts the Electoral Roll module, previously ERONET , within the integrated platform.
Users	Mainly used by BLOs, AEROs and EROs for administrative workflows.	Serves citizens, parties, candidates, observers, election officers and field staff .
Data & Analytics	Identified duplicates using basic demographic matching across constituencies.	Uses algorithmic cross-matching to flag logical discrepancies and data inconsistencies in electoral rolls.

ERONET

About ERONET:

What it is?

- A dedicated, centralized web-based form processing and decision-support system introduced by the ECI to replace 36 separate state and union territory electoral database systems with a single national database infrastructure.

- **Aim:** To standardize the processing of statutory voter forms (Forms 6, 6A, 7, and 8), automate inter-state/inter-district voter migration, detect duplicate registrations across constituencies, and support Electoral Registration Officers (EROs) in updating electoral rolls.

Key Features:

- **Decision Support Architecture (Non-Automated Deletions):** Functions strictly as a statutory decision-support tool rather than an autonomous decision-maker; flags duplicate entries or demographic similarities for field enquiry rather than auto-deleting records.
- **Seamless Nationwide Migration Tracking:** Automatically routes transfer requests when a voter moves from one constituency to another, notifying the previous ERO to initiate deletion upon confirmation of inclusion in the new constituency.
- **Unified Centralized Form Processing:** Creates an auditable, end-to-end digital pipeline for managing voter applications, linking Booth Level Officers (BLOs), Assistant EROs (AEROs), and EROs during annual summary revisions and Special Intensive Revisions (SIR).
- **Demographic & Phonetic Deduplication:** Runs phonetic and demographic matching algorithms across the electoral roll repository to identify identical names, addresses, or photos, alerting EROs to conduct physical field verifications.

The Armed Forces (Special Powers) Act, 1958 (AFSPA)

Context:

The Ministry of Home Affairs extended the Armed Forces (Special Powers) Act, 1958 (AFSPA) for another six months from October 1, 2026, across designated disturbed areas in Manipur, Nagaland, and Arunachal Pradesh.

The Armed Forces (Special Powers) Act, 1958 (AFSPA)

About The Armed Forces (Special Powers) Act, 1958 (AFSPA):

What it is?

- A special parliamentary statute that confers extraordinary operational powers and statutory legal immunity upon members of the Indian Armed Forces (and Central Armed Police Forces deployed alongside them) to conduct counter-insurgency and internal security operations in designated disturbed areas in aid of civil power.



History & Origins:

- Traces its legislative roots to the British colonial Armed Forces (Special Powers) Ordinance of 1942, promulgated by Viceroy Lord Linlithgow to suppress the Quit India Movement.
- Re-enacted post-independence as an Ordinance and then passed by Parliament on September 11, 1958, initially to quell the armed secessionist movement led by the Naga National Council (NNC) in the Naga Hills of erstwhile undivided Assam.
- Over subsequent decades, its mandate was amended and expanded to encompass other northeastern states facing armed ethnic insurgencies. (A separate sibling statute, the Armed Forces (Jammu and Kashmir) Special Powers Act, was enacted in 1990).

States Currently Under AFSPA (2026):

- **Manipur:** Applicable across the entire state except for 13 police station jurisdictions located in five valley districts.
- **Nagaland:** Retained in nine entire districts (including Mon, Kiphire, Noklak, Phek, Peren, Dimapur) and within 21 police station limits across five other districts.
- **Arunachal Pradesh:** Enforced in three southeastern border districts (Tirap, Changlang, and Longding) and areas under three police stations (Namsai, Mahadevpur, Chowkham) in Namsai district.

- Assam: Restricted to select border districts (such as Tinsukia, Charaideo, Sivasagar) under state-notified disturbed area declarations.
- Jammu & Kashmir Status: It remains active under its separate legal framework—The Armed Forces (Jammu and Kashmir) Special Powers Act, 1990.
- Aim: To restore public order in conflict-ridden internal frontiers where civil administrative machinery is overwhelmed by violent insurgent groups, enabling military units to execute counter-terror operations with legal operational protections.

Key Features of the Act:

- Disturbed Area Declaration (Section 3): Allows the Governor, UT Administrator or Central Government to declare an area disturbed when internal disorder threatens public order.
- Power to Use Force (Section 4a): Authorises specified armed forces personnel to use force, including lethal force, against prohibited activities after giving due warning.
- Arrest and Search Without Warrant (Sections 4b & 4d): Permits warrantless arrest on reasonable suspicion and entry or search of premises without a search warrant.
- Destruction of Insurgent Hideouts (Section 4c): Allows security forces to destroy arms dumps, fortified positions, training camps and hideouts used for armed attacks.
- Protection from Prosecution (Section 6): Requires prior Central Government sanction before initiating prosecution or legal proceedings against personnel for actions under the Act.

Significance:

- Provides security forces with special operational powers and legal protection to respond to insurgency and armed violence in disturbed areas.
- AFSPA involves balancing national security with civil liberties. Its constitutional validity was upheld with safeguards in *Naga People's Movement of Human Rights v. Union of India* (1997).

- Ramsar Site: Designated as Ramsar Wetland No. 2482 in April 2022, protecting 1,478.64 hectares.

- Important Bird Area (IBA): Listed under BirdLife International as a vital Central Asian Flyway stopover for pelicans, spoonbills, and flamingos.

Equal Earth Map

Context:

The United Nations General Assembly passed the Correct the Map resolution (164 votes in favor, 1 against, 6 abstentions), formally endorsing the adoption of the Equal Earth projection.

Equal Earth Map

About Equal Earth Map:

What it is?

- The Equal Earth projection is an equal-area, pseudocylindrical world map projection created in 2018 by cartographers Bojan Šavrič, Tom Patterson, and Bernhard Jenny.
- It was designed specifically to display the entire globe's surface while preserving relative landmass sizes accurately without causing the severe, aesthetically jarring shape distortions common in earlier equal-area maps like the Gall-Peters projection.



Current Map Style (The Mercator Projection):

- Origins & Purpose: Formulated in 1569 by Flemish cartographer Gerardus Mercator specifically as a navigational tool for maritime sailors.
- Conformal Nature: It preserves local shapes, angles, and constant compass bearings (rhumb lines) as straight paths.
- Severe Area Distortion: To keep angles intact on a flat rectangular grid, latitude lines are stretched progressively wider toward the poles. Consequently, equatorial regions appear drastically shrunk, while high-latitude regions appear massive.
- For instance, Greenland appears roughly equal in size to Africa, even though Africa is actually 14 times larger.

Need for Change:

- Visual and Cognitive Bias: The perpetual dominance of Mercator in classrooms, textbooks, and media creates a psychological impression of northern-hemisphere dominance, minimizing the perceived economic and geopolitical weight of Africa, Latin America, and South Asia.
- Misrepresentation of True Scale: On standard Mercator maps, the African continent's true expanse—which can easily fit the US, China, India, Japan, and most of Europe within its borders—is drastically downplayed.
- Fixing Earlier Equal-Area Flaws: While the 1970s Gall-Peters map corrected area, it heavily distorted continental shapes. The Equal Earth projection was created to balance area accuracy with visually pleasing, recognizable landmass outlines.

Key Features of the Equal Earth Projection:

- True-to-Scale Surface Area (Equal-Area): Continents and nations are displayed in exact proportion to their true physical surface areas.
- Pleasing Continental Outlines: Inspired by the aesthetic curvature of the Robinson projection, it preserves familiar continental shapes and reduces extreme shearing at higher latitudes.
- Straight Parallels of Latitude: Parallels remain straight horizontal lines, making it easy to compare locations sharing the same latitude across the globe.
- Flexible Centering: Can be constructed with different central meridians, allowing regional variations such as Pacific- or Oceania-centered views instead of exclusively relying on the Greenwich prime meridian.

Significance:

- Addresses centuries of cartographic marginalization, restoring geographic dignity and fair representation to the Global South in international discourse.

- Provides school systems, universities, and public institutions with a realistic reference frame for global geography, natural resource distributions, and climate vulnerability.

Bhitarkanika National Park

Context:

Hundreds of saltwater crocodile hatchlings have begun emerging from 117 nesting sites in Odisha's Bhitarkanika National Park.

Bhitarkanika National Park

About Bhitarkanika National Park:

What it is?

- A protected national park spanning 145 km-sq nested within the larger 672 km-sq Bhitarkanika Wildlife Sanctuary. It encompasses India's second-largest mangrove ecosystem and serves as a premier estuarine wetland reserve.
- Located in: The northeastern corner of Kendrapara district in coastal Odisha, bounded by the Bay of Bengal and Gahirmatha Marine Sanctuary to the east.



History:

- Originally declared as Bhitarkanika Wildlife Sanctuary in April 1975 under the Wildlife (Protection) Act, 1972, to rescue the vanishing saltwater crocodile population.
- The core zone of 145 km-sq was officially notified as Bhitarkanika National Park on September 16, 1998.
- Recognized globally as a Ramsar Site (Wetland of International Importance) on August 19, 2002, becoming Odisha's second Ramsar site after Chilika Lake.

Key Geological Features:

- Deltaic Estuarine Confluence: Formed by the alluvial deltaic deposits of the Brahmani, Baitarani, Dhamra, and Pathsala river systems where freshwater mixes with tidal marine flows.
- Dense Tidal Creek Network: Intersected by a labyrinth of meandering brackish channels, tidal creeks, and mudflats shaped by daily high- and low-tide cycles.
- Active Accretion and Sedimentation: Characterized by dynamic alluvial land accretion, forming low-lying marshes, intertidal silt beds, and floodplains enriched by riverine silt.
- Protective Coastal Barrier Beaches: Flanked on its seaward boundary by barrier sandbars and coastal beaches—such as Gahirmatha and Hukitola—which buffer inland wetlands against marine waves.
- Salt-Rich Soils and Salinity Gradient: Features high-salinity hydromorphic soils that create specialized intertidal conditions required to sustain diverse mangrove species and specialized halophytes.

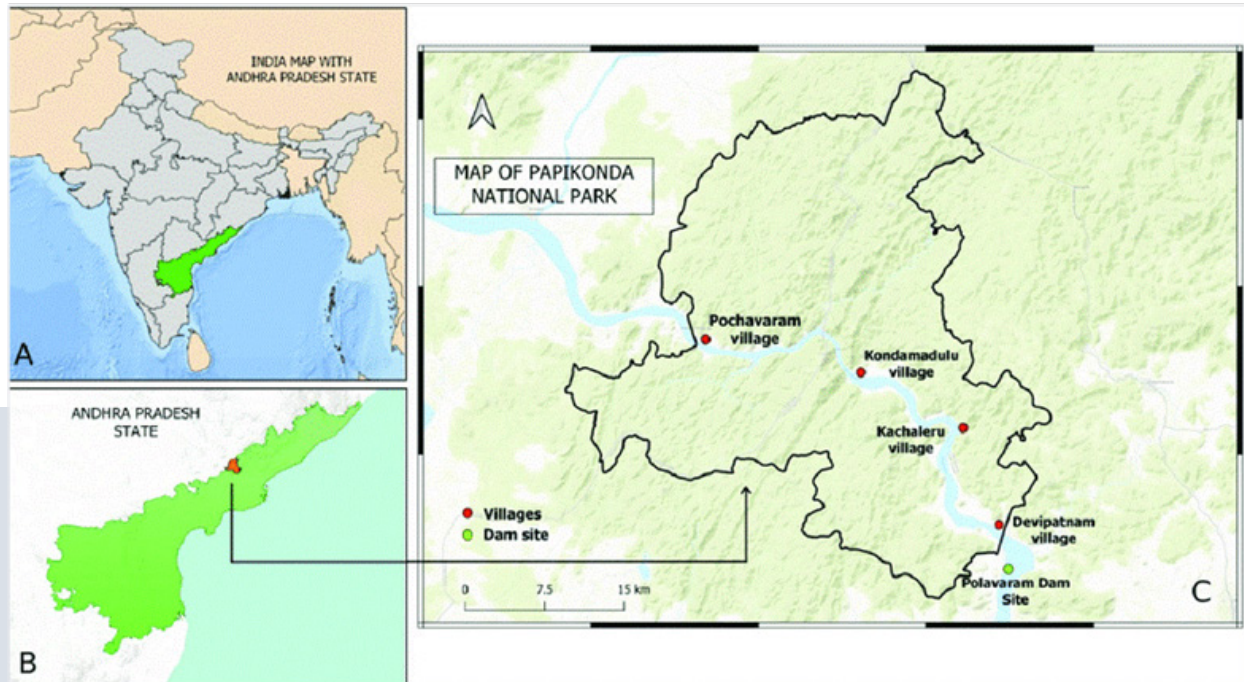
Significance:

- Saltwater Crocodile Stronghold: Supports one of the world's densest populations of saltwater crocodiles (*Crocodylus porosus*), including individuals exceeding 6 metres.
- Olive Ridley Nesting Hub: Adjoins Gahirmatha Beach, a major global mass-nesting site for Olive Ridley turtles (*Lepidochelys olivacea*).

Papikonda National Park

Context:

A 750-kg female Indian Gaur (*Bos gaurus*) was rescued by forest officials after getting caught in an illegal wire snare laid by poachers in the Eco-Sensitive Zone of Papikonda National Park in Andhra Pradesh.



Papikonda National Park

About Papikonda National Park:

What it is?

- A major protected wilderness expanse covering approximately 1,068 square kilometres (412 square miles) across the northern Eastern Ghats, renowned for its rugged hill tracts, riverine gorges, and rich floral and faunal diversity.
- Located in: Situated primarily along the banks of the Godavari River in the Alluri Sitharama Raju and Eluru (Polavaram) districts of Andhra Pradesh, extending into parts of neighboring Telangana, with administrative boundaries proximate to Rajahmundry.

Background:

- Originally declared a wildlife sanctuary in 1978, the area was upgraded to a National Park in 2008 to safeguard its unique moist deciduous forest biomes and critical tiger and herbivore habitats.
- Historically, the Papikonda Hill Range in the Godavari Valley was referred to by British naturalists and local administrators as the 'Bison Hills' owing to its dense populations of the Indian Gaur (bison).

Key Features:

- Riverine Gorge Landscape: Spans the Papikonda hills, where the Godavari River forms deep gorges, sandy riverbeds, islands and riparian habitats.
- Diverse Forest Ecosystem: Comprises southern tropical moist deciduous and dry deciduous forests, interspersed with evergreen patches and extensive bamboo breaks, featuring valuable timber species such as teak, rosewood, and Terminalia.
- Rich Avian & Mammalian Sanctuary: Recognised as an Important Bird and Biodiversity Area (IBA), supporting tigers, leopards, Indian gaur, sloth bears and rare birds like the Malabar pied hornbill.
- Indigenous Tribal Fabric: Home to ancient tribal communities (including the Konda Reddis and Koyas), whose sustainable indigenous knowledge, forest gathering practices, and traditional folklore are deeply intertwined with the landscape.

Significance:

- Acts as a vital watershed catchment regulating hydrological flows, preventing soil erosion, and maintaining freshwater balance across the Godavari River basin.
- Serves as a crucial biodiversity corridor in the Eastern Ghats under active monitoring, where balancing infrastructure demands with anti-poaching and habitat-connectivity measures is paramount.

Sohar Port

Context:

Amid geopolitical conflict and maritime disruptions across the Strait of Hormuz, Oman's Sohar Port has emerged as a vital strategic alternative gateway for Indian cargo headed to Gulf Cooperation Council (GCC) nations.

Sohar Port

About Sohar Port:

What it is?

- A modern, deep-sea commercial port and integrated industrial free zone (SOHAR Port and Freezone). It is managed by the Sohar Industrial Port Company (SIPC), a 50:50 joint venture between the Sultanate of Oman and the Port of Rotterdam.
- Located in: Situated in the Wilayat of Liwa (Al Batinah North Governorate) in northern Oman, facing the Gulf of Oman and the Arabian Sea. It lies outside the volatile Strait of Hormuz maritime chokepoint, midway between Muscat and Dubai.



History:

- Conception (1995): Initiated under Sultan Qaboos bin Said via a ministerial committee to develop regional port infrastructure outside the Persian Gulf.
- Concession & Royal Decree (2002): Concession agreement ratified via Royal Decree No. 80/2002 partnering with the Port of Rotterdam; physical port construction commenced in 2003.
- Freezone Establishment (2010): Expanded by incorporating a contiguous 4,500-hectare special economic zone established under Royal Decree No. 123/2010.

Key Features of the Port:

- Strategic Chokepoint Bypass: Positioned directly outside the Strait of Hormuz, enabling uninterrupted maritime access to global shipping lanes without subjecting commercial vessels to Persian Gulf naval tensions.
- Deepwater Jetties for Ultra-Large Carriers: Equipped with deep-draft berths capable of docking the world's largest dry bulk carriers, such as Valemax-class Very Large Ore Carriers (VLOCs).
- Integrated Four-Pillar Industrial Clusters: Structured around four distinct core industrial clusters—Logistics, Petrochemicals, Metals, and a dedicated Food Cluster.
- High Cargo Capacity & Free Zone Scale: Handles over 1 million tonnes of cargo weekly and ~3,500 vessel calls annually across an industrial footprint exceeding 4,500 hectares, with total cumulative investments surpassing \$27 billion.
- Overland GCC Intermodal Connectivity: Functions as a multimodal transit hub connected via high-capacity road networks to the UAE, Saudi Arabia, Qatar, Bahrain, and Kuwait, enabling cargo to be offloaded at Sohar and trucked across GCC borders.

Significance:

- Provides a resilient logistics corridor that protects India's critical agricultural, basmati rice, and consumer goods exports to the Gulf from being halted by Strait of Hormuz blockades.
- Offers Indian terminal operators direct operational access to Oman's logistics grid, reinforcing the India–Middle East–Europe Economic Corridor (IMEC) framework and complementing India's strategic access to the Port of Duqm.

The East Sea (Sea of Japan)

Context:

North Korea fired an unidentified projectile off its eastern coastline into the East Sea (also known internationally as the Sea of Japan), days after reaffirming its irreversible status as a nuclear-armed state.

The East Sea

About The East Sea (Sea of Japan):

What it is?

- A semi-enclosed marginal sea of the western Pacific Ocean, bounded by the Asian continent to the west and the Japanese archipelago to the east. It is officially referred to as the East Sea in South Korea (and the East Sea of Korea in North Korea) and as the Sea of Japan in Japan and widespread international cartography.
- Located in: Northwestern Pacific Ocean, situated between latitudes 35° N and 52° N in East Asia.
- Bordering Nations: Japan, South Korea, North Korea, and Russia.



Key Features:

- Deep Semi-Enclosed Basin: Unlike the shallower Yellow and East China Seas, the East Sea has an average depth of about 1,752 m and contains the Japan, Yamato and Tsushima basins.
- Narrow Connecting Straits: It connects with surrounding seas through relatively narrow and shallow straits, including the Korea/Tsushima, Tsugaru, La Pérouse and Tatar straits, which strongly influence water exchange.
- Warm & Cold Current Convergence: The warm Tsushima Current meets colder waters such as the Liman and North Korea Cold currents, creating nutrient-rich frontal zones that support high marine productivity.
- Low Tides & Distinct Deep Water: The sea experiences a small tidal range and contains its own cold, oxygen-rich deep-water mass known as Japan Sea Proper Water or East Sea Proper Water.
- Maritime Disputes: The region includes unresolved maritime issues, particularly the Dokdo/Takeshima sovereignty dispute between South Korea and Japan, along with disagreement over the sea's international naming.

Significance:

- The sea is important for North Korean missile activity and provides Russia's Vladivostok-based naval forces with an important maritime route towards the Pacific.
- Nutrient-rich waters support valuable fisheries such as squid, pollock and crab, while the seabed also contains natural gas and methane hydrate resources.

Typhoon Dujan

Context:

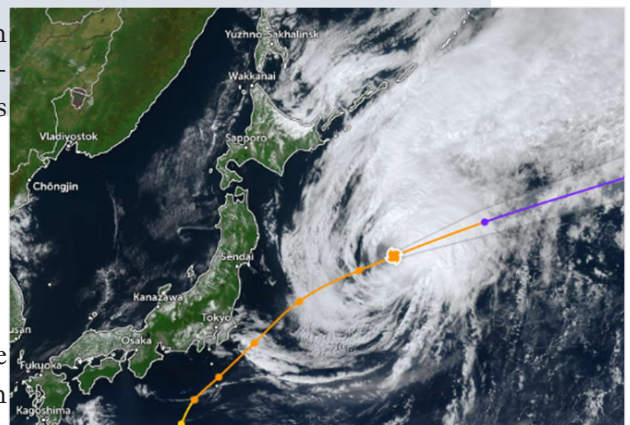
Typhoon Dujan battered Tokyo and eastern Japan with torrential rainfall and damaging winds, dumping a record-breaking 832 mm of rain on Izu Oshima island within 48 hours and triggering all-time high rainfall in Tokyo's Edogawa ward.

Typhoon Dujan

About Typhoon Dujan:

What it is:

- A powerful tropical cyclone that formed over the Northwestern Pacific Ocean—designated as Japan's 25th named storm of the season—characterized by maximum sustained winds of 130 km/h and peak gusts reaching 194 km/h. The name Dujan was contributed by China and refers to the azalea flower.



- Formed In: Originated over the warm waters of the Northwestern Pacific and tracked northwest towards eastern Honshu, affecting Tokyo and the Boso Peninsula.

How It Forms?

- Thermal Engine: Warm ocean waters (at least 26.5°C) generate intense evaporation, supplying the heat and moisture needed for cyclone formation and intensification.
- Atmospheric Convection: Warm, moist air rises and condenses, releasing latent heat that lowers surface pressure and strengthens cyclonic circulation.
- Coriolis Deflection: Earth's rotation deflects converging winds, producing an anticlockwise circulation around the cyclone's low-pressure centre in the Northern Hemisphere.
- Autumn Front Interaction: Moisture from unusually warm Pacific waters interacted with Japan's stationary autumn rain front (Akisame zensen), intensifying rainfall and orographic precipitation.

Key Features of Typhoon Dujuan:

- Extreme Rainfall: Recorded 832 mm of rainfall within 48 hours over Izu Oshima, alongside exceptionally heavy rainfall across metropolitan Tokyo.
- Destructive Winds: Generated sustained winds of 130 km/h and gusts reaching 194 km/h, damaging power infrastructure and residential buildings in Chiba and Kanagawa.
- Landslide Hazards: Intense rainfall saturated volcanic and hilly terrain, triggering destructive landslides and debris flows in coastal prefectures.
- Transport Disruptions: Disrupted flights at Haneda and Narita airports, suspended bullet-train services and forced the cancellation of major public events.

Significance:

- Warmer air holds approximately 7% more moisture per 1°C rise, intensifying typhoon rainfall and flooding through interactions with seasonal fronts.
- Highlights the importance of Tokyo's underground flood diversion infrastructure in protecting densely populated areas from extreme rainfall and flooding.

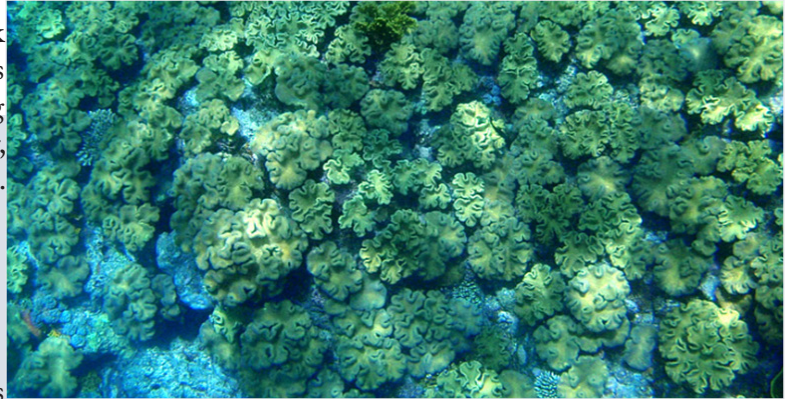
Chapter- 4

ENVIRONMENT

Global Coral Reefs Under Stress

Context:

The Global Coral Reef Monitoring Network (GCRMN) released the 7th Status of Coral Reefs of the World report, finding near-annual bleaching stress and a 9.5% decline in global hard coral cover, with recovery windows shrinking to just 4–6 years.



Global Coral Reefs Under Stress

About Global Coral Reefs Under Stress:

What it is?

- Coral bleaching is a physiological stress response where coral polyps, under sustained thermal or environmental stress, expel their endosymbiotic photosynthetic microalgae (Zooxanthellae). This causes the coral host to lose its vibrant pigments and primary nutrient supply, turning bone-white and leaving the calcified skeleton vulnerable to disease and starvation.

Key Data & Statistics:

- Net Global Coral Cover Loss: Hard coral cover declined by ~9.5% on average (ranging from 4% to 14.5%) relative to the 1980–2009 reference baseline, exhibiting a sharp stepwise drop post-2010.
- Sharpest Single-Year Fall: Global hard coral cover dropped 8.9% between 2023 and 2024 alone, marking the largest annual relative contraction on record.
- Severe Heat Stress Exposure: In 2024, 87% of all monitored reefs experienced unprecedented heat anomalies, with 42.6% exposed to extreme mortality thresholds and 27.4% in 2025.
- Shorter Recovery Cycles: Major mass disturbance events that historically occurred roughly once every 10 years now recur every 4 to 6 years, outpacing the multi-year timeline required for slow-growing calcifying corals to regenerate.
- Near-Annual Bleaching Frequency: Over 25% of global reef area endured heat stress exceeding 4°C-weeks on four or more separate occasions between 2019 and 2025.
- Four Historical Mass Bleaching Events: Major global bleaching episodes occurred in 1998–99, 2010–11, 2016–17, and 2023–2025, with each cycle inflicting a 6.5% to 9.9% relative loss in hard coral cover.

Regional Hotspots & Severely Impacted Ecosystems:

- The Caribbean Basin: Hard coral cover plunged to an average of 1%. Surveys in the US Virgin Islands showed a 47% coral decline, while ~70% of Dominican Republic reefs were reduced to under 5% live coral cover.
- Mesoamerican Barrier Reef: Heat stress caused a collapse of keystone reef-building *Acropora* species, with over 90% mortality of wild and restored acroporids in Belize and 100% loss of *Acropora palmata* at Puerto Morelos (Mexico).
- ROPME Sea Area (Persian Gulf & Sea of Oman): Severe thermal spikes destroyed roughly 50% of hard coral cover between 2020 and 2024, leaving average baseline coral density at only ~15%.
- Indo-Pacific & Great Barrier Reef: Recorded successive mass bleaching events across northern and central sectors, stressing biodiversity hotspots across the Coral Triangle.

Key Drivers & Ecological Threats:

- Marine Heatwaves & Sea Surface Warming: Average sea-surface temperatures across global reef provinces rose by 0.81°C between 1985 and 2025, acting as the primary driver of rapid mass bleaching.

- **Compound Anthropogenic Stressors:** Coastal urbanization, destructive bottom-trawling, port dredging, and untreated municipal runoff weaken coral immunity and promote smothering macroalgal growth.
- **Ocean Acidification:** Increased absorption of atmospheric CO₂ reduces seawater carbonate saturation, weakening calcium carbonate (CaCO₃) skeleton formation and slowing reef calcification.
- **Ecological Phase Shift to Macroalgal Dominance:** Once coral colonies die, fleshy macroalgae rapidly colonize bare limestone skeletons, inhibiting larval settlement and preventing reef recovery.
- **Population Fragmentation:** Declining coral cover isolates surviving colonies, reducing successful cross-fertilization and genetic diversity during annual mass spawning events.

Way Ahead:

- **Accelerating Global Emission Reductions:** Enforce strict Paris Agreement targets to limit warming to 1.5 degree C, as exceeding 2.0 degree C will render over 99% of warm-water coral reefs unviable.
- **Expanding Marine Protected Areas (MPAs):** Target the 30×30 Kunming-Montreal Global Biodiversity Framework to place at least 30% of critical coral ecosystems under strict no-take marine reserves.
- **Deploying Climate-Resilient Coral Nurseries:** Scale micro-fragmentation, larval propagation, and selective breeding of thermally resilient super corals to restore degraded reef crests.
- **Mitigating Land-Based Coastal Runoff:** Enforce zero-discharge norms for coastal industries and restore mangrove and seagrass buffer zones to trap silt and agricultural effluents.
- **Operationalizing Dynamic Ocean Management:** Leverage real-time satellite oceanographic models and acoustic monitoring to regulate commercial shipping, fishing, and tourism around reefs during active marine heatwave alerts.

Conclusion:

The 2026 GCRMN report delivers a stark warning: recurring marine heatwaves and shrinking recovery windows are driving global coral reefs toward permanent ecological decline. Because coral reefs support 25% of all marine life, protect coastal communities from storm surges, and sustain global fisheries, their preservation is essential for planetary health. Combining aggressive global climate action with local coastal conservation and active biological restoration will be vital to safeguarding these marine ecosystems.

The Data Centre Boom & Climate Collision

Context:

Experts warned that India's \$200-billion data centre boom, projected to reach 6.5 GW by 2030, could worsen water scarcity, power constraints and urban heat, highlighting the need for a National Sustainability Framework.

The Data Centre Boom & Climate Collision

About The Data Centre Boom & Climate Collision:

What it is?

- The collision between data centres and climate reality refers to the mounting structural mismatch between digital infrastructure growth and physical carrying capacity. Data centres are massive consumers of base-load electrical power and freshwater.
- When clustered in water-stressed, power-congested metropolitan hubs without mandatory green-sourcing regulations, they divert potable municipal water, increase coal-based power generation due to grid constraints, and exacerbate local urban surface temperatures.



Key Data & Statistics:

- **Rapid Capacity Growth:** Installed capacity grew from 520 MW in 2020 to ~1.5 GW in 2026, with projections reaching 6.5 GW by 2030 (a fourfold surge in four years).
- **Spike in Power & AI Demand:** Power consumption is projected to jump from 13 TWh in 2024 to 57 TWh by 2030; the Ministry of Power estimates generative AI workloads will add 26.3 GW of new base-load demand by 2031–32.

- **Massive Water Footprint:** A single 100 MW data centre consumes approximately 2 million litres of water daily (~usage of 6,500 urban homes). Aggregate water use will escalate from 150 billion litres (2024–25) to 358 billion litres annually by 2030.
- **Clean Energy Curtailment:** Due to evacuation bottlenecks, India curtailed 300 GWh of renewable electricity in Q1 2026 alone (178 GWh in Northern and 122 GWh in Western regional grids), according to Ember Energy.
- **Transmission Buildout Deficit:** India has achieved only about 80% of its annual transmission targets over the last five years, leaving ~20 GW of renewable energy delayed by over four months.
- **Micro-Climate Surface Warming:** University of Cambridge satellite analysis revealed that data centres elevate ambient land surface temperatures by an average of 2°C within a 10 km radius, with extreme micro-climatic spikes reaching 9.1°C.

Key Structural Drivers & Challenges:

- **Clustering in Water-Stressed Aquifers:** Facilities concentrate around Mumbai, Hyderabad, Bengaluru, and NCR. Rajasthan extracts 147.11% of its annual groundwater recharge, Hyderabad faced 20% surface water drops in 2024, and 16 Telangana districts face severe groundwater stress.
- **The Green Paradox and Coal Reliance:** While hyperscalers commit to net-zero, long 2-year queues for 220 kV substation interconnects and transmission delays from solar-rich zones (Rajasthan/Gujarat) force data centres to draw round-the-clock baseload power from coal grids.
- **The Urban Thermal Feedback Loop:** Server cooling exhaust elevates surrounding surface temperatures. Hotter urban ambient conditions increase mechanical cooling loads, raising electricity demand and fossil emissions in a self-reinforcing cycle.
- **Competitive Federalism & Policy Dilution:** States compete for capital by granting essential service tags while diluting mandates; Maharashtra reduced its core renewable energy mandate from 100% to 51% in June 2026.
- **Risk of Cost Socialization:** Capital upgrades to the public transmission grid and water distribution networks built to support private data centres risk being transferred onto retail power and water consumers through higher tariffs.

Way Ahead:

- **Mandating an Enforceable National Sustainability Framework:** Establish statutory benchmarks requiring mandatory environmental impact assessments (EIA), and public disclosures of daily water and power metrics before commissioning.
- **Implementing a National AI Energy Star Rating:** Adopt phased efficiency standards and a Star-rating regime for data centres (monitoring Power Usage Effectiveness and Water Usage Effectiveness) to create market transparency.
- **Deploying Battery Storage at Pooling Substations:** Mandate 3–4 GW of co-located 2-hour Battery Energy Storage Systems at major Inter-State Transmission System renewable pooling stations to absorb curtailed solar/wind power for data centre use.
- **Decentralizing to Coastal & Near-Shore Corridors:** Encourage developers to build along coastal regions with direct access to offshore wind, solar hubs, and seawater-based direct cooling systems, de-linking from stressed urban drinking water grids.
- **Reforming Power Markets for Ancillary Grid Services:** Transition to climate-intelligent power markets that compensate battery storage, demand-response flexibility, and clean round-the-clock (RTC) supply contracts.

Conclusion:

However, allowing unconstrained development without resource accountability risks exacerbating urban heat islands, depleting vital drinking water reserves, and transferring grid expansion costs to retail consumers. Enacting a national sustainability framework that mandates renewable integration, closed-loop cooling, and balanced regional distribution is crucial to ensuring India's digital boom supports sustainable growth.

UNEP Limiting Overshoot Report

Context:

The United Nations Environment Programme (UNEP) released a spotlight report titled “Limiting Overshoot: Navigating Exceedance of 1.5°C and Pathways Towards Return.”

- The report highlights that breaching the 5°C warming limit is now unavoidable in the near term, outlining an “overshoot, peak, and decline” framework to restore climate stability by 2100.

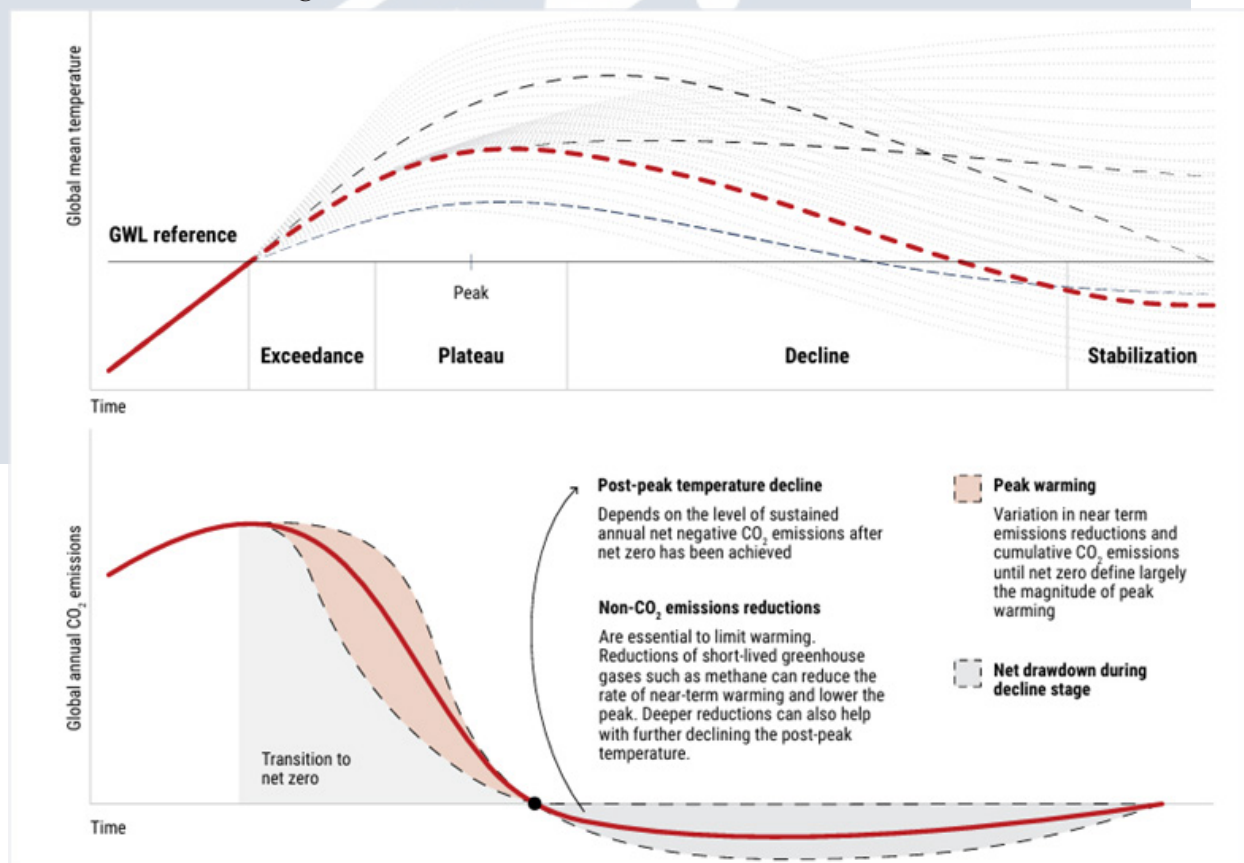
About UNEP Limiting Overshoot Report:

What is the Overshoot Framework?

- An overshoot pathway refers to a scenario where global average surface temperatures temporarily exceed the internationally agreed target (1.5°C) before peaking and gradually declining back below the limit through sustained net-negative emissions and deep decarbonization.

Key Findings in the Report:

- 1.5°C Threshold Nearing:** Human-induced warming is nearing 1.4°C, rising at ~0.25°C per decade. WMO estimates a 75% chance that the 2026–2030 average will exceed 1.5°C.
- Shrinking Carbon Budget:** Only about 130 GtCO₂ remains from 2026 for a 50% chance of limiting warming to 1.5°C. At current emissions (~40 GtCO₂ annually), it could be exhausted in about three years.
- Projected Warming:** Current policies point to ~2.6°C warming by 2100. Even full implementation of NDCs and net-zero pledges could still result in peak warming of ~1.8°C.
- Cost of Delay:** Every five years of sustained high emissions adds ~0.1°C to peak warming; reversing it would require removing about 220 GtCO₂.
- Ecological Tipping Points:** Overshoot could trigger irreversible changes, including Greenland and West Antarctic ice-sheet loss, AMOC weakening and Amazon dieback.
- Cryosphere & Sea-Level Risks:** Mountain glaciers could lose over 25% of their mass by 2100. Every century above 1.5°C could lock in ~40 cm additional sea-level rise by 2300.
- Socio-Economic Disruptions:** Food production could fall by up to 14% by 2050 without adequate adaptation, while severe coral bleaching is pushing reefs beyond adaptation limits.
- Four-Stage Overshoot Pathway:** An overshoot pathway is not a single event but a multi-decadal sequence across four distinct stages: Exceedance, Plateau/Peak, Decline, and Stabilization.



Positives Highlighted in the Report

Positives Highlighted in the Report:

- **Large Mitigation Potential:** Available measures across energy, agriculture, industry and transport could cut up to 41 GtCO₂e annually by 2035, with nearly half costing below \$20/tCO₂e.
- **Health Co-Benefits:** Rapid fossil-fuel phase-out could reduce SO₂ and NO_x by 60–80%, lowering respiratory diseases and healthcare costs.
- **Methane Reduction:** Cutting methane, responsible for ~0.5°C of warming, offers one of the fastest ways to reduce near-term peak warming.
- **Adaptation Pays:** In developing economies, \$1 invested in climate-resilient infrastructure can avoid about \$4 in losses.
- **Stronger Legal Precedents:** International judicial rulings have strengthened 1.5°C-based due-diligence obligations for mitigation and adaptation.

Challenges Identified:

- **Debt & Fiscal Stress:** Climate-vulnerable countries face higher borrowing costs and rising reconstruction debt, reducing funds available for resilience.
- **Example:** Around 70% of SIDS exceed the 40%-of-GDP debt threshold after repeated climate disasters.
- **Limits of Carbon Removal:** Nature-based CDR faces saturation and wildfire risks, while DACCS and BECCS require significant energy, water and land.
- **Example:** Novel technological CDR contributes less than 0.1% of conventional removals.
- **Maladaptation:** Poorly designed adaptation can worsen ecological and social vulnerabilities.
- **Example:** About 45% of Bonn Challenge restoration pledges involve commercial monocultures, which store far less carbon than native forests and can worsen water stress.
- **SIDS Habitability Crisis:** Sea-level rise and saltwater intrusion threaten freshwater, territory and statehood even before complete submergence.
- **Example:** Tuvalu and Kiribati face substantial locked-in sea-level rise.
- **Heat & Labour Productivity:** Rising humid heat threatens human health and outdoor work.
- **Example:** Labour capacity in Ghana could fall 11% at 3°C warming, while heat stress could drive 60–70% of projected GDP losses in Sri Lanka by 2053.

Recommendations:

- **Integrate Mitigation & Adaptation:** Pursue both simultaneously rather than treating them as competing priorities.
- **Accelerate Decarbonisation:** Rapidly phase down fossil fuels, expand renewables and sharply reduce methane emissions.
- **Regulate Carbon Removal:** Establish strong MRV frameworks and ensure CDR complements, rather than replaces, direct emission cuts.
- **Transform Adaptation:** Adopt flexible, climate-responsive infrastructure, nexus governance and planned retreat where necessary.
- **Strengthen Loss & Damage Finance:** Scale up the UNFCCC Fund for Responding to Loss and Damage before worsening climate impacts widen financing needs.

Conclusion:

A temporary 1.5°C overshoot may be increasingly difficult to avoid, but its scale and duration still matter. Every fraction of warming prevented can reduce irreversible ecological and human losses. Rapid decarbonisation, transformational adaptation and stronger climate finance are essential to return the world towards a safer temperature pathway.

The Northern Goshawk

Context:

The Northern Goshawk (Baaj), Punjab's state bird, has re-entered the political spotlight ahead of state assembly elections after rival political leaders claimed sightings of the bird, interpreting them as divine symbols of protection and blessing.



The Northern Goshawk

About The Northern Goshawk:

What it is?

- A medium-to-large raptor in the family Accipitridae (historically classified as *Accipiter gentilis*, and recently reclassified as *Astur gentilis* for the Eurasian goshawk). Known as a “true hawk,” it is widely celebrated for its speed, maneuverability, and prowess in falconry.
- Habitat: Primarily inhabits mature temperate and boreal woodlands, including mixed deciduous and coniferous forests. It is widely distributed across Eurasia and North America, ranging from Scandinavia, northern Russia, and the Mediterranean to the Himalayas, eastern China, and Canada.
- IUCN Status: Categorised as Least Concern (LC) on the IUCN Red List.

Key Characteristics:

- Forest-Adapted Morphology: Possesses relatively short, broad wings and a long tail, providing aerodynamic agility to navigate dense tree canopies and make rapid sharp turns while chasing prey.
- Distinctive Plumage and Eye Colour: Features slate-grey to dark brownish-black upperparts with finely barred white-and-grey underparts. Juveniles have pale yellow irises that mature into bright orange or striking deep red eyes in adults.
- High-Speed Pursuit: Known for an aggressive and reckless hunting style, diving through thick brush and reaching horizontal chase speeds of up to 40 miles per hour (approx. 64 km/h).
- Broad Diet: An opportunistic apex predator hunting a diverse array of animals, including gamebirds, grouse, hares, squirrels, and other smaller raptors like owls and kestrels.
- Fierce Nest Defense: Exhibits strong nest fidelity by reusing the same nesting sites across multiple years, defending its territory aggressively against large intruders, including humans.

Significance:

- Deeply revered in Sikh history and culture as the avian companion of the tenth Sikh Guru, Guru Gobind Singh, who is traditionally depicted carrying a white hawk on his wrist. It serves as a spiritual emblem of sovereignty, courage, and justice.
- Designated as the official State Bird of Punjab, making its legal protection and conservation an emblem of regional and cultural pride.

India's Carbon Credit Trading Scheme (CCTS)

Context:

The United Kingdom has officially recognized India's Carbon Credit Trading Scheme (CCTS) as a qualifying carbon pricing framework under its Carbon Border Adjustment Mechanism (CBAM).

Carbon Credit Trading Scheme

About India's Carbon Credit Trading Scheme (CCTS):

What it is?

- A national market-based mechanism designed to establish the Indian Carbon Market (ICM) by pricing greenhouse gas (GHG) emissions, issuing tradable Carbon Credit Certificates (CCCs), and driving industrial decarbonization.
- Launched in: Notified by the Government of India in June 2023 under powers conferred by the Energy Conservation (Amendment) Act, 2022, with detailed compliance regulations adopted in July 2024.
- Aim: To accelerate the decarbonization of the Indian economy, fulfill India's Nationally Determined Contributions (NDCs) under the Paris Agreement, and incentivize emission cuts across energy-intensive sectors through a transparent carbon-trading exchange.



Key Features:

- **Dual-Track Framework:** Combines an obligatory Compliance Mechanism for energy-intensive sectors with a Voluntary Offset Mechanism allowing non-obligated entities to register GHG reduction or removal projects.
- **Governance Architecture:** Governed by the National Steering Committee for the Indian Carbon Market (NSCICM), co-chaired by the Ministry of Power and MoEFCC, with the Bureau of Energy Efficiency (BEE) serving as the chief administrator.
- **Transition from the PAT Scheme:** Builds upon and gradually absorbs the existing Perform, Achieve, and Trade (PAT) energy efficiency mechanism, transitioning obligated industrial units from specific energy consumption targets to carbon emission intensity benchmarks.
- **Carbon Credit Certificates (CCCs):** Entities outperforming their assigned emission intensity benchmarks earn CCCs (denominated in units of 1 tonne of CO₂ equivalent), while underperforming entities must purchase certificates to meet compliance.
- **Comprehensive Emission Scope:** Follows a gate-to-gate approach covering Scope 1 (direct combustion and process emissions) and Scope 2 (indirect emissions from electricity and heat), initially targeting CO₂ and perfluorocarbons (PFCs).

Significance:

- **Protects Export Competitiveness:** Helps shield steel and aluminium exports from international carbon-border costs.
- **Drives Green Investment:** Carbon pricing encourages investment in clean technology, efficiency and low-carbon industries.

UNCCD COP17: Advancing Global Drought Resilience and Land Restoration

Context:

The 17th Conference of the Parties (COP17) to the United Nations Convention to Combat Desertification (UNCCD) concluded in Ulaanbaatar, Mongolia.

- Held under Restoring Land, Restoring Hope, the summit focused on rangeland conservation, drought financing and community-led restoration, amid deadlock over a binding global drought treaty.



UNCCD COP17

About UNCCD COP17: Advancing Global Drought Resilience and Land Restoration

What it is?

- The United Nations Convention to Combat Desertification (UNCCD), established following the 1992 Rio Earth Summit, is the sole legally binding international agreement linking environment and development to sustainable land management. COP17 coincided with the UN International Year of Rangelands and Pastoralists, placing pastoral communities and fragile open ecosystems at the center of the global Land Degradation Neutrality (LDN) agenda.

Key Highlights of UNCCD COP17:

- **Global Land Crisis:** The convention warned that approximately 40% of the world's land surface is already degraded, directly affecting billions of livelihoods and threatening global water and food security.
- **Host Nation's Commitment:** Mongolia, where nearly 77% of land is affected by degradation, showcased its national Billion Trees Campaign (launched in 2021 to plant 1 billion trees by 2030) to combat regional desertification.
- **AI-Powered Drought Resilience Index:** Launched as the world's first comprehensive technical diagnostic tool, utilizing artificial intelligence and vulnerability mapping to track national preparedness and drive proactive drought mitigation.

- **Drought Resilience Investment Facility:** Co-launched by the UNCCD and Luxembourg as the first global catalytic financing platform, deploying public capital to de-risk investments and mobilize commercial funds for water security and climate-resilient agriculture.
- **Financing Mobilization:** The conference secured \$1.3 billion in new and pipeline financing dedicated to scaling ecosystem restoration and strengthening drought resilience in vulnerable developing states.
- **Impasse on Global Drought Treaty:** Parties failed to agree on a legally binding international drought treaty, deferring negotiations despite an estimated \$278 billion annual resilience financing gap.
- **Institutional Agendization:** It was formally decided that drought will become a permanent, standalone agenda item starting from COP18 onwards, ending its historically ad-hoc treatment.

India's Stance & Interventions at COP17:

- **First-Ever Guide to Grasslands & Open Natural Ecosystems (ONEs):** India unveiled a specialized policy guide to mainstream the ecological conservation of ravines, arid deserts (Thar), cold deserts, and Deccan savannahs.
- **Bonn Challenge Restoration Progress:** India reported bringing 21.76 million hectares of degraded and deforested land under active restoration, progressing steadily toward its national pledge of restoring 26 million hectares by 2030.
- **Pastoral Rights & Custodianship:** India advocated for recognizing pastoralists as frontline ecological stewards and highlighted indigenous conservation models, specifically citing the traditional Orans of Rajasthan.
- **Climate Finance Demands:** New Delhi reiterated calls for adequate, predictable, and sustained international climate finance while detailing domestic market instruments such as Sovereign Green Bonds and the Green Credit Programme.

India's Domestic Initiatives to Combat Desertification:

- **National Action Plan to Combat Desertification (NAPCD):** First formulated in 2001 and updated in 2023, it serves as the nodal umbrella mechanism converging ministerial land restoration programs.
- **PM Krishi Sinchayee Yojana (PMKSY) – Watershed Component:** Integrates ridge-to-valley watershed treatments, runoff harvesting, and in-situ moisture conservation to build local drought-proofing.
- **ISRO's Desertification and Land Degradation Atlas:** Deploys remote sensing and Geographic Information System (GIS) analytics to monitor temporal shifts in land degradation and guide targeted district-level interventions.
- **Aravalli Green Wall Project:** An afforestation and ecological green corridor initiative aimed at checking eastward desert expansion from the Thar across Haryana, Rajasthan, Gujarat, and Delhi.
- **Mission Amrit Sarovar:** Focuses on excavating and rejuvenating at least 75 water bodies per district to recharge shallow aquifers and ensure local water security.
- **Soil Health Card Scheme:** Provides farmers with soil-nutrient test profiles to optimize chemical fertilizer application and prevent chemical-induced soil degradation.

Key Challenges Identified:

- **Chronic Drought Financing Deficit:** A massive \$278 billion annual financing gap hampers proactive drought preparedness across the Global South.
- **Multilateral Treaty Resistance:** Disagreements between developed and developing nations over binding financial commitments continue to block a comprehensive international drought protocol.
- **Marginalization of Open Natural Ecosystems:** Well-intentioned tree-planting drives frequently result in planting non-native monocultures in natural grasslands and shrublands, damaging local pastoral hydrology and endemic wildlife.
- **Reactive Disaster Relief Cycle:** National drought mechanisms remain largely reactive, deploying post-disaster compensation rather than executing anticipatory risk reduction.

Way Ahead:

- **Implementing Agro-Ecological Zoning:** Align agricultural electricity subsidies, irrigation allocations, and Minimum Support Prices (MSP) with local agro-climatic conditions to halt water-intensive cultivation in arid zones.

- Adopting Forecast-Based Trigger Financing: Connect satellite-based soil moisture analytics directly to disaster relief funds, releasing contingency financing before drought-induced crop failure materializes.
- Protecting Grazing Commons Legally: Integrate legal protections for community grazing routes, pastoral commons, and sacred groves into formal revenue and land-use records.
- Transitioning from Relief to Proactive Water Stewardship: Scale micro-irrigation, decentralized rainwater structures, and soil organic carbon enhancement to buffer smallholder agriculture against recurrent dry spells.

Conclusion:

The outcomes of UNCCD COP17 highlight that while technological tracking tools and catalytic financing platforms are emerging, the absence of a legally binding global drought framework leaves billions vulnerable to climate shocks. For India, pairing science-based landscape restoration with the protection of traditional grazing commons and open ecosystems offers a balanced pathway to achieving Land Degradation Neutrality by 2030.

The Orangutan

Context:

The Special Task Force (STF) of the Odisha Police and the Wildlife Crime Control Bureau (WCCB) initiated an investigation following the rescue of five juvenile orangutans from a coastal casuarina plantation in Balasore district.



The Orangutan

About The Orangutan:

What it is?

- The orangutan (genus *Pongo*) is one of humanity's closest living relatives among the great apes. The name originates from the Malay words *orang* (man) and *hutan* (forest), translating to man of the forest. It is the only genus of great apes native entirely to the continent of Asia.

IUCN Red List Status:

- Bornean Orangutan (*Pongo pygmaeus*): Critically Endangered.
- Sumatran Orangutan (*Pongo abelii*): Critically Endangered.
- Tapanuli Orangutan (*Pongo tapanuliensis*): Critically Endangered.
- Habitat: Native exclusively to the primary tropical rainforests and lowland peat-swamp forests of Southeast Asia, restricted entirely to the two islands of Borneo (shared by Indonesia, Malaysia, and Brunei) and Sumatra (Indonesia).

Key Characteristics:

- World's Largest Arboreal Mammal: Spends over 90% of its life in the high forest canopy, possessing exceptionally long, muscular arms and grasping, hook-like feet adapted for swinging across tree branches.
- Solitary and Semi-Solitary Social Structure: Unlike social chimpanzees or gorillas, orangutans lead largely solitary lives to avoid food competition within their large home ranges, forming loose associations only during mating.
- Distinct Secondary Sexual Dimorphism (Bimaturism): Mature dominant males develop wide, fleshy facial cheek pads and large throat pouches that amplify booming vocalizations.
- Keystone Seed Dispersers: Primarily frugivorous, their diet consists of hundreds of wild forest fruits alongside bark, shoots, and insects; their feeding habits are indispensable for forest regeneration and seed dispersal.
- Complex Cognitive and Tool-Using Ability: Highly intelligent primates that build fresh sleeping nests and use sticks and leaves as tools for feeding and protection.

World Circular Economy Forum (WCEF) 2026

Context:

India is set to host the World Circular Economy Forum (WCEF) 2026 at the Mahatma Mandir Convention Centre in Gandhinagar, Gujarat, from September 15 to 18, 2026.

World Circular Economy Forum

About World Circular Economy Forum (WCEF) 2026:

What it is?

- The world's premier global platform and landmark annual event dedicated to advancing the transition from a linear take-make-waste model to a regenerative circular economy through cross-sectoral collaboration, policy development, and business innovation.
- 2026 Host: Gandhinagar, Gujarat, India.
- 2026 Theme: Circular Economy: Transition for People and Prosperity.



Background:

- Created in 2017 on the initiative of Sitra (the Finnish Innovation Fund) to mark the centenary of Finland's independence and foster global circular business solutions.
- The 2026 edition marks the 10th milestone edition of WCEF and its debut in the South Asian region.
- Aim: To accelerate market transformation, foster international partnerships with the Global South, mobilize private-sector capital and circular finance, and demonstrate scalable solutions that reconcile economic prosperity with planetary boundaries.

Key Functions:

- Mobilising Circular Finance & Investments: Facilitates venture linkages, institutional capital flows, and green funding mechanisms to scale bankable circular technologies and business models.
- Promoting Technology & Digital Innovation: Explores the deployment of artificial intelligence (AI), IoT, and digital product passports to optimize material tracking, industrial symbiosis, and life-cycle management.
- Catalysing Cross-Sectoral Policy Dialogue: Convenes governments, researchers, and industry leaders across key governance tracks to harmonize regulatory frameworks, standard-setting, and Extended Producer Responsibility (EPR) mandates.
- Showcasing Scalable Market Solutions: Hosts an international expo of over 125 exhibitors alongside 80 independent global accelerator sessions to demonstrate practical, market-ready recycling, remanufacturing, and bio-economy technologies.
- Advancing Global Framework Alignments: Integrates global governance, including hosting the UN's 10YFP Board meeting on the sidelines.

Significance:

- Shifts the circular economy discourse from predominantly developed-nation perspectives to the resource realities, and informal recycling sectors.
- Highlights India's domestic achievements under Mission LiFE, comprehensive EPR regulations, and its leadership as Co-Chair of the 10 YFP Board.

The UN's Loss and Damage Fund (FRLD)

Context:

Nepal submitted a high-profile request seeking \$20 million in climate compensation from the United Nations' Loss and Damage Fund following catastrophic glacial collapse-triggered flash floods.



The UN's Loss and Damage Fund (FRLD)

About The UN's Loss and Damage Fund (FRLD):

What it is?

- Officially designated as the Fund for Responding to Loss and Damage (FRLD), it is a dedicated multilateral financing entity under the United Nations Framework Convention on Climate Change (UNFCCC) designed to provide financial restitution and assistance to developing nations coping with unavoidable economic and non-economic losses caused by extreme climate shocks and slow-onset events.
- Origin: Established through a landmark consensus decision at the 27th UN Climate Change Conference (COP27) held at Sharm el-Sheikh, Egypt, in November 2022, followed by operationalization at COP28 in Dubai (2023).
- Aim: To assist developing countries that are particularly vulnerable to the adverse effects of climate change in mobilizing new, predictable, and additional financial resources to recover from, reconstruct after, and manage unavoidable loss and damage.

How it Works?

- Voluntary Capital Mobilisation: Capitalized through non-binding, voluntary contributions primarily pledged by developed nations and high-income partners.
- Procedural Project Cycles: Operates through a structured 11-step project pipeline—involving periodic calls for proposals, completeness reviews, technical due diligence, country feedback loops, board approvals, and execution of bilateral legal trustee agreements prior to disbursement.
- Access Windows: Channels resources through direct budget support, programmatic sub-grants, national implementing entities, and small-grant facilities for rapid rehabilitation.

Key Features:

- Voluntary Non-Binding Contributions: Does not mandate binding liability or historical compensation quotas; contributions remain entirely voluntary, leaving funding levels subject to the changing political will of donor nations.
- Severe Capital-to-Demand Asymmetry: Capitalized at roughly \$822 million in pledges, yet heavily oversubscribed—receiving 180 project proposals totaling \$2.8 billion in its very first call against annual global loss estimates exceeding \$400 billion.
- Bureaucratic 11-Step Disbursement Process: Relies on protracted, multi-phase technical scrutiny and due diligence similar to traditional multi-year developmental finance institutions, creating long delays between disaster impact and fund release.
- Coverage of Economic and Non-Economic Losses: Designed to address both quantifiable livelihood destruction and non-economic losses such as cultural heritage damage, biodiversity decline, territorial displacement, and community disruption.
- Grants-Based Concessional Allocation: Emphasizes highly concessional, grant-based financing rather than loans to prevent exacerbating external debt distress in vulnerable recipient nations.

The Report: Forests for food: Nourishing people, sustaining the planet

Context:

The Food and Agriculture Organization (FAO) of the United Nations, in collaboration with the Landscape Alliance (CIFOR-ICRAF), published a landmark global report titled Forests for food: Nourishing people, sustaining the planet.

About The Report: Forests for food: Nourishing people, sustaining the planet

What it is?

- Developed under the Collaborative Partnership on Forests (CPF) Joint Initiative, the report synthesizes global empirical evidence on the multifaceted linkages connecting forests to the four dimensions of Food Security and Nutrition (FSN): availability, access, utilization, and stability.
- It addresses the systemic knowledge gap caused by the absence of globally standardized definitions, unrecorded informal wild-food consumption, and fragmented policy silos across agriculture, forestry, and health sectors.

Key Findings in the Report:

- **Livelihood Scale:** Over 5 billion people worldwide depend to some extent on forests for their livelihoods, with forests generating up to 20% of rural household incomes in several developing regions.
- **Vast Edible Biodiversity:** More than 50,000 wild species are utilized globally for food, energy, medicine, and materials, including at least 10,000 species consumed directly as human food.
- **Protein & Caloric Dependency:** In remote forest-dependent communities, wild forest foods supply up to 80% of daily dietary protein and account for nearly half of total consumed food mass by weight.
- **Vital Cooking & Water Safety Energy:** Around 1.8 billion people (23% of the global population) relied primarily on woodfuel for cooking in 2022, and 410 million people depended mainly on wood energy to boil and sterilize drinking water.
- **Ecosystem Foundation for Agriculture:** Forests sustain critical agricultural inputs by hosting pollinators that support 35% of global crop production, while forested watersheds supply freshwater to over 85% of the world's major cities.
- **Downwind Precipitation Recycling:** Agricultural zones across 155 countries depend on forests in other countries for up to 40% of their annual rainfall through atmospheric moisture recycling and evapotranspiration.
- **Healthcare & Medicinal Dependency:** More than 1 billion people rely on forest-derived medicinal plants for primary healthcare, treating conditions like childhood diarrhea that impair nutrient absorption.
- **Severe Deforestation Pressures:** An estimated 10.9 million hectares of forests were deforested annually between 2015 and 2025, driven largely by agricultural expansion, weak tenure rights, and commodity trade.

Positives Identified So Far:

- **Net Forest Loss Deceleration:** The global annual rate of net forest loss declined significantly from 10.7 million hectares (1990–2000) to 4.12 million hectares (2015–2025) due to targeted afforestation and landscape restoration.
- **Proven Nutritional Dividends (Child Health):** Studies in India, Africa, and the Amazon demonstrate that children living in landscapes with higher forest cover have higher dietary diversity scores and lower stunting and wasting rates.
- **Dietary Equalizers for Vulnerable Households:** Unlike costly commercial meat, wild meat and freshwater fish act as wealth-neutral nutritional buffers, providing poor rural children with vital protein, iron, zinc, and vitamin B12.
- **Successful Community-Based Co-Management:** Localized management models—such as the recovery of the giant arapaima in the Amazon (increasing 30-fold in protected lakes)—demonstrate that blending indigenous knowledge with conservation can boost incomes and household nutrition.
- **Institutionalization of “Broader Food” Concepts:** Pioneer national frameworks—such as China’s Food Security Assurance Law and Brazil’s Catrapovos school feeding initiative—are successfully integrating non-wood forest products and agroforestry into public procurement.

Challenges Associated:

- **Data Invisibility & Definitional Ambiguity:** Forest foods are largely absent from national statistical databases (like FAOSTAT) due to lack of standard taxonomies and reliance on informal, unmonitored harvesting.
- **Deforestation Driven by Agricultural Conversion:** Nearly three-quarters of tropical deforestation is driven by commercial crop expansion and livestock grazing, destroying the very ecosystems that sustain agricultural yields.
- **Insecure Land and Resource Tenure:** Fragmented legal rights and lack of formal recognition for indigenous and customary forest tenure leave local communities vulnerable to displacement by industrial concessions.
- **Unsustainable Overharvesting & Commercial Offtake:** Rapid urban demand and improved hunting gear have driven commercial wild-meat harvesting to unsustainable levels, threatening over 30% of harvested vertebrate species.
- **Zoonotic Disease & Food Safety Risks:** Disrupting natural forest barriers through logging and unregulated wild-animal trade chains heightens the risk of zoonotic spillover (such as Ebola and coronaviruses) in the absence of One Health protocols.

Way Ahead:

- **Cross-Sectoral Policy Harmonization:** Break administrative silos by integrating forest foods, agroforestry, and non-wood forest products directly into national agricultural development, school feeding, and public nutrition programs.
- **Securing Customary and Community Land Tenure:** Formally recognize and enforce indigenous and community land rights, drawing on the FAO Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) to protect local access to forest foods.
- **Establishing Standardized Statistical Methodologies:** Build globally harmonized metrics and household survey modules to accurately quantify wild-food consumption, nutritional profiles, and economic values in national accounting.
- **Scaling Agroforestry and Landscape-Level Planning:** Incentivize agroforestry, silvopastoral systems, and protective tree shelterbelts to optimize crop microclimates, enhance soil organic carbon, and buffer agricultural yields against extreme weather.
- **Institutionalizing the One Health Framework:** Implement veterinary monitoring, hygienic processing standards, and sustainable harvest quotas along wild food supply chains to mitigate zoonotic risks while safeguarding local subsistence access.

Conclusion:

Forests are not merely static environmental carbon sinks; they are indispensable pillars of global agrifood systems that nourish billions of vulnerable people. Achieving Sustainable Development Goal 2 (Zero Hunger) requires ending the historical policy divide between forestry and agriculture. Recognizing forest foods as vital nutritional assets and securing the rights of forest-dependent communities will be essential to building resilient, biodiverse, and food-secure landscapes worldwide.

Neelakurinji

Context:

Rampant destruction of Neelakurinji blooms across unprotected hill ranges in Munnar (such as Lakshmi Hills and Chinnakkanal) triggered serious concerns among Kerala Forest Department officials.

Neelakurinji

About Neelakurinji:

What it is?

- A prominent, purplish-blue flowering shrub belonging to the genus *Strobilanthes* in the family *Acanthaceae*. The most famous representative species is *Strobilanthes kunthiana*, renowned for its synchronized, mass gregarious flowering that transforms whole hillslopes into carpets of blue once every 12 years.



Habitat and Distribution:

- **Ecological Niche:** Exclusively adapted to the high-altitude, montane Shola-grassland ecosystems of peninsular India, growing typically at elevations ranging from 1,000 to 2,500 metres above mean sea level.
- **Primary Geographical Hotspot:** Abundantly concentrated across the Western Ghats within Kerala (Munnar, Eravikulam National Park), Tamil Nadu (Nilgiri Hills, Palani Hills), and Karnataka (Mandalpatti in Kodagu, Baba Budangiri and Mullayanagiri in Chikkamagaluru).
- **Global Diversity Hub:** The genus comprises around 450 species globally, of which more than 160 species occur in India—with over 72 species endemic to the Western Ghats alone.
- **Dedicated Sanctuary:** The Kerala government notified the Kurinjimala Sanctuary specifically to protect the natural habitat of Neelakurinji.

Key Characteristics:

- **Plietesimal Lifecycle & Mast Seeding:** Most species flower synchronously after long vegetative cycles, typically 3–16 years (12 years for *S. kunthiana*), produce seeds and subsequently die.
- **Shrub Morphology:** Typically erect shrubs measuring 0.5–3 metres, with some species reaching 8 metres. Their opposite, stalked leaves often contain mineral deposits called cystoliths.
- **Tubular Hooded Inflorescence:** Produces distinctive tubular, two-lipped flowers arranged in dense spikes or panicles, displaying shades of purplish-blue, violet and pale pink.
- **Pollination & Medicinal Honey:** Mass flowering attracts Indian honeybees and giant rock bees, which produce Kurinjithen, a distinctive, dark honey traditionally valued for its medicinal properties.
- **Statutory Protection:** *Strobilanthes kunthiana* is protected under Schedule III of the Wildlife (Protection) Act, 1972. Unlawful collection or destruction may attract imprisonment and fines.

Significance:

- Indicates the health of high-altitude shola-grassland ecosystems, supporting soil conservation, watershed protection and the hydrological stability of the Western Ghats.
- Celebrated in Tamil Sangam literature as Kurinji thinai, its periodic flowering traditionally serves as a biological calendar for Muthuvan and Paliyan communities.

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Chapter- 5

SCIENCE & TECHNOLOGY

The Nancy Grace Roman Space Telescope

Context:

NASA launched its next flagship astrophysics observatory, the Nancy Grace Roman Space Telescope, aboard a SpaceX Falcon Heavy rocket from Kennedy Space Center in Florida.

The Nancy Grace Roman Space Telescope

About The Nancy Grace Roman Space Telescope:

What It Is?

- The Nancy Grace Roman Space Telescope (formerly known as the Wide Field Infrared Survey Telescope or WFIRST) is NASA's next-generation space observatory operating in the visible and near-infrared spectrum.
- Named in honor of Dr. Nancy Grace Roman (NASA's first Chief of Astronomy and the Mother of Hubble), the telescope features a 2.4-meter primary mirror that matches the resolution of the Hubble Space Telescope while delivering a field of view 100 times larger.
- Organisations Involved: National Aeronautics and Space Administration (NASA), managed primarily by NASA's Goddard Space Flight Center.
- Launch Provider: SpaceX (via Falcon Heavy rocket).
- Aim: To conduct large-scale, high-speed panoramic surveys of the universe to unravel the mysteries of dark energy and dark matter, test general relativity at cosmic scales, and perform a comprehensive statistical census of thousands of new exoplanets.



Key Features of the Roman Telescope:

- Massive Field of View (Wide-Field Instrument): Equipped with a 300-megapixel near-infrared camera, it offers a field of view 100 times wider than Hubble, complementing the James Webb Space Telescope's deep-focus observations.
- Rapid Cosmic Survey Speed: Due to its vast scanning footprint, Roman can map the entire plane of the Milky Way galaxy in approximately one month, a monumental task that would require nearly a century of continuous observing time for Hubble.
- Advanced Coronagraph Instrument (CGI): Features an active wavefront control coronagraph designed to suppress bright host starlight by a factor of over one billion, enabling direct imaging and spectroscopy of faint.
- Deep-Space L2 Orbit: It operates in a quasi-halo orbit around the Sun-Earth Lagrange Point 2 (L2), located about 1.5 million km from Earth. This location provides a stable thermal environment and reduces interference from the Earth.
- Gravitational Microlensing Survey: Uses gravitational microlensing to detect distant exoplanets, including gas giants, rocky worlds and free-floating rogue planets.

Earth observation satellite (EOS-05)

Context:

ISRO has slated the launch of EOS-05 (formerly GISAT-1A) aboard the GSLV-F17 rocket from Sriharikota. The mission serves as the operational replacement for the lost GISAT-1 mission to place a continuous geo-imaging satellite over the Indian subcontinent.



Earth observation satellite (EOS-05)

About Earth observation satellite (EOS-05):

What It Is?

- OS-05 (formerly GISAT-1A) is an ISRO geo-imaging satellite built on the I-2K platform. Operating in Geosynchronous Orbit (~35,786 km), it enables near-real-time monitoring of India, surrounding oceans and border regions, succeeding the lost GISAT-1 mission.
- Nodal Agency & Launcher: Developed by the Indian Space Research Organisation (ISRO), launching via GSLV-F17 (GSLV Mk II) from the Second Launch Pad at SDSC-SHAR, Sriharikota.
- Orbit: Placed into a high-altitude Geosynchronous Orbit (~35,786 km), matching Earth's rotation to overcome the multi-day revisit gaps typical of Low Earth Orbit (LEO) satellites.
- Primary Objective: Deliver persistent spatial, spectral, and thermal monitoring over the Indian landmass, oceans, and border zones for disaster mitigation, agriculture, and strategic defense.

Key Features:

- Geostationary High-Resolution Optics: Carries a 700 mm Ritchey–Chrétien optical telescope achieving 42 m spatial resolution in the visible and near-infrared (VNIR) band from ~36,000 km.
- Advanced Hyperspectral Suite: Houses multispectral and hyperspectral sensors—HyS-VNIR (158 spectral bands), HyS-SWIR (256 spectral bands), and Long-Wave Infrared (MX-LWIR)—enabling detailed analysis of vegetation, soil health, and atmospheric aerosols.
- Rapid Revisit Capability: Capable of imaging critical disaster spots every 5 to 10 minutes and completing a full scan of the Indian landmass every 30 minutes under clear skies.
- Agile Spacecraft Bus: Features electronically steerable phased array antennas and low-jitter reaction wheels for quick repointing toward sudden events like cyclones, flash floods, or border activity.

Significance:

- Functions as an Eye in the Sky by maintaining uninterrupted coverage over the Line of Actual Control (LAC), the Line of Control (LoC), and key maritime passages across the northern Indian Ocean.
- Drastically cuts emergency warning and reaction times by continuously tracking cyclone development in the Bay of Bengal, cloudburst events, forest fires, and glacial lake outbursts in the Himalayas.

AI Creativity and Copyright

Context:

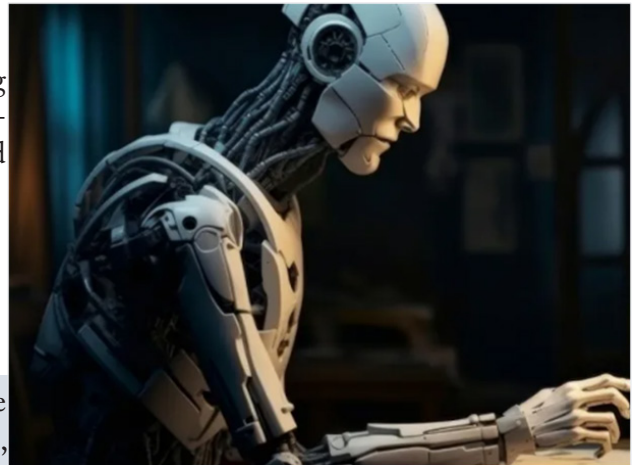
The Copyright Office of India rejected an application seeking to recognise the AI system DABUS as the author of an AI-generated artwork, while accepting that the work itself could satisfy the originality requirement.

AI Creativity and Copyright

About AI Creativity and Copyright:

What it is?

- AI creativity refers to the use of artificial intelligence systems to generate creative outputs such as images, music, literature, videos and designs.
- Under the Copyright Act, 1957, copyright protects original literary, dramatic, musical and artistic works. For a computer-generated work, Section 2(d)(vi) identifies the author as the “person who causes the work to be created.”



Arguments For and Against AI Authorship:

Arguments for AI Authorship	Arguments against AI Authorship
Autonomous Creativity: Advanced AI can generate outputs with limited direct human control over the final expression.	No Legal Personality: AI is neither a natural nor a recognised juristic person capable of possessing legal rights and duties.
Technological Reality: Recognising AI's creative role may better reflect how increasingly autonomous generative systems operate.	Human-Centric Copyright: Copyright law traditionally links authorship with human skill, judgement and creative responsibility.
Encourages Innovation: Protection of AI-generated works could incentivise investment in creative AI technologies.	Ownership Problem: AI cannot independently own, assign, license or enforce copyright through contracts or courts.
Clear Attribution: Recognition could distinguish genuinely AI-generated works from human-created or AI-assisted works.	AI as a Tool: Like a camera, editing software or printing technology, AI may facilitate creation without becoming the legal author.
Law Can Evolve: Parliament can create a separate legal framework for autonomous AI-generated works as technology develops.	Accountability Gap: Treating AI as an author creates uncertainty over infringement, liability and responsibility for unlawful outputs.

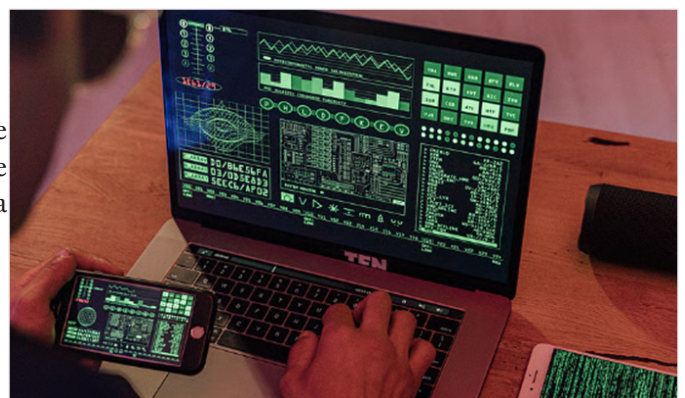
Significance:

- The ruling distinguishes originality from authorship. An AI-generated work may be original, but AI itself cannot currently be its statutory author; the legally responsible human may qualify as the person who “causes” the work to be created.
- It provides an important precedent for generative AI, intellectual property and creative industries, while leaving any extension of legal personhood or authorship to AI for Parliament to decide.

Virtual Private Network (VPN)

Context:

Authorities in Jammu and Kashmir's Doda district have imposed a two-month ban on the use of Virtual Private Networks (VPNs) under Section 163 of the Bharatiya Nagarik Suraksha Sanhita (BNSS).



Virtual Private Network (VPN)

About Virtual Private Network (VPN):

What it is?

- A Virtual Private Network (VPN) is a networking and cybersecurity technology that establishes an encrypted, private communication link between a user's device and a remote server over a public or unsecure network (such as the internet).
- It masks the user's real IP address and location, ensuring data privacy and preventing external interception.
- Aim: To secure sensitive digital traffic from unauthorized interception, surveillance, or tampering while in transit, enabling secure remote data transmission and private access to networked resources.

Types of VPNs:

- RemoteAccess VPN: Connects an individual user remotely to a private corporate network or cloud environment, authenticating the user and safeguarding data in transit.
- Site-to-Site VPN: Interconnects fixed network setups across multiple permanent physical locations.
- Client-to-Provider (Commercial) VPN: Used primarily by individual consumers to route standard public browsing traffic through an external intermediary server, encrypting consumer internet activity and masking geolocation.

How It Works?

A VPN operates on three core technical pillars:

- Authentication: Before establishing a session, the user and device credentials are confirmed by the VPN gateway to verify that only authorized endpoints are granted network access.
- Tunneling: The original data packets are encapsulated inside another transport packet through a process known as encapsulation, creating a private virtual tunnel across public internet infrastructure.
- Encryption: Plaintext data is scrambled into unreadable ciphertext using cryptographic protocols. Even if the traffic is intercepted by third parties or internet service providers, it cannot be read without the designated decryption keys.

Key Applications:

- Enterprise and Remote Work Security: Enables employees to securely access internal enterprise tools, private databases, and development servers from off-site locations without exposing them directly to the open internet.
- Secure Hybrid and Cloud Infrastructure: Connects on-premises corporate infrastructure with cloud platforms (such as virtual network gateways), ensuring secure multicloud workflows.
- Academic and Research Connectivity: Allows university students, researchers, and faculty to access proprietary digital libraries, laboratory resources, and internal campus databases from off-campus.
- Public Network Protection: Shields credentials, financial information, and personal communications from eavesdropping, packet-sniffing, and man-in-the-middle attacks on unsecured public Wi-Fi networks.

ISRO's New Space Model: Expanding Private Participation Without Privatisation

Context:

ISRO clarified that it is not being privatised, amid plans for private firms and PSUs to manufacture operational launch vehicles and satellites.

- The shift aims to expand private participation in routine space activities while ISRO focuses on advanced research and missions.



ISRO

About ISRO's New Space Model: Expanding Private Participation Without Privatisation

What it is?

- India's space reforms, initiated in 2020 and codified under the Indian Space Policy 2023, mandate that ISRO transition out of the routine manufacturing of operational systems. The objective is not privatization of the agency, but ecosystem expansion and capability multiplication:
- ISRO: Focuses exclusively on frontier research and development, deep-space planetary exploration, human spaceflight and strategic national security payloads.
- IN-SPACe (Indian National Space Promotion and Authorization Centre): Acts as the single-window autonomous regulator to authorize, promote, and supervise Non-Government Entities (NGEs) utilizing Department of Space infrastructure.
- NSIL (NewSpace India Limited): The commercial arm responsible for commercializing publicly funded technologies, aggregating customer demand, and transferring mature launch vehicles to industry consortia.

Key Data & Structural Indicators:

- Market Size & Target: India's space economy is worth about \$8.4–9 billion, with targets of \$44 billion by 2033 and \$1.5 trillion by 2047.
- Startup Growth: Space-tech startups grew from 1 in 2014 to over 440 by mid-2026, covering launch vehicles, satellites and ground infrastructure.
- US Patent Trend: Privately driven US space patents rose from 65% to nearly 84%, while NASA remained strong in transportation and human spaceflight technologies.
- FDI Liberalisation: Automatic-route FDI allows up to 74% in satellites, 49% in launch vehicles/spaceports and 100% in components.

Comparative Analysis: ISRO's Model vs. NASA's Commercial Paradigm

Institutional Philosophy:

- NASA: Operates primarily as an anchor customer and procurement agency under fixed-price commercial service contracts (e.g., Commercial Cargo, Commercial Crew to the ISS).
- ISRO: Retains an integrated developer-operator role, using NSIL to license proven technology packages directly to domestic industry while maintaining sovereign oversight.

Launch Vehicle Operations:

- NASA: Completely outsourced Low Earth Orbit (LEO) orbital launches and crew ferries to private operators (e.g., SpaceX Falcon 9, Dragon), while retaining the super-heavy Space Launch System (SLS) for deep-space Artemis missions.
- ISRO: Transferring mature, workhorse launch vehicles (PSLV, SSLV, and LVM3) to domestic industrial consortia, while ISRO engineers retain development of next-generation heavy-lift and reusable launchers (NGLV).

Deep Space & Frontier R&D:

- NASA: Directs planetary probes (e.g., Mars rovers, Europa Clipper) and human lunar infrastructure while contracting specialized commercial landers (Human Landing System).
- ISRO: Exclusively leads complex national programs, including the Chandrayaan lunar series, Shukrayaan Venus orbiter, Aditya solar observatories, and indigenous astronaut modules.
- Commercialization Maturity:
- NASA: Backed by an established private aerospace-defense industrial base (Boeing, Lockheed Martin, Northrop Grumman) and mature venture-capital-backed commercial spaceflight companies.
- ISRO: Spearheading the transition through a tripartite governance framework (ISRO–IN-SPACe–NSIL) to incubate a young private sector and upgrade MSME component suppliers into full-stack systems integrators.

Core Synergies & Shared Principles:

- Specialization of Labor: Both agencies recognize that routine manufacturing, fabrication, and commercial services divert critical public scientific manpower from pioneering frontier research.
- Public Infrastructure Access: Both models open state-owned launchpads, environmental test facilities, and tracking telemetry networks to private companies.
- E.g., NASA's Kennedy Space Center leases; ISRO's Sriharikota integration facilities.
- Capital Multiplication: Both structures deploy public capital as catalytic seed funding while mobilizing private investment to scale global market share.

Challenges Facing India's Transition:

- Capital Availability & Risk Appetite: Unlike the deep venture funding and multi-billion-dollar defense procurement contracts sustaining the US space ecosystem, Indian space startups face tighter private growth capital.
- Supply-Chain Upgradation: Moving local suppliers from build-to-print component fabricators to tier-1 aerospace systems integrators capable of independent orbital launches requires substantial quality-assurance upgrades.
- Liability & Space Insurance Frameworks: As non-government launches increase, establishing codified third-party financial liability, orbital debris mitigation norms, and affordable space insurance mechanisms remains critical.
- Internal Workforce Anxieties: Managing institutional concerns within state-run centers regarding job security, IP protection, and research priorities as routine assembly lines move to private consortia.

Way Ahead:

- Operationalizing Anchor Procurement Contracts: NSIL and government defense/telecom departments should act as guaranteed long-term buyers for private satellite constellations and launch services, replicating NASA's Commercial Orbital Transportation Services (COTS) model.
- Accelerating Tech Transfer (ToT) Protocols: Establish standardized, rapid-licensing frameworks for transferring liquid propulsion, avionics, and composite materials to vetted domestic consortia.
- Passing Comprehensive Space Legislation: Enact a dedicated, statutory Space Activities Bill to provide legislative permanence to IN-SPACE's regulatory authority, spectrum allocations, and private property rights in space.
- Expanding Defense Space Integration: Channel domestic procurement through the Defence Space Agency (DSA) and Mission DefSpace to provide sovereign demand pipelines for private rocket and Earth-observation builders.

Conclusion:

The fundamental distinction lies in execution: whereas NASA relies on a mature commercial market as an arms-length buyer, India is actively incubating its industrial ecosystem through coordinated state support, technology transfers, and shared national test facilities. By balancing private entrepreneurial agility with ISRO's proven engineering excellence, India is positioning its space program for sustained commercial scale and deep-space exploration.

Copper

Context:

Global copper prices surged to an all-time record high of \$14,708 per tonne on the London Metal Exchange (LME).

Copper

About Copper:

What it is?

- A non-ferrous base metal and chemical element (symbol Cu, atomic number 29, atomic weight



63.546) celebrated for its high thermal and electrical conductivity, malleability, and ductility. Because of its pervasive use across infrastructure, it is often nicknamed Doctor Copper for its ability to diagnose the overall health of the global economy.

Origin & History:

- Named from the Latin word cuprum, meaning from the island of Cyprus, which was the principal source of copper in the Roman era.
- Humankind's oldest metal in continuous use, dating back more than 10,000 years (with decorative copper beads and pendants discovered in northern Mesopotamia dating to c. 8700 BCE).
- Spearheaded the transition of prehistoric human civilization from the Neolithic Era into the Chalcolithic (Copper Age) and subsequent Bronze Age.

Key Characteristics:

- **Superior Electrical and Thermal Conductivity:** Possesses the highest electrical conductivity of any non-precious commercial metal, making it the global standard for industrial wiring and power transmission.
- **Distinct Natural Coloration:** Alongside gold, copper is one of only two elemental metals on the periodic table that exhibits an intrinsic non-gray/non-white reddish-orange metallic luster.
- **Infinite Recyclability:** Highly sustainable, 100% recyclable without any loss in physical or chemical properties, retaining high market value across scrap loops.
- **Inherent Antimicrobial Efficacy:** Poses contact-killing properties against bacteria, yeasts, and viruses via oligodynamic action, preventing biofouling and microbial proliferation on contact surfaces.
- **Extensive Alloying Versatility:** Easily alloys with various elements to form over 400 specialized compounds—most notably brass and bronze.

Key Applications:

- **Power Grids & Renewable Energy Infrastructure:** Forms the foundational cabling and winding material for electricity generation, high-voltage substations, transmission networks, wind turbines, and solar photovoltaic plants.
- **Clean Mobility & Electric Vehicles (EVs):** An essential ingredient in EV battery packs, stator coils, electric motors, and high-speed DC charging stations, requiring up to four times more copper per vehicle than internal combustion engine (ICE) cars.
- **High-Tech, AI & Data Centers:** Used extensively in chip-level interconnects, printed circuit boards (PCBs), heat sinks, busbars, and liquid cooling systems powering artificial intelligence data centers and supercomputers.
- **Building Construction & Industrial Plumbing:** Deployed broadly in residential and commercial architectural roofing, heating-ventilation-air conditioning (HVAC) heat exchangers, water piping, and architectural cladding.
- **Biological Nutrition & Agro-Chemicals:** Functions as an indispensable trace micronutrient in plant enzymes, animal metabolism, and human hematopoiesis, as well as in agricultural fungicides and algicides.

Badri Cattle

Context:

In a major milestone for indigenous cattle conservation, India produced its first Badri calf through Ovum Pick-Up and In Vitro Fertilization (OPU-IVF) technology at Pantnagar.

Badri Cattle

About Badri Cattle:

What it is?

- An indigenous humped cattle (*Bos indicus*) breed native to the Himalayan region of Uttarakhand, locally called Pahadi.
- It derives its name from the holy shrine of Badrinath and holds the distinction of being the first cattle breed from Uttarakhand to be officially certified and registered by ICAR's National Bureau of Animal Genetic Resources (NBAGR).



Habitat:

- Found throughout the hilly and mountainous tracts of Uttarakhand—particularly across the Garhwal and Kumaon divisions (such as Almora, Pauri Garhwal, Chamoli, and Champawat).
- It thrives in high-altitude environments, uneven slopes, and cold climatic conditions where exotic or plains-bred cattle struggle to adapt.

Key Characteristics:

- **Compact, Agile Body Frame:** Relatively small in stature with strong, sure-footed hooves and legs, perfectly structured to graze on steep, rocky mountain slopes and narrow hill terraces without slipping.
- **Upward and Inward Curved Horns:** Features medium-sized horns that curve characteristic upward and inward, aiding maneuverability through dense montane shrubs and forests.
- **Varied Coat Coloration:** Displays diverse coat colors, commonly ranging from solid black, brown, and red to grey, white, or mottled patterns.
- **High Disease Resistance and Low-Input Grazing:** Highly hardy and disease-resilient, surviving comfortably on free-range grazing of native Himalayan grasses, shrubs, and medicinal herbs with minimal supplementary stall feed.
- **A2 Beta-Casein Rich Milk:** Although a modest yielder (~1 to 3 litres per day), its milk is exceptionally rich in healthy A2 beta-casein protein, antioxidants, and minerals, fetching a premium market value.

Significance:

- The successful application of OPU-IVF and embryo transfer allows elite female germplasm to be multiplied rapidly in surrogate cows, circumventing the slow biological reproduction rate of conventional hill cattle.
- Provides sustainable livelihood support, organic dairy products, and draught power for terrace farming in remote Himalayan villages, directly mitigating agrarian distress and rural distress-migration.

Weaponisation of Space: The Emerging Arms Race in Earth's Orbit**Context:**

The United States officially confirmed that it has deployed offensive on-orbit space control weapons in Earth's orbit, marking the first time Washington has publicly acknowledged stationing combat weapons in space.

The Weaponisation of Space**About The Weaponisation of Space:****What It Is?**

- The weaponisation of space refers to the placement of offensive or defensive weaponry into orbit around Earth, or the development of systems specifically intended to destroy, disrupt, or degrade orbital assets or terrestrial targets from space. It is distinguished from the passive militarisation of space by shifting space into an active warfighting domain.

**Laws Governing Outer Space:****The Outer Space Treaty (1967):**

- The foundational pillar of international space law. Article IV explicitly prohibits placing nuclear weapons or other Weapons of Mass Destruction in orbit, installing them on celestial bodies, or stationing them in outer space.
- However, it contains a critical legal loophole: it does not ban conventional weapons, kinetic interceptors, electronic jammers, or directed-energy arms in Earth's orbit.
- **UN Charter & International Law:** Applies to outer space, governing self-defense (Article 51) and the peaceful settlement of disputes.

- Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water (1963): Prohibits nuclear detonations in orbital space.
- The Moon Agreement (1979): Prohibits using the Moon or celestial bodies for military bases or maneuvers, though major spacefaring states have largely failed to ratify it.

Rise of the Weaponisation of Space:

- Direct-Ascent Anti-Satellite (DA-ASAT) Tests: Ground-to-space kinetic interceptors have demonstrated the ability to destroy low-Earth orbit satellites; proven by the US, Russia, China (2007 test against Fengyun-1C), and India (Mission Shakti, 2019).
- Co-Orbital Rendezvous and Proximity Operations (RPO): The deployment of maneuverable inspector spacecraft capable of trailing, shadowing, grappling, or physically disabling adversary satellites; exemplified by Russian Cosmos satellites maneuvering in close proximity to Western and European constellations.
- Directed-Energy & Laser Blindings: Ground- and space-based laser, microwave, and particle-beam systems designed to dazzle, blind, or permanently burn optical sensors on reconnaissance and early-warning satellites.
- Electronic Warfare & Orbital RF Jammers: Deploying space-based jammers and spoofers to intercept, degrade, or sever uplink/downlink communication bands, rendering adversary military command systems blind without physical destruction.
- Space-Based Missile Interceptors: Accelerated integration of offensive orbital interceptors, highlighted by the US Space Force's space control doctrine and orbital components of the Golden Dome missile defense architecture.

Challenges Associated with the Weaponisation of Space:

- Kessler Syndrome & Orbital Debris: Destroying satellites creates high-speed debris that can collide with other spacecraft and trigger cascading collisions. Russia's 2021 ASAT test, for instance, created over 1,500 trackable fragments.
- Escalation & Miscalculation Risks: It can be difficult to distinguish a satellite malfunction or cyberattack from a deliberate strike, increasing the risk that misinterpretation escalates into conflict on Earth.
- Civilian Infrastructure at Risk: Military and civilian systems often depend on the same space infrastructure. Counterspace attacks can therefore disrupt banking, aviation, weather forecasting, navigation and emergency services.
- Dual-Use Technology Dilemma: Technologies for debris removal, satellite servicing and refuelling have peaceful uses but can also be repurposed to capture, disable or alter another country's satellites.
- Weak Global Rules: Major-power disagreements have slowed efforts to establish binding rules for space security, leaving significant gaps in norms governing counterspace weapons and responsible behaviour.

Way Ahead:

- Strengthen the Outer Space Treaty: Develop legally binding rules restricting kinetic, co-orbital and directed-energy weapons, addressing gaps left by the 1967 treaty.
- Ban Destructive ASAT Tests: Establish a global moratorium on debris-generating anti-satellite tests to prevent further creation of dangerous, long-lived orbital debris.
- Responsible Behaviour in Space: Use UN-led processes to develop norms on safe distances, advance notification of manoeuvres and responsible satellite operations.
- Space Traffic Management: Build transparent Space Situational Awareness (SSA) and data-sharing mechanisms to track objects, prevent collisions and reduce misunderstandings.
- Build Resilient Space Systems: Shift from a few vulnerable satellites towards distributed Low Earth Orbit constellations, reducing dependence on individual high-value space assets.

Conclusion:

The deployment of on-orbit weapons confirms that outer space has definitively shifted from an operational support environment into an active warfighting domain. While superpowers justify offensive orbital systems as necessary deterrence, unchecked weaponisation risks triggering a chain-reaction arms race that threatens humanity's shared access to the cosmos. Establishing binding international legal prohibitions and robust space traffic management is urgent before conflict in orbit permanently shatters the peaceful utilization of the global orbital commons.

SEMICON India 2026

Context:

Prime Minister Narendra Modi inaugurated the 5th edition of SEMICON India 2026 at Yashobhoomi (IICC) in New Delhi, coinciding with Vishwakarma Diwas.

SEMICON India 2026

About SEMICON India 2026:

What it is?



- India's flagship international semiconductor conference and exhibition, functioning as the premier nexus connecting the global microelectronics supply chain, fab operators, design startups, academic institutions, and policymakers.
- Organisers: Jointly organized by the India Semiconductor Mission (ISM), Ministry of Electronics and Information Technology (MeitY), and SEMI (the leading global industry association uniting the electronics manufacturing and design supply chain).
- Host: Yashobhoomi (India International Convention & Expo Centre), New Delhi.
- Theme: Silicon to Systems: Building the Ecosystem.
- Aim: To accelerate capital investments, bridge global technology partnerships, foster domestic chip design IP, and position India as a trusted, resilient global manufacturing destination across the entire electronics value chain.

Key Features:

- End-to-End Sand to Systems Exhibition: Brings together 500+ companies from 20+ countries, covering silicon, chemicals, chip manufacturing, packaging and system integration.
- Specialised Pavilions: Includes country and state pavilions, a Workforce Development Pavilion and a Startup Pavilion featuring 40+ deep-tech fabless startups.
- ISM Phase 2: Provides \$13.5 billion to strengthen semiconductor equipment, specialty gases, silicon photonics and advanced 3D packaging.
- Talent & Skill Development: Promotes chip-design skills through universities and hackathons, with 70,000+ engineering students trained in EDA tools against a 100,000 target.
- Clean Energy Integration: Links semiconductor fabs and AI data centres with reliable clean power, leveraging solar capacity and emerging small modular nuclear reactors.

Significance:

- Aligns with the global China+1 diversification drive, offering democratic resilience and dependable intellectual property safeguards for international chip giants.
- Transforms India from a design hub into a full semiconductor value-chain powerhouse, boosting domestic value addition, reducing import dependence and advancing Viksit Bharat @2047.

The Hepatitis B and C

Context:

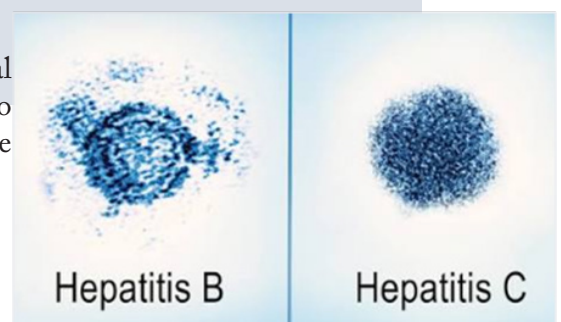
Addressing a side-event at the 81st session of the UN General Assembly, Union Health Secretary reaffirmed India's commitment to eliminating Hepatitis B and C as public health threats by 2030 in line with the UN Sustainable Development Goals (SDG 3.3).

The Hepatitis B and C

About The Hepatitis B and C:

What it is?

- Both are infectious, blood-borne viral diseases that cause inflammation of the liver (hepatitis). They can transition into chronic, lifelong infections responsible for progressive fibrosis, liver cirrhosis, end-stage liver failure, and hepatocellular carcinoma (liver cancer). Together, Hepatitis B and C account for approximately 80% of primary liver cancers globally.



Global/National Burden:

- **Global Impact:** According to the World Health Organization (WHO), an estimated 304 million people worldwide live with chronic Hepatitis B or C, causing over 1.3 million deaths annually.
- **Indian Context:** Recognised as a major public health priority. Under India's 2021 HIV Sentinel Surveillance, test positivity stood at 0.85% for Hepatitis B and 0.29% for Hepatitis C.
- The Government of India rolled out the National Viral Hepatitis Control Program (NVHCP) in 2018 under the National Health Mission (NHM) to provide decentralized, free screening, and treatment.

Key Characteristics of Hepatitis B (HBV):

- **Pathogen & Viral Structure:** Caused by HBV, a partially double-stranded DNA virus belonging to the Hepadnaviridae family that primarily infects liver cells.
- **Mode of Transmission:** Spreads through mother-to-child transmission at birth, infected blood and bodily fluids, unsafe medical injections, and unprotected sexual contact.
- **Environmental Stability & High Infectivity:** HBV is 50–100 times more infectious than HIV and can remain infectious on environmental surfaces for at least seven days.
- **Persistence via cccDNA:** Forms covalently closed circular DNA (cccDNA) inside liver-cell nuclei, creating a persistent viral reservoir that enables reactivation and makes complete eradication difficult.
- **Direct Oncogenic Potential:** HBV can integrate its DNA into the host genome, increasing the risk of hepatocellular carcinoma even without preceding liver cirrhosis.

Key Characteristics of Hepatitis C (HCV):

- **Pathogen & Viral Structure:** Caused by HCV, a positive-sense, single-stranded RNA virus belonging to the Flaviviridae family, which primarily targets the liver.
- **Mode of Transmission:** Spreads mainly through infected blood, particularly shared needles, unsafe blood transfusions and unsterilised medical equipment. Sexual and perinatal transmission are less common.
- **Chronic Progression Course:** Often remains asymptomatic for years, with approximately 70–80% of untreated infections becoming chronic and potentially progressing to cirrhosis and liver cancer.
- **Rapid Viral Mutation & Lack of Vaccine:** Its error-prone RNA polymerase produces frequent mutations and diverse viral variants, complicating vaccine development. No preventive HCV vaccine is currently available.

Analogue Paneer

Context:

The Food Safety and Standards Authority of India (FSSAI) proposed a draft amendment to the Food Safety and Standards (Prohibition and Restrictions on Sales) Regulations, 2011, to prohibit the manufacture, marketing, and sale of non-dairy analogue products under the name Paneer.

Analogue Paneer

About Analogue Paneer:

What it is?

- A formulated, imitation food product designed to replicate the appearance, taste, texture, and culinary functionality of traditional dairy paneer, in which milk constituents (primarily milk fat and milk protein) are partially or completely replaced by non-dairy ingredients such as vegetable oils, hydrogenated fats, starches, and plant proteins.

How It is Formed?

- **Constituent Substitution:** Replaces natural milk fat with low-cost vegetable fats and pairs them with skimmed milk powder (SMP), soy protein isolates, or caseinates.
- **Emulsification & Binding:** Modified food starches (like potato, maize, or tapioca starch), emulsifiers, and stabilisers are blended under controlled thermal processing to achieve the characteristic firmness and water-binding capacity of cottage cheese.



- **Coagulation & Setting:** Acidulants are introduced to precipitate the blend, followed by mechanical pressing into solid blocks that slice and fry identically to conventional dairy paneer.

Difference Between Milk Paneer and Analogue Paneer:

Feature	Conventional Milk Paneer	Analogue Paneer
Raw Materials	Milk or milk solids coagulated using heat and permitted acids.	Vegetable oils, starch, plant proteins and stabilisers, sometimes with milk solids.
Fat Source	Natural milk fat.	Vegetable oils, often palm oil or hydrogenated fats.
Protein Quality	High-quality milk protein containing all essential amino acids.	Variable protein content and quality, depending on ingredients.
Production Cost	Higher, requiring approximately 4–5 litres of milk per kg.	Reportedly 50–70% cheaper to manufacture.
FSSAI Classification	Standardised dairy product with prescribed moisture and fat limits.	Dairy analogue; cannot be labelled or sold as genuine paneer.

Implications of FSSAI's Regulatory Action:

- **Consumer Protection:** Ensures transparent labelling, preventing consumers from unknowingly purchasing nutritionally inferior paneer substitutes.
- **Protecting Dairy Farmers:** Prevents unfair competition from cheaper imitation products, safeguarding dairy farmers and cooperatives.
- **Food Service Compliance:** Requires hotels, restaurants, caterers and food delivery platforms to disclose analogue products and prevent misleading sales.

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Elias 2-24 b

Context:

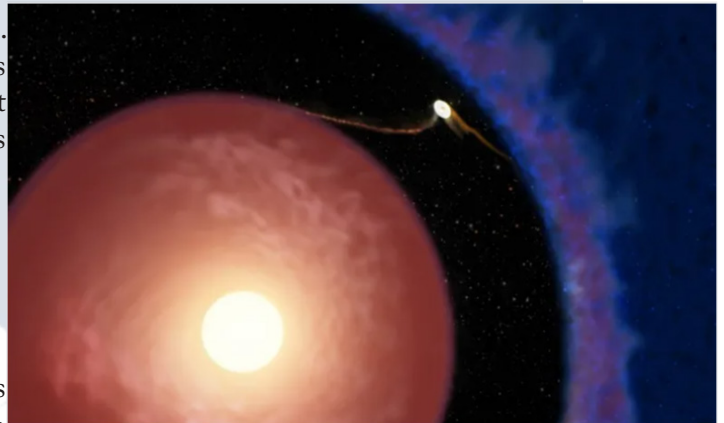
Using NASA-funded archival data from the W. M. Keck Observatory, an international team of astronomers confirmed Elias 2-24 b as the youngest known planet ever detected, clocking in at less than one million years old.

Elias 2-24 b

About Elias 2-24 b:

What it is?

- A nascent, gas-giant exoplanet roughly the mass of Jupiter, representing a baby planet caught in the earliest stages of planetary birth while still embedded in its surrounding circumstellar disk of gas, dust, and rock.
- Origin: Formed around the young host star Elias 2-24, located approximately 450 light-years from Earth in the Ophiuchus star-forming region.



Key Features:

- Record-Breaking Age: Estimated at less than 1 million years old, easily shattering the previous record held by planets around PDS 70 and WISPIT 2 (which are over 5 million years old).
- Extreme Orbital Distance: Orbits its parent star at a wide distance of approximately 55 Astronomical Units (AU)—roughly 55 times the Earth–Sun distance.
- Active Disk Accretion: Located precisely inside a dark ringed gap carved out in the circumstellar disk, directly accumulating gas and dust to build up its envelope and atmosphere.
- Coronagraphic Detection: Identified by using high-contrast coronagraphy to block the overwhelming glare of the host star, revealing faint infrared signatures in archival images taken between 2018 and 2020.

Significance:

- Challenges Planet Formation Models: Its rapid formation at 55 AU in under 1 million years suggests faster mechanisms such as gravitational instability or pebble drift.
- Window into Early Solar Systems: Helps explain how gas giants form, migrate and clear surrounding debris during the early stages of planetary systems.

The Unified Payments Interface (UPI)

Context:

The Unified Payments Interface (UPI) cemented its role as the backbone of India's digital economy, processing 2,366 crore transactions worth nearly 30 lakh crore in July 2026 alone.

The Unified Payments Interface (UPI)

About The Unified Payments Interface (UPI):

What It Is?

- UPI is an advanced, real-time interoperable payment system that enables instantaneous inter-bank fund transfers directly through mobile applications. Built as an open-architecture digital public infrastructure, it converts a user's complex bank account details into a simple, secure virtual payment alias (Virtual Payment Address or UPI ID).



Developed By:

- Developer: National Payments Corporation of India (NPCI).
- Launch Date: Piloted in April 2016 with 21 banks under then-RBI Governor Raghuram Rajan, expanding to over 730 participating banks.
- Aim: To build a seamless, interoperable, cashless digital payment ecosystem that simplifies retail transactions, brings unbanked/underbanked populations into formal digital finance, and drives friction-free person-to-person (P2P) and person-to-merchant (P2M) settlement.

How It Works?

- Payment Initiation via Virtual Alias: The sender inputs the recipient's UPI ID (e.g., shankar@flutebank) or scans a QR code on a Third-Party Application Provider (TPAP like Google Pay/PhonePe) connected through a Payment Service Provider (PSP) bank.
- User Authentication: The TPAP routes the transaction token to the NPCI central switch, which prompts the sender to authenticate the request by entering their secret 4- or 6-digit UPI PIN on a secure encrypted library.
- Core Banking System (CBS) Validation: The sender's bank (Remitter Bank) verifies the authentication, checks account validity, account balance, daily transaction limits, and automated anti-fraud parameters.
- Inter-Bank Switching & Routing: Once the remitter bank approves the debit, the NPCI central switch directs the instruction to the recipient's bank (Beneficiary Bank) mapped to that specific UPI ID alias.
- Real-Time Settlement & Confirmation: The remitter bank deducts the amount, the beneficiary bank instantly credits the recipient's account, and a simultaneous confirmation message is relayed back through NPCI to both users' mobile apps.

Key Features of UPI:

- Virtual Payment Address (VPA / UPI ID): Eliminates the need to share sensitive financial data (such as bank account numbers, IFSC codes, or net-banking passwords) by using aliases.
- 24/7/365 Real-Time Settlement: Operates continuously with zero downtime, built over the Immediate Payment Service (IMPS) messaging backbone.
- Single App Multi-Banking: A single UPI mobile application can link multiple bank accounts from different institutions, allowing users to choose source accounts on demand.
- Two-Factor Authentication (2FA): Incorporates device binding (SIM card registration) as the first factor and the secret UPI PIN as the second factor for robust security.
- Advanced Capabilities (UPI 2.0): Supports recurring mandates (autopay), pre-approved credit lines, overdraft account linking, invoice verification before payment, UPI Lite for offline small-value transactions, and conversational AI-driven voice payments.

India's 7.8% GDP Growth Debate: Understanding MoSPI's Defence and the Double Deflation Method

Context:

The MoSPI rejected claims that India's Q1 FY 2026–27 real GDP growth of 7.8% was inflated, stating that estimates use the 2022–23 base year, Producer Price Indices (PPI), and double-deflation methodology.

7.8% GDP Growth Debate

About India's 7.8% GDP Growth Debate: Understanding MoSPI's Defence and the Double Deflation Method



What it is

- GDP measures the value of final goods and services produced within a country. Under the Double Deflation Method, output and intermediate inputs are deflated separately using appropriate price indices:
- Real GVA = Deflated Gross Output – Deflated Intermediate Consumption
- This provides a more accurate measure of real manufacturing growth, especially when input and output prices move differently.

Key Data & Economic Indicators:

- Real vs. Nominal GDP: Real GDP reached 81.36 lakh crore (7.8% YoY growth), while nominal GDP reached 88.27 lakh crore (10.3% YoY growth).
- Real GVA Outturn: Real GVA expanded by 8.2% to 73.82 lakh crore, outpacing nominal GVA growth of 11.5% (80.53 lakh crore).

Sectoral Drivers:

- Manufacturing GVA: Grew 9.2% in real terms (compared to 7.7% nominal growth), yielding a negative implicit GVA deflator of -1.5%.
- Tertiary / Services: Surged 10.0%, anchored by Financial, Real Estate, and Professional Services at 12.1%.
- Primary Sector: Grew 2.9%, with Agriculture, Forestry & Fishing expanding at 3.6%.
- Mining & Quarrying: Contracted 2.4% in volume terms (IIP-based) but posted 22.3% nominal growth due to high global crude oil and metal ore price inflation (PPI up >60%).
- Demand-Side Strength: Gross Fixed Capital Formation (GFCF) expanded by 11.9% (up from 5.8% in Q1 FY26), and Private Final Consumption Expenditure (PFCE) grew by 7.1%.

Core Criticisms Raised vs. MoSPI's Point-by-Point Rebuttal:

Critic Claim	MoSPI Clarification & Economic Rationale
Growth is only 2.6% due to base manipulation: Last year's Q1 FY26 nominal GDP was deflated from 86.05 lakh crore to 80.00 lakh crore to artificially boost growth.	Apples-to-Oranges Comparison: The 86.05 lakh crore figure belonged to the superseded 2011–12 base series. The 2022–23 series initially estimated Q1 FY26 at 80.32 lakh crore in Feb 2026, revised normally through standard data cycles. Growth must be evaluated within the same series.
Negative Manufacturing Deflator (-1.5%) is impossible: How can the deflator be negative when consumer and wholesale prices are rising?	Double Deflation Dynamics: Input prices (cotton, basic metals, polymers) rose faster than factory-gate output prices. Intermediate costs compressed nominal value-add while real physical output expanded.
GDP Deflator (2.5%) contradicts CPI (3.9%) and WPI (>9%): Large divergences between price indices suggest flawed inflation accounting.	Coverage & Weight Variations: CPI tracks only household retail baskets; WPI tracks bulk physical goods excluding services. The GDP deflator covers the whole economy (including low-inflation IT, telecom, and banking) via >300 item-level deflators.
Double deflation skews PFCE: Consumption expenditure estimates are distorted by production-side adjustments.	Methodological Isolation: Double deflation is applied strictly to production-side GVA. PFCE is estimated via independent consumer demand indicators and detailed retail CPI baskets.
Discrepancies indicate major future revisions: Large statistical discrepancies between expenditure and production approaches undermine credibility.	Routine Balancing Mechanism: Discrepancies represent statistical balancing items across high-frequency indicator models that converge toward zero as annual corporate MCA21 and tax filings arrive.

Significance of the 2022–23 Base Year Revision:

- Granular Price Capture: Replaced broad WPI proxies with the Producer Price Index (PPI), expanding

individual sector deflators from ~180 to over 300, aligning India with UN System of National Accounts (SNA) standards.

- Inclusion of Modern Services: Deployed the Banking Services Price Index and modernized digital/fintech weights to capture structural shifts in the services-led economy.
- Enhanced Real-Time Tracking: Utilizes the benchmark-indicator framework using high-frequency real-economy proxies rather than outdated sample surveys.

Way Ahead:

- Accelerating High-Frequency Input Price Tracking: Deepen survey coverage of intermediate industrial inputs to minimize volatility in quarterly double-deflated manufacturing estimates.
- Harmonizing Enterprise MCA21 Portals: Integrate real-time corporate financial data filings with National Accounts compilations to narrow discrepancies between production and expenditure approaches.
- Public Dissemination & Technical Workshops: Conduct technical briefings for academic economists, financial institutions, and policy analysts to build familiarity with double-deflation mechanics and PPI linkages.
- Institutionalizing Regular 5-Year Base Revisions: Establish a predictable schedule for updating national account and inflation baselines to prevent data shocks associated with delayed revisions.

Conclusion:

The controversy surrounding the Q1 FY 2026–27 GDP numbers highlights the transition pains of upgrading to global statistical standards like double deflation. By distinguishing between output prices and intermediate cost shocks, the revised 2022–23 series provides a more accurate reflection of industrial value addition. Maintaining absolute transparency and improving granular data infrastructure will be essential to safeguarding institutional trust in India's macroeconomic growth narrative.

The Public Insurance Registry (PIR)

Context:

The Insurance Regulatory and Development Authority of India (IRDAI) has issued a consultation paper proposing the establishment of a Public Insurance Registry (PIR).

- Conceived as a Digital Public Infrastructure (DPI), it aims to address critical information gaps across the insurance sector under the Sabka Bima Sabki Raksha (Amendment of Insurance Laws) Act, 2025.



The Public Insurance Registry (PIR)

About The Public Insurance Registry (PIR):

What it is?

- A population-scale, interoperable, and non-exclusionary Digital Public Infrastructure (DPI) designed as a common information exchange layer. It allows authorized participants to discover, verify, and share insurance data without creating a single centralized data warehouse.

Organisations Involved:

- Regulator & Anchor: Insurance Regulatory and Development Authority of India (IRDAI).
- Implementing Body: Proposed to be managed by transforming the existing Insurance Information Bureau (IIB) into a wholly owned, not-for-profit subsidiary of IRDAI.
- Ecosystem Participants: Insurers, reinsurers, intermediaries, policyholders, financial institutions, government departments, and research institutions.
- Aim: To bridge persistent data asymmetries, streamline verification, enhance transparency, and eliminate operational friction across the insurance value chain while keeping primary records secure with their original source institutions.

Key Features:

- **Source-System Primacy (Federated Model):** The registry does not act as a central data silo. The original institutions retain ownership of their underlying records, while PIR facilitates controlled access through lightweight references, governed copies, or anonymized aggregates.
- **Interoperable Open Standards:** Instead of forcing institutions onto a single software platform, it establishes unified data formats, standard definitions, and common digital protocols across the entire industry.
- **Robust Identity Anchoring:** Integrates verified identity anchors along with demographic probabilistic matching to accurately identify policyholders, assign confidence scores, and resolve duplicate profiles.
- **Strict Consent-Driven Architecture:** Data access strictly requires customer authorization that is specific, informed, revocable, and auditable. Access is strictly tied to clear purpose limitations and role-based permissions.
- **External System Integration:** Designed to connect with vehicle, health, weather, disaster and court databases, enabling automated verification without duplicating data.

Significance:

- Reduces turnaround times for claim settlements and underwriting by enabling real-time, verified access to customer history and official documents.
- Enhances industry-wide fraud detection, reduces policy duplication, and pinpoints fraudulent claims across multiple insurers through unified records.
- Provides anonymized, aggregate insights on insurance loss trends, underserved geographies, and demographics, helping design more inclusive products.

The Global Bond Sell-Off

Context:

Global bond markets are witnessing an intense sell-off that is pushing sovereign yields to multi-year highs across major economies.

- This development has spilled over into India, lifting its benchmark 10-year government bond yield and raising concerns over rising borrowing costs.

$$\text{Current Yield} = \frac{\text{Annual Coupon Payment}}{\text{Current Market Price}}$$

The Global Bond Sell-Off

About The Global Bond Sell-Off:

What is the Global Bond Sell-Off?

- A global bond sell-off occurs when institutional investors simultaneously liquidate large volumes of government debt securities across major markets such as the US, UK, Germany, and Japan. This wave of selling floods the secondary market with excess supply, driving bond prices down and pushing market interest rates up.

Relationship Between Bond Prices and Yields:

Bond prices and yields share an inverse relationship:

- **Market Dynamics:** A bond's face value and interest payout (coupon) remain fixed. When investors dump bonds, market supply outstrips demand, causing the market price of the bond to fall.
- **Effective Return:** When an investor acquires a bond at a discounted purchase price while receiving the original fixed coupon payout, the effective percentage return—the yield—rises automatically.

Key Reasons for the Global Sell-Off:

- **Massive Sovereign Debt Issuance:** Escalating US federal debt forces governments to issue vast quantities of new debt.
- **Investors demand higher risk premiums** to absorb this supply glut, offloading older, lower-yielding securities in anticipation of higher-paying future issues.
- **Persistent Inflation Pressures:** Geopolitical tensions in West Asia and volatile crude oil prices have kept global inflation elevated, eroding the real purchasing power of fixed bond returns.

- Higher-for-Longer Interest Rate Expectations: With inflation remaining stubborn, markets expect central banks to keep benchmark interest rates elevated or hike them further, discouraging investors from holding low-yielding debt.

Implications for India and the Global Economy:

- As yields rise, governments must offer higher coupon rates on fresh debt auctions to attract buyers, increasing public debt-servicing burdens.
- Sovereign yields act as the risk-free benchmark for corporate debt. A climb in government yields pushes corporate bond interest rates higher, making capital expenditure and private borrowing more expensive.
- Higher borrowing rates compress corporate profit margins and prompt businesses to delay capital expansion plans, slowing overall economic growth.
- Rising yields on advanced-market debt often draw foreign portfolio investment (FPI) out of emerging markets like India, putting depreciation pressure on local currencies.

10 Years of Flexible Inflation Targeting: Does India Need a Rethink?

Context:

Marking 10 years of RBI's Flexible Inflation Targeting (FIT), economists argue that India's Phillips curve is largely flat and inflation expectations remain poorly anchored, questioning whether rate hikes effectively control inflation without hurting growth and employment.

10 Years of Flexible Inflation Targeting

About 10 Years of Flexible Inflation Targeting: Does India Need a Rethink?

What it is?

- Inflation Targeting (IT) is a monetary policy framework where the central bank publicly announces an explicit quantitative target for the medium-term inflation rate (in India, 4% with a tolerance band of $\pm 2\%$, under the amended RBI Act, 1934).

Both transmission channels rely theoretically on the New Keynesian Phillips Curve (NKPC):

- where current inflation (π) is a positive function of future expected inflation ($E[\pi_{t+1}]$) and the output gap ($y_t - y^*$).^{*} Mainstream theory presumes that as economic output expands, tighter labor markets empower workers to negotiate higher nominal wages, which firms pass into prices via markups. When inflation flares, monetary tightening slides the economy down along the NKPC, exchanging lower output for reduced price pressure.

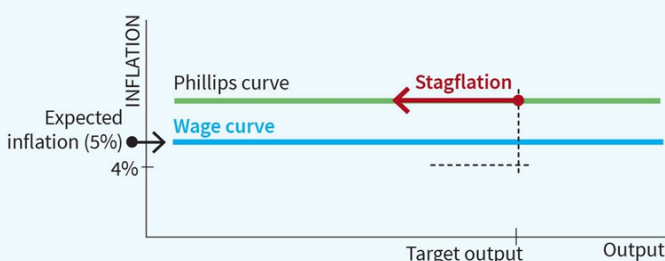
Key Empirical Data:

- Flat Phillips Curve: IIP and CPI data from April 2012 to March 2026 show an almost flat relationship (≈ 0). This suggests that higher output in India does not necessarily lead to higher inflation.
- Large Informal Workforce: Nearly 92% of Indian workers are in the informal sector, where wage bargaining is limited. So, an increase in economic activity may not result in strong wage-led inflation.
- Gap in Inflation Expectations: RBI's IESH shows that households generally expect inflation to be around 4 percentage points (400 bps) higher than RBI projections.
- Food Dominates Inflation: Food and beverages make up 45.86% of the CPI basket. Rate hikes have limited impact on inflation caused by crop failures, supply shortages or global commodity prices.

Core Criticisms Raised Against the Framework:

- The Flat Phillips Curve Dilemma: Because the NKPC is flat, hiking policy interest rates reduces domestic output and stalls capital formation without producing a commensurate decrease in inflation, risking monetary-induced stagflation.
- Failure of the Wage-Push Premise: Mainstream NKPC models assume that high output strengthens worker bargaining power. In India's informal labor market, wages remain stagnant while workers absorb price shocks as price takers.

Graph 2: A flat curve means lower output without lower inflation



- **Ineffective Inflation Tethering:** The expectation channel fails because household perception is anchored heavily in daily retail food and fuel costs rather than the central bank's published numerical path.
- **Disproportionate Burden on the Real Economy:** High borrowing costs disproportionately squeeze micro, small, and medium enterprises (MSMEs) and prospective homeowners, curbing employment creation in manufacturing and construction.
- **Neglect of Supply-Side Volatility:** Raising the cost of credit cannot address seasonal vegetable crop failures, geopolitical crude oil surges, or domestic supply disruptions.

Counter-Arguments: Why the RBI & Mainstream Economists Defend FIT:

- **Macroeconomic Stability & Lower Risk Premia:** Since adopting FIT in 2016, India's headline inflation has averaged lower and displayed significantly less volatility than during the double-digit episodes of 2009–2013, anchoring sovereign bond yields.
- **Preventing Generalization of Price Shocks:** While interest rates cannot grow vegetables, tightening prevents temporary food and energy price shocks from embedding into core inflation and broader inflationary psychology.
- **External Sector Resilience:** A transparent, predictable interest rate framework defends the external value of the Rupee by maintaining stable real interest rate differentials against the US Federal Reserve, mitigating capital flight.
- **Counter-Cyclical Flexibility:** India practices Flexible Inflation Targeting rather than rigid strict targeting. The Monetary Policy Committee (MPC) accommodates temporary supply shocks by utilizing the full width of the 2%–6% band to support growth during downturns.

Way Ahead:

- **Re-Evaluating the Output-Inflation Trade-Off:** The Monetary Policy Committee should formally account for labor market informality and the flat Phillips curve when determining the output sacrifice ratio during rate-hiking cycles.
- **Prioritizing Coordinated Supply-Side Interventions:** Complement monetary policy with fiscal supply management, including targeted market interventions, dynamic food buffer-stock offloading, and strategic strategic fuel excise adjustments.
- **Addressing Food Price Volatility Structurally:** Invest in climate-resilient cold chains, modern warehouse infrastructure, and decentralized agro-processing to stabilize perishables before price shocks require monetary tightening.
- **Refining Inflation Expectations Measurement:** Develop nuanced surveying methodologies that distinguish between short-term grocery price perceptions and broader underlying inflation expectations.
- **Modernizing the CPI Consumption Basket:** Accelerate the revision of the CPI weighting structure (currently using the outdated 2011–12 base) to reduce the disproportionate weight of food items in line with current household consumption trends.

Conclusion:

While the RBI's framework has fostered macro-financial stability, an overwhelming reliance on monetary demand contraction in an economy marked by a flat Phillips curve and food-driven price swings risks curbing growth. Combining monetary vigilance with active supply-chain management and public investment is essential to stabilizing prices without compromising job creation.

India-Mercosur Preferential Trade Agreement

Context:

Union Minister of Commerce and Industry and Uruguay's Foreign Affairs Minister formally announced the launch of negotiations to expand the India-MERCOSUR Preferential Trade Agreement (PTA).



India-Mercosur Preferential Trade Agreement

About India-Mercosur Preferential Trade Agreement:

What it is?

- A limited-scope, bilateral trade pact signed in 2004 that officially came into force on June 1, 2009, between the Republic of India and MERCOSUR (Mercado Común del Sur / Southern Common Market)—a major South American customs union comprising Argentina, Brazil, Paraguay, and Uruguay (with Bolivia as a newer full member, while Venezuela remains suspended).
- Aim: To foster South-South economic cooperation, reduce tariff barriers across identified commercial lines, and establish a foundational framework to gradually expand bilateral trade, investment, and supply chain integration between India and Latin America.

Key Features:

- Limited Tariff Line Coverage: Offers preferential margin-of-preference tariff cuts (ranging from 10% to 100%) on roughly 450 tariff lines from India and 452 from MERCOSUR, primarily covering industrial chemicals, pharmaceuticals, machinery, agricultural products, and auto components.
- Absence of Services & Investment Chapters: Operates purely as a limited trade-in-goods agreement; services, intellectual property rights, government procurement, and investment protections are currently excluded.
- Institutional Dispute Settlement & Safeguards: Incorporates specific annexes governing Rules of Origin (RoO), safeguard measures to prevent import surges, and a defined dispute settlement mechanism.
- Transition to Paperless Customs: Modernized through the signing of the First Additional Protocol, enabling mutual recognition of digital/electronic Certificates of Origin (e-CoO) to reduce trade transaction costs and customs clearance times.
- Framework for Expansion into a Full FTA: The newly launched negotiations aim to widen product coverage and establish Terms of Reference (ToR) to transition the restricted PTA into a comprehensive Free Trade Agreement (FTA).

Significance:

- Serves as India's primary institutional trade gateway to the vast, resource-rich South American continent, providing market access for Indian pharmaceuticals, engineering goods, and IT integration.
- Crucial for securing long-term Indian imports of vegetable oils, crude petroleum, critical minerals (lithium), and fertilizers, while diversifying India's export basket beyond traditional markets in the US, Europe, and West Asia.

The EPFO Wage Ceiling

Context:

The Union Cabinet approved the Ministry of Labour and Employment's proposal to raise the mandatory wage ceiling under the Employees' Provident Fund Organisation (EPFO) from 15,000 to 25,000 per month.

The EPFO Wage Ceiling

About The EPFO Wage Ceiling:

What it is?

- The statutory monthly salary threshold (basic pay plus dearness allowance) that determines mandatory coverage under the Employees' Provident Funds and Miscellaneous Provisions Act, 1952. Any worker joining an establishment with 20 or more employees at a wage up to this limit must mandatorily be enrolled in the provident fund, pension, and insurance schemes.
- Organisation: Administered by the Employees' Provident Fund Organisation (EPFO).
- Aim: To align statutory social security benefits with sustained wage growth, rising cost of living, and inflation, ensuring that entry- and mid-level formal sector workers receive portable, assured retirement savings and survivor benefits.



Background:

- The mandatory wage ceiling remained static at 6,500 per month from 2004 until September 1, 2014, when it was revised to 15,000.
- Over the intervening 12 years, rising minimum wages across states brought baseline earnings close to or above 15,000, leaving new workers outside automatic coverage. The Expenditure Finance Committee (EFC) cleared the hike to 25,000 in June 2026.

Key Features:

- Integrated Tripartite Benefit Expansion: Unlocks statutory coverage across all three EPFO schemes—the Employees' Provident Fund (EPF) for retirement corpus, the Employees' Pension Scheme (EPS-95) for lifelong post-retirement pensions, and the Employees' Deposit Linked Insurance Scheme (EDLI) for life insurance up to 7 lakh.
- Higher Pensionable Base & Contribution Cap: Raises the monthly EPS contribution cap (8.33% of the wage ceiling paid from the employer's share) from 1,250 to 2,083 per month, substantially increasing future monthly pension payouts under EPS-95.
- Mandatory Enrolment for the 15,000– 25,000 Band: Brings an estimated 51+ lakh employees currently earning between 15,000 and 25,000 into automatic statutory enrollment.
- Fiscal Outlay & Budgetary Support: The central government's budgetary contribution toward the EPS will increase by 1,089 crore annually, taking the total annual government outgo to approximately 11,339 crore.

The Paradox of Self-Reliance & the Assembly Trap

Context:

India and China have renewed focus on addressing their widening bilateral trade imbalance and supply-chain vulnerabilities, amid concerns that India's manufacturing sector remains heavily dependent on Chinese imports of components and intermediate goods.

The Paradox of Self-Reliance & the Assembly Trap

About The Paradox of Self-Reliance & the Assembly Trap:

What it is?

- The paradox of self-reliance refers to the contradiction where national efforts to expand domestic manufacturing and substitute finished imports (Atmanirbhar Bharat, Make in India, and the Phased Manufacturing Programme) have paradoxically deepened dependence on intermediate components and capital goods imported from China:
- Downstream Assembly Boom: India has successfully scaled final assembly lines—most visibly in smartphones and consumer electronics—driving headline industrial growth and merchandise exports.
- The Assembly Trap: Because domestic manufacturing relies primarily on screw-driver assembly without a commensurate domestic precision-component ecosystem, every increase in domestic production requires a matching surge in imported inputs from China, entrenching structural vulnerability.

Key Trade Data & Structural Metrics (2021–2025):

- Bilateral Trade Expansion: Total bilateral trade between India and China reached \$167.6 billion in 2025, characterized by an expanding asymmetry.

Widening Trade Imbalance:

- Indian exports to China remained broadly stagnant between 2021 and 2025.

India's exports to China has remained broadly stagnant between 2021–2025, while imports rose sharply from US\$87.5 billion to US\$149.5 billion in the same period, resulting in the widening trade deficit



- Indian imports from China surged by approximately 71%, jumping from \$87.5 billion in 2021 to \$149.5 billion in 2025.

Composition of Imports from China:

- Intermediate goods constitute nearly 70% of total imports.
- Capital goods account for another 22%.
- Finished consumer goods form only a minor fraction, showing that the deficit is driven by industrial inputs rather than retail consumer goods.

Concentration in Top Five Import Categories:

- The cumulative import value of the top five product categories expanded from \$19 billion in 2021 to \$34.6 billion in 2025 (representing nearly 25% of all Chinese imports).
- The import basket is heavily concentrated in high-tech electronics inputs, including integrated circuits (semiconductors), laptops, and telecommunications equipment.
- The Smartphone Paradox: While India expanded domestic mobile phone assembly, the share of imported parts and components within the total import basket rose from 3.3% in 2022 to 10.1% in 2025, illustrating downstream expansion without local upstream backward integration.

Core Drivers of the Structural Trade Deficit:

- Absence of a Deep Domestic Component Ecosystem: Despite incentives under the Production Linked Incentive (PLI) schemes, domestic capacity in high-precision engineering, printed circuit board assemblies (PCBAs), and active semiconductor fabrication remains nascent.
- Chinese Cost Competitiveness and Scale: Chinese suppliers benefit from decades of state capital subsidies, massive scale, and integrated industrial clusters, making Chinese intermediate inputs significantly cheaper and faster to source than domestic or Western alternatives.
- Incentive Misalignment: Industrial policies have predominantly rewarded final output volumes and export turnover rather than domestic value addition (DVA), incentivizing manufacturers to import semi-knocked-down (SKD) and completely-knocked-down (CKD) kits for assembly.
- Tariff Inversions and Raw Material Bottlenecks: Discrepancies in duty structures and domestic non-tariff barriers have at times made raw materials costlier to import than finished sub-assemblies, discouraging local component development.

Risks of Entrenched Supply Chain Asymmetry:

- Hardening Strategic Vulnerabilities: Heavy industrial reliance on a geopolitical rival leaves vital sectors—such as telecommunications, pharmaceuticals (active pharmaceutical ingredients), and green energy (solar cells and EV batteries)—exposed to supply chain weaponization or disruptions.
- Erosion of Net Value Addition: Because high-value components (chips, displays, memory modules) represent the bulk of a product's economic value, domestic retention of economic rents remains limited to low-margin assembly labor.
- Macroeconomic Drag: A persistent bilateral trade gap nearing \$130+ billion strains India's current account balance and increases foreign exchange exposure.

Way Ahead:

- Pursuing Guarded Globalisation: Integrate deeply into global value chains (GVCs) while proactively building domestic manufacturing depth, preventing critical intermediate dependencies from turning into permanent strategic chokepoints.
- Shifting Incentives from Assembly to Upstream Components: Recalibrate future PLI schemes and capital subsidies to explicitly reward domestic value addition, precision tooling, local supplier networks, and semiconductor testing/packaging (ATMP).
- Deploying Calibrated Rather Than Blanket Tariffs: Avoid disruptive blanket import bans; instead, implement phased, targeted tariffs on specific components where viable domestic substitutes exist, providing protected incubation windows for local MSME suppliers.
- Strengthening Industry-Academia R&D Translation: Direct public research funding through bodies like the Anusandhan National Research Foundation (ANRF) into applied materials science, precision metallurgy, and electronic design automation (EDA).

- Diversifying Alternate Import Sourcing: Expand intermediate sourcing partnerships through China-plus-one frameworks, Free Trade Agreements (FTAs), and trusted-trade corridors with partner economies to dilute single-source exposure.

Conclusion:

Without developing an indigenous component ecosystem and precision technological capabilities, expanding assembly lines will continue to widen the trade deficit with Beijing. Achieving genuine economic self-reliance requires shifting focus from factory assembly to technological mastery, backward integration, and strategic value-chain resilience.

Anti-Dumping Duty (ADD)

Context:

The Department of Revenue (Ministry of Finance) extended the anti-dumping duty on imports of 'Decor Paper' originating in or exported from China up to and inclusive of March 26, 2027.



Anti-Dumping Duty (ADD)

About Anti-Dumping Duty (ADD):

What it is?

- A trade protectionist tariff imposed by a sovereign government on foreign imports that are priced substantially below their normal value (the domestic market price in the exporting country), neutralizing the distortive injury caused by dumping.

Origin & Multilateral Legal Framework:

- Global Origin: Grounded internationally in Article VI of the General Agreement on Tariffs and Trade (GATT 1994) and the WTO Anti-Dumping Agreement.
- Domestic Statutory Basis in India: Administered under Section 9A of the Customs Tariff Act, 1975, read alongside the Customs Tariff (Identification, Assessment and Collection of Anti-Dumping Duty on Dumped Articles and for Determination of Injury) Rules, 1995.

How it Works?

- Petition & Investigation: Domestic industry petitions the Directorate General of Trade Remedies (DGTR) under the Ministry of Commerce and Industry.
- Dumping & Injury Determination: DGTR conducts a quasi-judicial probe to establish three conditions: existence of dumping (Export Price < Normal Value), material injury to the domestic industry, and a direct causal link between the two.
- Calculation: Computes the Dumping Margin (Normal Value minus Export Price) and Injury Margin (Fair Selling Price of domestic industry minus Landed Cost of import). Under the Lesser Duty Rule, India levies whichever margin is lower.
- Notification: The DGTR recommends the duty, which is formally approved and notified by the Department of Revenue (Central Board of Indirect Taxes and Customs – CBIC) under the Ministry of Finance.

Key Features of Anti-Dumping Duty:

- Product- and Country-Specific: Applies exclusively to specifically identified goods originating from named exporting nations or discrete manufacturing entities.
- Five-Year Sunset Clause: An ADD remains in force for an initial period of five years from the date of imposition, unless revoked earlier.
- Sunset Review Mechanism: Can be extended for another five-year period through a Sunset Review conducted by the DGTR to evaluate whether the expiry of the duty would likely lead to a recurrence of dumping and material domestic injury.
- Non-Punitive Remedial Measure: Serves as a trade-corrective, fair-competition instrument rather than an outright trade embargo or punitive penal fine, restoring price parity in the domestic market.

- Distinct from Countervailing Duty (CVD): Unlike Countervailing Duty or Safeguard Duty, ADD exclusively counters private predatory export pricing.

The SWIFT Payment System

Context:

Amid the weaponisation of the U.S. dollar and Western financial sanctions, member nations of BRICS and the Global South are accelerating efforts to bypass the Belgium-based SWIFT messaging network.

The SWIFT Payment System

About The SWIFT Payment System:

What it is?

- The Society for Worldwide Interbank Financial Telecommunication (SWIFT) is a standardized, secure messaging network that financial institutions use to transmit instructions and information—such as money transfers—via standardized codes (SWIFT/BIC codes). It is a messaging platform, not a settlement or fund-holding bank.
- Organisation: Founded in 1973 and headquartered in La Hulpe, Belgium, it operates as a member-owned cooperative under Belgian law, collectively supervised by the G10 central banks.
- Aim: To provide a unified, highly secure, reliable, and standardized communications network for cross-border financial transactions, replacing error-prone telex technology with automated messaging.

Key Features:

- Pure Messaging Architecture: Transmits payment orders, letters of credit, and securities instructions between institutions, while the actual movement of money relies on bilateral correspondent banking accounts (Nostro/Vostro).
- Standardized BIC/ISO Protocol: Uses standardized 8- or 11-character Business Identifier Codes (BIC) and the ISO 20022 messaging framework to ensure error-free global transaction routing.
- Global Scale & Reach: Connects over 11,000 banking and securities organizations across more than 200 countries and territories, processing dozens of millions of financial messages daily.
- Belgian/EU Legal Jurisdiction: Governed under Belgian and European Union law, which obligates it to comply with EU sanctions and sanction orders.
- High Security & Redundancy: Employs end-to-end hardware encryption, dedicated secure network lines, and geographically distributed operations centers to prevent outages and cyber manipulation.

Other Key Alternatives to SWIFT:

- CIPS (China): Launched in 2015 to internationalise the yuan, it enables cross-border RMB messaging, clearing and settlement across more than 120 countries.
- SPFS (Russia): Developed in 2014 following Western sanctions, it connects Russian banks with foreign institutions, including Iran's SEPAM system, for financial messaging.
- Project mBridge (Multi-CBDC Platform): A blockchain-based platform developed by participating central banks to enable direct cross-border settlement using Central Bank Digital Currencies, bypassing SWIFT and conventional correspondent banking.

Tackling food loss and waste — India's opportunity

Context:

On the International Day of Awareness of Food Loss and Waste (September 29), an FAO assessment highlighted India's need to reduce post-harvest food loss and urban food waste.



Tackling food loss and waste — India's opportunity

About Tackling food loss and waste — India's opportunity:

The Conceptual Distinction:

- Food Loss: Occurs primarily along the upstream supply chain—from post-harvest handling, storage, moisture spoilage, processing, and transportation to wholesale distribution before reaching the retail stage.
- Food Waste: Takes place at the downstream consumption end—in retail outlets, supermarkets, hotels, restaurants, catering services, and domestic households.

The Triple Win Framework:

1. Food Security & Nutrition: Preserving calorie and micronutrient availability for India's 1.4 billion population without requiring unsustainable agricultural expansion.
2. Climate & Ecological Conservation: Preventing the squandering of embedded water, fertilizers, arable land, and energy, thereby reducing methane and CO₂-equivalent emissions.
3. Economic Productivity & Farm Incomes: Reducing financial loss for smallholders and food-business MSMEs while generating secondary revenue through waste valorisation (biogas, organic compost, bio-CNG).

India's Evidence Base: A Global Benchmark with Data Gaps

- A Global First in National Loss Surveys: India is the only country in the world to have conducted three comprehensive national post-harvest loss surveys through the Ministry of Food Processing Industries (MoFPI):
- 1st Round (2005–07): Assessed 45 agricultural commodities.
- 2nd Round (2012–14): Assessed 45 commodities.
- 3rd Round (2020–22): Expanded coverage to 54 commodities from farm-gate to retail.
- 4th Round: Currently underway to update baseline loss metrics.
- Tracking SDG Indicators: This structured data provides empirical backing for India's reporting under Sustainable Development Goal (SDG) 12.3 and the FAO Food Loss Index (FLI).
- The Persistent Data Blind Spot: While upstream agricultural and supply-chain losses are measured, downstream food waste metrics at retail, hospitality (hotels/restaurants), and domestic household levels remain largely undocumented.

Key Hotspots & The Wholesale Market Opportunity:

- The Scale of Mandi Waste: Joint assessments by the FAO and the National Council of Agriculture Marketing Boards (COSAMB) reveal that major wholesale Agricultural Produce Market Committees (APMCs) generate up to 100 tonnes of organic waste per day.
- Landfill Burden: In several metropolitan cities, discarded wholesale market produce accounts for up to 20% (one-fifth) of all municipal organic waste entering landfills.
- National Aggregate & Carbon Value: Nationally, wholesale agricultural markets discard an estimated 3.5 million tonnes of organic waste annually.
- Treating this stream circularity could offset approximately 3.3 million tonnes of CO₂-equivalent emissions every year.
- Represents an unrealized carbon-credit market potential close to \$30 million annually.
- Viable Circular Models (The Surat Precedent): A 50-tonne-per-day bio-CNG facility in Surat, Gujarat—operated through a public-private partnership for over five years—mitigates ~7,500 tonnes of methane emissions annually by valorising urban market waste into clean fuel and bio-fertilizer.

Institutional & Financing Partnerships:

- FAO–SIDBI Green Financing Axis: FAO has partnered with the Small Industries Development Bank of India (SIDBI) to connect identified food-loss geographical hotspots directly with concessional finance. This enables small and medium enterprises (MSMEs), Farmer Producer Organisations (FPOs), and agri-aggregators to invest in:
- Energy-efficient solar/hybrid cold rooms and precoolers.

- Dehumidification and moisture-management drying technologies.
- Digital traceability platforms to track perishable commodity velocity.
- Urban “Package of Practices”: FAO is formulating a standardized operational toolkit for Indian municipal corporations to systematically measure, prevent, reduce, redistribute, and valorise food waste across urban households, institutional canteens, and wholesale markets.

Systemic Challenges Associated with Food Loss and Waste

- Cold-Chain Infrastructure Gaps: Severe shortage of farm-gate pack-houses, refrigerated reefer transport, and controlled-atmosphere storage forces distress sales and rapid rotting of perishable horticulture.
- Limited Downstream Waste Legislation: India lacks binding national municipal mandates compelling commercial food businesses and banquet halls to separate organic food waste or enter formal food redistribution arrangements.
- High Capital Costs for Smallholders: Advanced post-harvest handling machinery, cold storage units, and solar dryers carry high upfront costs, limiting adoption among marginal farmers and emerging FPOs without credit subsidies.
- Underdeveloped By-Product Markets: Supply chains for secondary valorisation products—such as city compost and compressed biogas (CBG)—face inconsistent procurement pricing and fragmented distribution networks.

Way Ahead:

- Institutionalizing Farm-Gate Value Addition: Expand capital subsidies under the Pradhan Mantri Kisan SAMPADANA Yojana (PMKSY) and the Agriculture Infrastructure Fund (AIF) to locate primary sorting, grading, solar drying, and pre-cooling units at village collection hubs.
- Scaling Mandatory Mandi-Level Bio-CNG Infrastructure: Replicate the Surat bio-CNG model across all Tier-1 and Tier-2 APMC wholesale markets under the SATAT and GOBARdhan schemes to convert mandi waste into vehicle fuel.
- Formalizing Urban Food Recovery Networks: Establish statutory frameworks encouraging retail chains, hospitality operators, and institutional caterers to partner with registered food banks and charities (under FSSAI’s Save Food, Share Food initiative) with civil liability protections for bona fide food donations.
- Developing a Comprehensive Food Waste Index: Direct the Ministry of Housing and Urban Affairs (MoHUA) and state pollution control boards to mandate annual municipal food waste audits across urban local bodies, closing downstream consumer data gaps.
- Integrating Food Loss Metrics into Climate Commitments: Incorporate food-loss reduction and post-harvest supply chain decarbonization directly into India’s updated Nationally Determined Contributions (NDCs) under the Paris Agreement.

Conclusion:

As the FAO assessment emphasizes, India has established a strong foundation by pioneering national post-harvest loss surveys. Translating this empirical head-start into tangible outcomes will require connecting agricultural planning with municipal waste management, expanding affordable cold-chain financing for FPOs through institutions like SIDBI, and scaling circular bio-economy infrastructure. Integrating food loss reduction into urban, agricultural, and climate policies will be essential to ensuring sustainable food security for India’s 1.4 billion citizens

Each One Teach One Initiative

Context:

Assam geography teacher Rajesh Bordoloi received the National Teachers Award 2026 for his innovative “Each One Teach One” initiative, which turns students into tutors for their mothers.

Each One Teach One Initiative

About Each One Teach One Initiative:

What it is?

- An innovative community-based education initiative launched at Adarsha Tribal Higher Secondary School in Kalbari, Jorhat district, Assam, where Class 10 students teach their mothers basic literacy and digital skills.

How it Works?

- Students become teachers at home, helping their mothers learn to read and write, operate smartphones, make UPI payments, use online banking and access essential digital services. Smart boards are also used during parent-teacher meetings to familiarise mothers with technology.

Key Features:

- Reverse Learning Model: Transforms students from recipients of education into teachers and community change-makers.
- Women's Digital Literacy: Equips mothers with literacy, smartphone, digital payment and online-service skills.
- Community-Centred Education: Extends learning beyond classrooms by connecting schools, students, parents and communities.
- Focus on Tribal Communities: Nearly 99% of the school's students belong to the Mising community, with many being first-generation learners.
- Wider Social Intervention: The initiative also promotes school retention and awareness against child marriage.
- Scalable Local Model: The programme has expanded from Kalbari to several neighbouring villages, demonstrating its potential for wider replication.

Significance:

- Women's Empowerment: Literacy and digital skills improve women's financial independence, access to services and participation in household decisions.
- Bridging the Digital Divide: Enables rural and tribal families to access UPI, banking, online applications and digital markets.
- Education as Social Transformation: Converts classroom learning into a tool for intergenerational and community empowerment.

The Changing Face of Protest: Anatomy of Gen Z Discontent

Context:

Recent student and youth mobilisations around NEET-UG, public recruitment examinations and institutional accountability have brought renewed attention to the changing character of protest politics in India.





The Changing Face of Protest

About The Changing Face of Protest: Anatomy of Gen Z Discontent

What it is?

Gen Z protests represent a structural evolution away from conventional political mobilization:

- Rather than operating as organized extensions of recognized political parties, contemporary youth movements emerge as spontaneous, network-driven rebellions against systemic governance deficits.
- Discontent is anchored in deep frustration over institutional collusion, recruitment exam mismanagement (such as paper leaks in NEET and state public services), and structural unresponsiveness, viewing disruption as necessary to dismantle an entrenched status quo that fails to meet youth aspirations.

Key Changing Trends:

- **Leaderless and Network-Driven Organization:** Contemporary movements do not rely on traditional, hierarchical party apparatuses; they mobilize through informal digital networks, satire, and ad-hoc collectives.
- **Speed and Virality via Digital Mobilization:** Social media platforms allow local grievances—such as a single examination paper cancellation or police action—to instantly transcend state borders and mobilize coordinated, national sit-ins.
- **Direct Confrontation with Institutional Legitimacy:** Unlike earlier student agitations focused on narrow collegiate demands, today's protests target systemic institutional failure and the loss of neutrality in regulatory bodies.
- **Symbolic and Discursive Defiance:** Youth movements adopt unconventional symbolism, satire, and reclamation of pejorative labels (e.g., turning executive barbs or terms like “cockroach” into badges of organized political defiance).

Reasons for the Change in the Face of Protest:

- **Repeated Failures in Public Examination Systems:** Persistent paper leaks, arbitrary cancellations, and delayed recruitment drives jeopardize the prime career years of millions of graduates, generating deep personal frustration.
- **Structural Graduate Unemployment:** A widening employability gap and slow growth in formal, salaried employment leave millions of highly educated youths feeling excluded from national economic growth.
- **Perception of Compromised Democratic Safeguards:** The belief that constitutional checks and balances—including regulatory agencies and oversight bodies—are being diluted fosters an impression that conventional redress mechanisms are ineffective.
- **Increasing Centralization of Authority:** The concentration of administrative decision-making creates an institutional distance between policy formulators and ground realities, weakening local grievance channels.
- **Heavy-Handed Security Responses:** State agencies increasingly use indiscriminate public-order force

against student protesters, alongside pejorative political labeling (such as “foreign agents” or “dimagi Naxals”), which deepens alienation.

Positives of the Changing Face of Protest:

- **Enhancing Democratic Accountability:** Spontaneous youth mobilizations force governments to confront entrenched paper-leak syndicates and bureaucratic paralysis that formal opposition parties often fail to address.
- **Inclusive and Decentralized Civic Engagement:** Digital coordination allows students across rural, urban, and marginalized backgrounds to organize and demand accountability without needing formal patronage.
- **Issue-Centric Rather Than Vote-Bank Driven:** Agitations remain focused on tangible developmental issues—such as transparent testing, merit-based employment, and institutional integrity—rather than sectarian or electoral divisions.
- **Acting as an Early Warning System:** Widespread student demonstrations serve as an indicator for the state, flagging institutional decay and administrative bottlenecks before they escalate into systemic crises.

Challenges Associated with the Changing Face of Protest:

- **Susceptibility to Co-optation and External Exploitation:** Spontaneous, decentralized movements lack rigid command structures, leaving them vulnerable to being hijacked by radical elements or partisan groups for confrontation.
- **Disproportionate Police Crackdowns and Criminalization:** The tendency of law-enforcement authorities to treat unarmed student demonstrations as public-order threats leads to preventative detentions and coercive legal notices, disrupting student futures.
- **Ad-Hoc, Reactive Policy Measures:** State responses frequently resort to disruptive stop-gap solutions—such as arbitrarily scrapping entire examination processes—which penalizes genuine aspirants and strains administrative capacity.
- **Erosion of Faith in the Rule of Law:** Repeated, unaddressed youth anger risks turning localized agitations against specific exam boards into broader disillusionment with the democratic process itself.

Way Ahead:

- **Institutionalizing Rapid Grievance Redressal:** Establish independent, statutory administrative ombudsman bodies specifically tasked with investigating youth grievances in public recruitment, and academic governance within strict timeframes.
- **Calibrating Police Engagement and Crowd Management:** Formulate specialized standard operating procedures (SOPs) prohibiting the use of force suited for violent mobs against peaceful student gatherings, ending arbitrary preventative legal notices.
- **Enforcing Strict Regulatory Reforms in Examinations:** Deploy secure, end-to-end digital examination protocols and enforce the Public Examinations (Prevention of Unfair Means) framework to dismantle cheating mafias and restore trust in testing agencies.
- **Facilitating Institutional Multi-Stakeholder Dialogue:** Foster structured consultation between student representatives, and ministry officials, recognizing young people as stakeholders rather than viewing dissent as an adversarial security challenge.

Conclusion:

Youth unrest across India is a structural signal of systemic friction rather than an isolated law-and-order disruption. When the aspirational energy of Gen Z collides with institutional opacity, heavy-handed policing, and delayed economic opportunities, democratic trust begins to fracture. Addressing this discontent requires proactive institutional reform, empathetic statecraft, and credible avenues for social mobility before localized protests coalesce into widespread civil disaffection.

The Bharat Vann Green Initiative

Context:

Union Finance Minister Nirmala Sitharaman inaugurated the ‘Bharat Vann’ green initiative at Lodhi Colony Park in Central Delhi, launching an urban afforestation drive in collaboration with the New Delhi Municipal Council (NDMC).



The Bharat Vann Green Initiative

About The Bharat Vann Green Initiative:

What It Is?

- 'Bharat Vann' is a dense urban micro-forest project developed using the Miyawaki afforestation method. It involves high-density planting of multi-layered, indigenous vegetation to rapidly establish self-sustaining, biodiverse green lungs in degraded or high-density urban spaces.
- Implementing Body: New Delhi Municipal Council (NDMC).
- Funding: Developed under the Corporate Social Responsibility (CSR) initiative of India Infrastructure Finance Company Limited (IIFCL) and implemented by the Enviro Creators Foundation.
- Aim: To accelerate urban ecological restoration, combat Delhi's particulate air pollution, lower local urban heat island (UHI) effects, and create accessible public community spaces for wellness and physical activity.

Key Features:

- Miyawaki Planting Density: Over 10,000 saplings are being planted across an area of approximately one acre (around 3,000 square metres), allowing saplings to grow up to 10–12 feet within a single year.
- Strictly Native Flora: The plantation exclusively uses indigenous, climate-adapted plants—including 76 distinct native species comprising fruit-bearing trees, shrubs, flowering plants, and large shade-giving canopy trees.
- Integration with 'Ek Ped Maa Ke Naam': Integrates citizen-led plantation drives where local schoolchildren and women's self-help groups plant and adopt saplings to foster long-term stewardship.
- Integrated Wellness Infrastructure: The forest zone is structured to include community facilities such as walking tracks, designated areas for yoga, pranayama, and open-air meditation within a sheltered natural canopy.
- Dedicated Long-Term Maintenance: Includes a 36-month (3-year) maintenance and nurturing protocol supported through IIFCL's CSR framework to ensure high sapling survival rates until the forest becomes fully self-sustaining.

Significance:

- Acts as a biological particulate filter in Central Delhi, trapping dust and absorbing gaseous vehicular emissions.

- Dense, multi-tiered canopy cover provides shading and evaporative cooling, countering the heat absorbed by surrounding concrete infrastructure.

The LPG Biometric Rules

Context:

The Ministry of Petroleum and Natural Gas announced that Biometric Authentication will become mandatory starting October 1, 2026, for booking domestic LPG refills at subsidised or regulated rates.

The LPG Biometric Rules

About The LPG Biometric Rules:

What it is?

- A regulatory compliance mandate requiring domestic Liquefied Petroleum Gas (LPG) consumers to verify their identity via biometric authentication (facial recognition, fingerprint, or iris scan) to remain eligible for government-subsidised cylinder
- Organisation: Administered by the Ministry of Petroleum and Natural Gas (MoPNG).
- Aim: To curb unauthorized commercial and industrial diversion of domestic subsidised cylinders, eliminate ghost or duplicate accounts, and ensure fiscal subsidies are targeted directly to genuine households.



Key Features:

- Mandatory for Subsidy Eligibility: From October 1, 2026, biometric authentication becomes mandatory to receive the LPG subsidy. Unverified consumers can still buy cylinders but must pay the full market price.
- Exemption for Verified Users: Around 27.43 crore consumers, nearly 89.9% of the active domestic base, have already completed biometric verification and need not repeat the process.
- Multiple Verification Channels: Authentication can be completed through OMC mobile apps using UIDAI face authentication, during doorstep delivery, or by visiting the local LPG distributorship.
- Digital Opt-Out Mechanism: Consumers unwilling to undergo biometric authentication can record their choice digitally and continue purchasing LPG cylinders at non-subsidised market prices.
- Grievance Redressal Support: OMCs provide toll-free customer support to assist consumers, particularly the elderly and those facing technological or authentication difficulties.

Significance:

- Biometric verification helps restrict subsidies to eligible consumers, reducing leakages and easing the fiscal burden arising from LPG under-recoveries.
- Authentication helps prevent diversion of subsidised domestic LPG to commercial users, strengthening transparency and targeted delivery of welfare benefits.

The PRAGATI-50 Initiative

Context:

Union Minister for Housing and Urban Affairs launched the PRAGATI-50 initiative in New Delhi to develop 50 model cities across 24 States demonstrating higher benchmarks of Swachhata under Swachh Bharat Mission–Urban 2.0 (SBM-U 2.0).

The PRAGATI-50 Initiative

About The PRAGATI-50 Initiative:

What it is?

- A targeted urban transformation and benchmarking program under SBM-U 2.0 that selects 50 urban centres across India to surpass routine sanitation standards and demonstrate sustained, high-performance outcomes in visible cleanliness, circular economy, and waste management.



- Organisation: Spearheaded by the Ministry of Housing and Urban Affairs (MoHUA), Government of India.
- Aim: To create replicable urban sanitation models, ensure scientific waste processing, eliminate legacy dumpsites, and promote behavioural change in major urban hubs.

Key Features:

- KPI-Driven & City as a Whole Approach: Formulates micro-level action plans covering solid waste management, used water management, public toilet upkeep, and citizen engagement through an integrated stakeholder model.
- Dedicated PRAGATI-Style Digital Tracking: Uses a Pro-Active Governance dashboard on the Swachhatam Portal, with MoHUA officers assigned cities for continuous support and bimonthly ministerial reviews.
- CSIR-CMERI Test Bed & Innovation Centre: Integrates indigenous technological research via the newly inaugurated facility at Durgapur to validate, test, certify, and scale advanced sanitation machinery and waste treatment hardware.
- Startup Incubation & Scale-up: Achieves the national milestone of 75 startups onboarded under SBM-U by inducting the 3rd Cohort (13 startups) in collaboration with the Startup Incubation and Innovation Centre (SIIC) at IIT Kanpur.
- Digital Grievance & Behavior Repositories: Introduces a dedicated citizen WhatsApp grievance redressal channel and launches the Swachhata Behaviour Change Digital Kosh to supply ULBs with standardized advocacy and campaign resources.

Significance:

- Serves as a live operational blueprint for the remaining 4,800+ statutory towns, shifting urban local bodies from compliance-driven cleaning to proactive circular-economy management.
- Combines entrepreneurial innovation, localized mechanical testing, and high-level bureaucratic accountability to build climate-resilient, circular, and garbage-free cities.

The EPFO Wage Ceiling

Context:

The Union Cabinet approved the Ministry of Labour and Employment's proposal to raise the mandatory wage ceiling under the Employees' Provident Fund Organisation (EPFO) from 15,000 to 25,000 per month.

The EPFO Wage Ceiling

About The EPFO Wage Ceiling:

What it is?

- The statutory monthly salary threshold (basic pay plus dearness allowance) that determines mandatory coverage under the Employees' Provident Funds and Miscellaneous Provisions Act, 1952. Any worker joining an establishment with 20 or more employees at a wage up to this limit must mandatorily be enrolled in the provident fund, pension, and insurance schemes.
- Organisation: Administered by the Employees' Provident Fund Organisation (EPFO).
- Aim: To align statutory social security benefits with sustained wage growth, rising cost of living, and inflation, ensuring that entry- and mid-level formal sector workers receive portable, assured retirement savings and survivor benefits.

Background:

- The mandatory wage ceiling remained static at 15,000 per month from 2004 until September 1, 2014, when it was revised to 25,000.
- Over the intervening 12 years, rising minimum wages across states brought baseline earnings close to or above 25,000, leaving new workers outside automatic coverage. The Expenditure Finance Committee (EFC) cleared the hike to 25,000 in June 2026.



Key Features:

- **Integrated Tripartite Benefit Expansion:** Unlocks statutory coverage across all three EPFO schemes—the Employees' Provident Fund (EPF) for retirement corpus, the Employees' Pension Scheme (EPS-95) for lifelong post-retirement pensions, and the Employees' Deposit Linked Insurance Scheme (EDLI) for life insurance up to 7 lakh.
- **Higher Pensionable Base & Contribution Cap:** Raises the monthly EPS contribution cap (8.33% of the wage ceiling paid from the employer's share) from 1,250 to 2,083 per month, substantially increasing future monthly pension payouts under EPS-95.
- **Mandatory Enrolment for the 15,000– 25,000 Band:** Brings an estimated 51+ lakh employees currently earning between 15,000 and 25,000 into automatic statutory enrollment.
- **Fiscal Outlay & Budgetary Support:** The central government's budgetary contribution toward the EPS will increase by 1,089 crore annually, taking the total annual government outgo to approximately 11,339 crore.



Chapter- 8

INTERNATIONAL RELATION

The Permanent Court of Arbitration (PCA)

Context:

The Permanent Court of Arbitration (PCA) ruled that the Indus Waters Treaty (IWT) remains in force and restricted certain works on the Ratle Hydroelectric Project.

- India rejected the ruling, calling the arbitration illegally constituted and its decision null and void.



The Permanent Court of Arbitration (PCA)

About The Permanent Court of Arbitration (PCA):

What It Is?

- The Permanent Court of Arbitration (PCA) is an intergovernmental organization dedicated to facilitating international arbitration, conciliation, and fact-finding for disputes arising between states, state entities, intergovernmental organizations, and private parties.
- Despite its name, it is not a traditional standing court with permanent judges; rather, it is a permanent institutional framework that provides administrative support, procedural rules, and registries for ad-hoc arbitral tribunals.
- Establishment: Founded in 1899 during the first Hague Peace Conference under the Convention for the Pacific Settlement of International Disputes (convened by Czar Nicholas II of Russia).
- Revision: The convention was revised at the second Hague Peace Conference in 1907.
- Headquarters: Peace Palace, The Hague, Netherlands.
- India and Pakistan: Both have been Contracting Parties to the PCA since 1950, adhering to the 1899 and 1907 Hague Conventions.
- Aim: To provide the international community with accessible, flexible, and peaceful legal mechanisms to settle inter-state and commercial disputes that diplomacy fails to resolve, avoiding recourse to armed conflict.

Key Functions of the PCA:

- Administration of Ad-Hoc Tribunals: Serves as the official registry and administrative secretariat for arbitral tribunals constituted under multilateral conventions, bilateral investment treaties (BITs), and international river pacts.
- Multi-Domain Dispute Resolution: Facilitates legal settlement across a wide array of disputes, including boundary demarcations, sovereign maritime boundaries, human rights, environmental governance, and commercial investor-state arbitrations.
- Appointing Authority Services: The Secretary-General of the PCA acts as an appointing authority to designate neutral arbitrators when disputing parties fail to agree on tribunal composition.
- Fact-Finding and Conciliation Commissions: Provides institutional rules and support for non-binding dispute resolution, such as international commissions of inquiry and conciliation panels.

The Indus Waters Treaty & Recent Ruling:

- Treaty Background: The World Bank-brokered IWT (1960) allocates Ravi, Beas and Sutlej to India and Indus, Jhelum and Chenab primarily to Pakistan, while permitting limited Indian hydropower use on Western Rivers.
- August 2026 Ruling: The PCA held that the IWT remains binding and cannot be unilaterally suspended or held in abeyance, rejecting India's cited grounds, including cross-border terrorism.

- Ratle Interim Measures: The PCA temporarily restricted specified construction on the 850 MW Ratle Hydroelectric Project on the Chenab pending Neutral Expert proceedings.

India's Stand:

- Parallel Proceedings Invalid: India argues Article IX provides a graded mechanism—Permanent Indus Commission Neutral Expert Court of Arbitration—making simultaneous proceedings contrary to the treaty.
- PCA Awards Rejected: India considers the Court of Arbitration illegally constituted and its decisions on Ratle and Kishenganga null and void.
- Treaty Remains in Abeyance: India maintains its decision to hold the IWT in abeyance, linking future engagement to security concerns and seeking renegotiation reflecting climate, demographic and regional realities.

The SCO Bishkek Declaration

Context:

Leaders of the 10 member states of the Shanghai Cooperation Organisation (SCO)—including India, Russia, and China—concluded the 26th Council of Heads of State summit in Bishkek, Kyrgyzstan, by signing the joint Bishkek Declaration.

The SCO Bishkek Declaration

About The SCO Bishkek Declaration:

What It Is?

- The Bishkek Declaration is the consensus-based joint communique and strategic outcome document adopted by the heads of state of the Shanghai Cooperation Organisation at their 26th annual summit. It sets the institutional roadmap, security priorities, and economic coordination framework for the Eurasian bloc for the next 25 years.
- Host City & Nation: Bishkek, Kyrgyzstan.
- Summit Chair: President Sadyr Japarov of the Kyrgyz Republic.
- Presidency Handover: Concluded with the transfer of the rotating SCO Presidency to the Islamic Republic of Pakistan for the 2026–2027 tenure.
- Official Theme (2026): 25 Years of the SCO: Together for Sustainable Peace, Development and Prosperity.

Key Outcomes of the Bishkek Declaration:

- No Double Standards on Terrorism: Condemned terrorism in all forms and rejected double standards, calling for action against cross-border terrorism, safe havens and terror financing under UN coordination.
- No Use of Extremist Proxies: Rejected the use of terrorist, separatist or extremist groups for political or strategic purposes, stressing state responsibility for counter-terrorism.
- Condemnation of Strikes on Iran: Condemned unilateral military strikes on Iran as violations of international law and called for a diplomatic resolution to the West Asia conflict.
- SCO Not a Military Bloc: Reaffirmed that the SCO is not a military-political alliance or directed against any country, upholding sovereignty and non-interference.
- Energy & Food Security: Warned that conflicts and disruptions at chokepoints such as the Strait of Hormuz threaten global energy and food security, especially in developing countries.
- Local Currency & Financial Cooperation: Supported greater trade in national currencies, alternative payment systems, and discussions on an SCO Development Bank.
- Sovereignty-Based Connectivity: Backed regional connectivity, including CKU and INSTC, while stressing respect for sovereignty and territorial integrity.



- Youth Science & Innovation: Institutionalised initiatives such as the SCO Young Scientists Forum and Start-up Forum to promote scientific and innovation cooperation.

The Pacific Islands Forum (PIF)

Context:

The Pacific Islands Forum (PIF) leaders' meeting faced sharp diplomatic turbulence and diminished leadership attendance amid escalating geopolitical pressure from China over Taiwan's regional participation

The Pacific Islands Forum (PIF)

About The Pacific Islands Forum (PIF):

What it is?

- The premier intergovernmental organization and political grouping in the Pacific, representing 18 island nations and territories across Oceania to enhance regional cooperation, trade, and collective diplomacy.
- Established in: Founded in August 1971 in Wellington, New Zealand, initially under the name South Pacific Forum (SPF) before being renamed the Pacific Islands Forum in 1999 to reflect its broader North and South Pacific scope.
- Members (18): Australia, Cook Islands, Federated States of Micronesia, Fiji, French Polynesia, Kiribati, Nauru, New Caledonia, New Zealand, Niue, Palau, Papua New Guinea, Republic of Marshall Islands, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.
- Aim: To foster regional peace, harmony, and social inclusion under the vision of "One Blue Pacific Continent," driving shared economic prosperity and presenting a unified voice on existential challenges like climate change and maritime security.

Key Functions:

- Regional Policy Harmonisation: Coordinates common positions on global platforms regarding sustainable development, fisheries, ocean governance, and regional resilience.
- Regional Security and Peacekeeping: Mobilizes collective stabilization missions and security cooperation under the mandate of the historic Biketawa Declaration.
- Climate Advocacy: Amplifies Pacific leadership on global climate action, advocating for low-lying island nations threatened by sea-level rise and environmental degradation.
- Economic Integration and Trade: Oversees technical programs to facilitate inter-island shipping, trade facilitation, renewable energy transitions, and tourism infrastructure.
- Post-Forum Dialogue (PFD): Serves as the primary multilateral interface to engage external development partners (including the US, EU, China, Japan, and India) through structured ministerial-level talks.

Significance:

- Equips vulnerable atoll nations with collective bargaining power on the global diplomatic and climate financing stage.
- Represents a critical maritime theatre in the Indo-Pacific where major global powers compete for security access, diplomatic recognition, and development pacts.

The BRICS 'POWER' Framework

Context:

Ahead of the 18th BRICS Summit in New Delhi, Chinese Ambassador Xu Feihong proposed a 'POWER' framework for Greater BRICS, calling for stronger Global South cooperation, closer India-China coordination, and collaboration on AI and supply chains.



The BRICS 'POWER' Framework

About The BRICS 'POWER' Framework:

What it is?

- The BRICS grouping—following its historic expansions (BRICS+)—has evolved from an economic dialogue forum into a leading multilateral platform for the Global South, offering an alternative to traditional Western-dominated institutions such as the G-7.
- As India (2026 chair) and China (incoming 2027 chair) hold successive presidencies, the proposed 'POWER' architecture outlines five foundational pillars to guide political, financial, technological, and developmental cooperation across emerging markets.

Key Data:

- **Demographic Reach:** Greater BRICS members encompass nearly half of the global population, providing vast domestic consumer bases and labor markets.
- **Economic Share & Growth Advantage:** The expanded grouping contributes approximately 30% of global GDP (PPP share exceeding one-third).
- According to IMF projections, Greater BRICS is set to expand nearly three times faster than the G-7 economies through 2028.
- **Trade Integration:** BRICS economies account for one-fifth (20%) of global trade turnover, controlling vital global production nodes in electronics, steel, critical minerals, and agriculture.
- **Bilateral Normalization Metrics:** Reflecting improved bilateral ties following diplomatic consensus, India and China have resumed five direct commercial mainland flight routes and reopened border trade after a six-year hiatus.

The Five Pillars of BRICS 'POWER':

P — Principle (Sovereign Equality & International Law):

- Uphold the fundamental principles of the United Nations Charter, including sovereign equality, mutual non-interference in internal affairs, and the peaceful resolution of territorial disputes.
- Counter hegemonic law of the jungle unilateralism by advancing Beijing's Global Security Initiative (GSI) and Global Governance Initiative.

O — Openness (Safeguarding Multilateral Trade):

- Defend the rules-based multilateral trading system centered around the World Trade Organization (WTO), preserving non-discriminatory Most-Favoured-Nation (MFN) treatment.
- Resist geopolitical decoupling, de-risking, and punitive tariff walls, while deepening cross-border cooperation in infrastructure, energy, and critical mineral supply chains.

W — Win-Win (Development-Centric Global Agenda):

- Place socioeconomic development at the core of multilateral dialogue, driving forward the UN Sustainable Development Goals (SDGs) and shaping the post-2030 global development architecture.
- Expand local-currency settlements, cross-border payment interoperability, and reciprocal credit arrangements to insulate member states from external financial sanctions and currency volatility.

E — Engine (Propelling Global Growth & Industrialization):

- Serve as the growth engine for the world economy by accelerating collaboration in digital public infrastructure, green tech, and smart manufacturing.
- Advance cross-sectoral integration of Artificial Intelligence (AI) through platforms such as the China-BRICS AI Development and Cooperation Center and the China-BRICS New Quality Productive Forces Research Center.

R — Responsibility (Successive Presidencies & Global South Leadership):

- Leverage the consecutive rotating presidencies of India (2026) and China (2027) to provide policy continuity and structural stability to the expanded 10-member BRICS mechanism.

- Champion the institutional reform of Bretton Woods financial institutions and the UN Security Council to amplify the voice of developing nations.

Key Challenges in Realizing the Vision:

- **Divergent Strategic Trajectories:** India views BRICS as a non-Western coalition dedicated to strategic autonomy and multilateral reform, whereas China and Russia often frame the expanded bloc as an anti-Western counterweight.
- **Asymmetries in Bilateral Commerce:** Despite shared calls for open trade, India faces a severe, structural trade deficit with China exceeding \$85 billion, alongside tariff and non-tariff access barriers for Indian pharmaceuticals and agricultural products.
- **Geopolitical Frictions on Unresolved Borders:** Tactical confidence-building measures (flight resumptions and hotline activations) remain vulnerable to unresolved Line of Actual Control (LAC) delimitation disputes and upstream dam infrastructure along trans-border rivers.
- **De-Dollarization vs. Local Currency Mechanics:** While member states favor local currency invoicing to minimize exchange volatility, creating a functional, liquid common settlement architecture or common currency remains constrained by capital control disparities and currency convertibility limits.
- **Internal Cohesion Across BRICS+:** The rapid accession of diverse Middle Eastern and African economies introduces disparate foreign policy priorities, complicating consensus on international security and trade agendas.

Way Ahead:

- **Strengthening India-China Multilateral Coordination:** Leverage the New Delhi (2026) and Beijing (2027) summits to harmonize a common Global South development agenda while keeping bilateral border management on a stable, de-escalated track.
- **Operationalizing Independent Settlement Infrastructure:** Enhance the financial resilience of the New Development Bank (NDB) and develop interoperable cross-border payment rails linking national digital currencies (CBDCs) and domestic payment systems (such as UPI).
- **Establishing Open Technology Guardrails:** Institutionalize transparent, human-centric multilateral frameworks for Artificial Intelligence governance to prevent algorithmic monopolies while bridging the Global South digital divide.
- **Prioritizing Critical Supply Chain Diversification:** Build diversified, reciprocal supply partnerships within BRICS in renewable energy manufacturing, fertilizer production, and critical minerals to shield member economies from unilateral export controls.
- **Advancing Comprehensive Multilateral Reform:** Maintain collective pressure for restructuring voting quotas within the IMF and World Bank, while building a unified consensus on expanding permanent and non-permanent representation in the UN Security Council.

Conclusion:

However, transforming rhetorical consensus into durable global governance requires overcoming acute internal strategic divergences and bilateral friction between its two largest members, India and China. If grounded in sovereign equality, mutual economic accommodation, and tangible institution-building, the expanded BRICS partnership can serve as a steady stabilizer for global development and multilateral peace.

India's opportunity to put BRICS back together

Context:

Ahead of the 18th BRICS Summit in New Delhi, concerns have emerged over internal frictions, anti-Western positioning and weakening consensus within the expanded grouping. India faces the challenge of restoring BRICS' focus on reformed multilateralism.



BRICS

About India's opportunity to put BRICS back together:

What it is?

- BRICS was established to amplify the voice of emerging economies in global governance—particularly Bretton Woods institutions—and promote an equitable, multipolar multilateral order. However, following its expansion to 11 full members alongside 10 partner countries, the grouping has developed two competing visions:
- India's Vision: A non-West coalition preserving strategic autonomy, multi-alignment, and people-centric reform under the 2026 chairship pillars of Resilience, Innovation, Cooperation, and Sustainability (RICS).
- China-Russia Vision: An anti-West geopolitical counterweight aimed at bypassing existing international bodies and constructing parallel global governance frameworks.

Key Data & Structural Realities:

- Group Expansion: Enlarged from 5 founding nations to 11 full members with the entry of Egypt, Ethiopia, Iran, Saudi Arabia, the UAE, and Indonesia, accompanied by 10 official partner countries.
- Global Macro Footprint: Represents approximately 45% of the world's population and roughly 30% of global nominal GDP, outpacing the G-7 in purchasing power parity terms.
- Consensus Breakdown: The May 2026 BRICS Foreign Ministers' meeting in New Delhi struggled to achieve a joint communique due to disputes among new members, echoing the 2020 precedent where non-consensus chair statements were first introduced.

Core Frictions Threatening Group Cohesion:

- The Non-West vs. Anti-West Tug-of-War: Growing geopolitical tensions, including the Ukraine war and conflicts involving the US, Israel and Iran, have encouraged some BRICS members to push the grouping towards a more anti-Western stance.
- The SAARC Syndrome: While the founding members historically managed bilateral disputes with diplomatic maturity, newer entrants have brought regional rivalries directly into the forum, causing diplomatic gridlock.
- Creating Parallel Structures vs. Reforming Existing Norms: Instead of reforming the UN, IMF, or WTO, China is establishing parallel international systems—such as the World AI Cooperation Organisation in Shanghai, the Digital Silk Road, and the mBridge digital currency platform.
- Pushback Against a Common Currency: Beijing's push for a common BRICS clearing currency has met hesitation from India and Brazil, who seek to avoid creating a renminbi-dominated mechanism, advocating instead for direct national currency trade settlements.
- Selective Support for UN Reform: Despite championing Global South solidarity, China continues to withhold explicit support for permanent UN Security Council seats for India, Brazil, and South Africa.

Strategic Pressures on India & Necessary Course Corrections:

- Managing Relations with the West: Faced with tariff pressures from Washington and strains across groupings like the Quad, India must resist turning BRICS into an anti-Western bloc to safeguard its strategic autonomy.
- Guarding Financial Sovereignty: Rather than adopting alternative clearing mechanisms like mBridge that may favor dominant currencies, India must focus on linking domestic payment systems and central bank digital currencies (CBDCs).
- Restoring Consensus Protocols: Following instances of non-consensus ministerial summaries, New Delhi must re-establish strict consensus as an indispensable rule to prevent majority decisions from being forced through.
- Championing Global South Middle Powers: India must counter Western-centric groupings by establishing BRICS as an independent platform for non-aligned Global South middle powers committed to systemic multilateral reform.

Way Ahead:

- **Re-Institutionalize Strict Consensus Rules:** Mandate that all official declarations, communiqués, and policy initiatives require unanimous consent, preserving the core principle that maintains institutional trust.
- **Prioritize Interoperable Payment Links Over Common Currencies:** Focus financial integration on bilateral arrangements, local-currency invoicing, and real-time payment linkages rather than creating a centralized common currency.
- **Reassert the Reformed Multilateralism Mandate:** Direct negotiations toward actionable structural reforms within the UN Security Council, IMF quota formulas, and the WTO dispute settlement mechanism.
- **Establish Norms Against Bilateral Disputes:** Institute clear conventions that discourage member states from using official multilateral agendas to litigate bilateral territorial or regional disputes.
- **Focus on People-Centric Development:** Channel working-group initiatives toward tangible developmental outcomes, including disaster-resilient infrastructure (CDRI), agricultural supply-chain security, and open-source digital public infrastructure.

Conclusion:

The 18th BRICS Summit in New Delhi represents a pivotal moment for the grouping. Without course correction, rapid expansion and deepening geopolitical rivalries risk turning the bloc into a fractured, anti-Western coalition paralyzed by regional disputes. By re-establishing consensus decision-making, resisting parallel institutional dominance, and focusing on reformed multilateralism, India can preserve BRICS as an effective, independent voice for the Global South.

The OPEC Plus

Context:

Seven core OPEC+ nations decided in a virtual meeting to keep their crude oil output targets unchanged for October.

- The decision came amid global economic uncertainties and continuing supply disruptions across the Middle East and the Strait of Hormuz.



The OPEC Plus

About The OPEC Plus:

What it is?

- OPEC+ is an expanded coalition comprising member states of the Organization of the Petroleum Exporting Countries (OPEC) and key non-OPEC oil-exporting nations, working collectively to regulate crude oil supply and manage global energy markets.
- Established in: Formed in late 2016 through the historic Declaration of Cooperation signed in Vienna, Austria.

History:

- **Origins of OPEC (1960):** Founded at the Baghdad Conference by five founding members—Iran, Iraq, Kuwait, Saudi Arabia, and Venezuela—to counter the dominance of multinational oil companies (Seven Sisters) and secure fair oil prices.
- **Birth of OPEC+ (2016):** Between 2014 and 2016, a massive surge in US shale oil production caused crude prices to crash. Recognizing that OPEC alone could no longer effectively balance the global market, OPEC partnered with 10 non-OPEC producers, led by Russia, creating the broader OPEC+ alliance to coordinate output cuts and stabilize prices.

Participating Countries:

- **OPEC Members:** Core producers including Saudi Arabia, Iraq, Kuwait, Algeria, Nigeria, Venezuela, and others.
- **Non-OPEC Partners:** Major crude producers including Russia, Kazakhstan, Oman, Azerbaijan, Bahrain, Brunei, Malaysia, Mexico, South Sudan, and Sudan.

Key Functions:

- **Coordinating Production Quotas:** Sets and adjusts country-specific crude oil extraction ceilings to align global oil supply with fluctuating worldwide demand.
- **Price & Market Stabilization:** Intervenes during market shocks—such as demand contractions or geopolitical supply cuts—by applying voluntary production increases or cuts to prevent extreme price volatility.
- **Unified Petroleum Policy:** Harmonizes energy and export strategies between OPEC members and non-OPEC allies to ensure stable returns for producing nations.
- **Supply Security for Consumers:** Monitors inventory balances to ensure regular, dependable, and economically viable supplies of petroleum to consuming nations.
- **Energy Market Intelligence:** Conducts comprehensive market research and economic forecasting through bodies like the Joint Ministerial Monitoring Committee (JMMC) to guide global energy policy.

Significance:

- Accounting for roughly half of the world's total crude oil production, decisions made by OPEC+ heavily influence benchmark prices like Brent and West Texas Intermediate (WTI).
- Fluctuations in OPEC+ output directly impact fuel prices, transportation costs, and industrial input costs worldwide, playing a central role in global inflation and central bank monetary policies.

The US-Denmark-Greenland Security Agreement

Context:

The United States, Denmark, and Greenland formally signed a trilateral security agreement on the sidelines of the UN General Assembly in New York, updating their 1951 defense pact.

The US-Denmark-Greenland Security Agreement

About The US-Denmark-Greenland Security Agreement:



What it is?

- A trilateral defense and security cooperation agreement that modernizes the historic 1951 US-Danish Defense Agreement, granting the United States expanded, permanent military operating rights and strategic denial capabilities in Greenland without transferring sovereign territory.
- **Members / Signatories:** The United States of America, The Kingdom of Denmark, and The Government of Greenland.
- **Aim:** To secure the North American northern frontier and Arctic-Atlantic maritime approaches, deny adversarial foreign powers military or economic footholds in Greenland, and de-escalate intra-NATO diplomatic tensions stemming from U.S. annexation rhetoric.

Key Features:

- **Permanent Basing & Defence Outposts:** Proposes expanding U.S. military presence beyond Pituffik Space Base, with new installations at Narsarsuaq and Mestersvig and wider aerial and maritime access.
- **Air & Missile Defence Integration:** Proposes integrating Greenland into U.S. ballistic missile early-warning and air defence systems, including the planned Golden Dome missile defence shield.
- **Strategic Denial & Investment Veto:** Seeks to prevent non-NATO military installations and require joint U.S., Danish and Greenlandic approval for sensitive infrastructure and critical-mineral investments.
- **Sovereignty & Self-Determination:** Reaffirms Danish territorial sovereignty and Greenland's right to self-determination, with the proposed framework requiring parliamentary ratification in Denmark and Greenland.
- **Enduring Defence Framework:** Proposes retaining the agreement's defence obligations and NATO-related conditions even if Greenland eventually gains full independence from Denmark.

Significance:

- Reflects the growing strategic importance of Greenland in North American security, linking Arctic military infrastructure with missile defence and regional deterrence.
- Strengthens surveillance of the Greenland-Iceland-United Kingdom Gap, a vital submarine transit corridor, while improving access to emerging Arctic shipping routes.

UNSC Veto Reform: The Debate over Veto Powers

Context:

At the 81st Session of the United Nations General Assembly (UNGA) in New York, French President Emmanuel Macron renewed the push to regulate the use of the veto in the UN Security Council (UNSC) during humanitarian crises and mass atrocities.



UNSC Veto Reform

About UNSC Veto Reform: The Debate over Veto Powers

What is the United Nations Security Council (UNSC)?

- The United Nations Security Council (UNSC) is one of the six principal organs of the United Nations, established under the UN Charter in 1945. It has primary responsibility for maintaining international peace and security.
- Origins & Textual Status: The word veto does not appear in the United Nations Charter. Instead, it is established under Article 27(3), which requires that decisions of the Security Council on non-procedural matters be made by an affirmative vote of nine members, including the concurring votes of the permanent members.
- The French-Mexican Initiative (2015): Originally floated in 2013 and formally launched in 2015 by France and Mexico, the initiative calls on the P5 to voluntarily refrain from exercising their veto in situations involving genocide, crimes against humanity, and large-scale war crimes.
- Core Philosophy: The initiative frames the veto not as an unconditional privilege of great-power status, but as a responsibility tied to maintaining collective peace and security.
- Current Diplomatic Traction: Backing has reached 128 UN Member States (with 21 countries joining in mid-2026), marking the first time two permanent members (France and the UK) have formally committed to the principle.

Paralysis & Competing Reform Initiatives:

- Recent regional conflicts—such as civil wars in Syria and Sudan, the war in Ukraine, and hostilities in Lebanon and Gaza—have repeatedly highlighted Council paralysis driven by conflicting P5 vetoes. Several complementary reform frameworks have emerged:
- The Liechtenstein Initiative (UNGA Resolution 76/262, 2022): Mandates that whenever a veto is cast in the Security Council, the President of the UNGA must convene a formal meeting of the General Assembly within 10 working days. This forces the vetoing permanent member to publicly defend and justify its decision before the entire world body.
- The ACT Code of Conduct: Formulated by the Accountability, Coherence, and Transparency (ACT) group, this initiative urges all Security Council member to pledge not to vote against credible UNSC draft resolutions aimed at preventing or halting mass atrocity crimes.

Arguments in Favour of Regulating / Abolishing the Veto:

- Ending Chronic Council Paralysis: Vetoes frequently obstruct timely humanitarian interventions, peacekeeping authorizations, and arms embargoes in conflict zones suffering catastrophic civilian casualties.
- Upholding Democratic Equality: An absolute negative vote wielded by five states contradicts the core Westphalian principle of sovereign equality enshrined in Article 2(1) of the UN Charter.
- Reflecting 21st-Century Geopolitical Realities: The P5 configuration reflects the post-World War II balance

of power from 1945, excluding major contributors to global governance and regional powers like the G4 nations (India, Brazil, Germany, Japan) and the African continent.

- **Increasing Political and Moral Cost:** Mechanisms like the Liechtenstein Initiative ensure that while a veto cannot be legally blocked, the casting state must endure significant diplomatic exposure on the UNGA floor.

Arguments Against Abolition:

- **The Realist Imperative of Great-Power Survival:** As noted by international relations scholars, the veto was created as an institutional guarantee: no global collective security organisation can survive if it takes binding enforcement action against the core interests of an armed great power.
- **The Charter Amendment Paradox:** Under Article 108 of the UN Charter, any formal amendment—such as abolishing the veto or restructuring permanent membership—requires a two-thirds vote in the UNGA followed by ratification by two-thirds of Member States, including all five permanent members. Consequently, the P5 hold a structural veto over the elimination of their own veto.
- **P5 Cleavages & Selective Framing:** The P5 remains sharply divided; the US, Russia, and China show no willingness to dilute their veto powers. Moreover, defining what constitutes a humanitarian crisis or genocide remains subject to political interpretation and double standards by individual great powers.
- **Dilution vs. Multiplication Risk:** Extending the veto to prospective new permanent members in the name of parity risks multiplying the number of actors capable of blocking Council action, worsening institutional paralysis.

Way Ahead:

- **Advancing Normative Self-Restraint:** Continue diplomatic pressure through the French-Mexican initiative to secure a two-thirds majority (129+ Member States) in the UNGA, creating a recognized global norm against using the veto during verified humanitarian disasters.
- **Strengthening Post-Veto Instruments:** Connect General Assembly debates triggered under the Liechtenstein Initiative to actionable multilateral follow-ups, such as independent commissions of inquiry or humanitarian aid corridors under Uniting for Peace (Resolution 377A).
- **Expanding Permanent Seats Without Immediate Veto Extension:** Formulate compromised models for Security Council expansion—such as inducting G4 nations with permanent membership while placing a long-term moratorium on exercising veto privileges—balancing representation with Council operability.
- **Objective Atrocity Trigger Mechanisms:** Empower independent statutory bodies—such as the UN Secretary-General, the International Court of Justice (ICJ), or the UN High Commissioner for Human Rights (OHCHR)—to issue factual alerts that trigger voluntary veto-restraint protocols.

Conclusion:

While complete legal abolition remains blocked by the architecture of the UN Charter itself, incremental mechanisms like voluntary restraint in mass atrocities and mandatory post-veto accountability in the General Assembly increase the political cost of unilateral obstruction. Reconciling the Council's legitimacy with its effectiveness requires transforming the veto from an instrument of national geopolitical defense into an accountable tool of international peace and collective security.

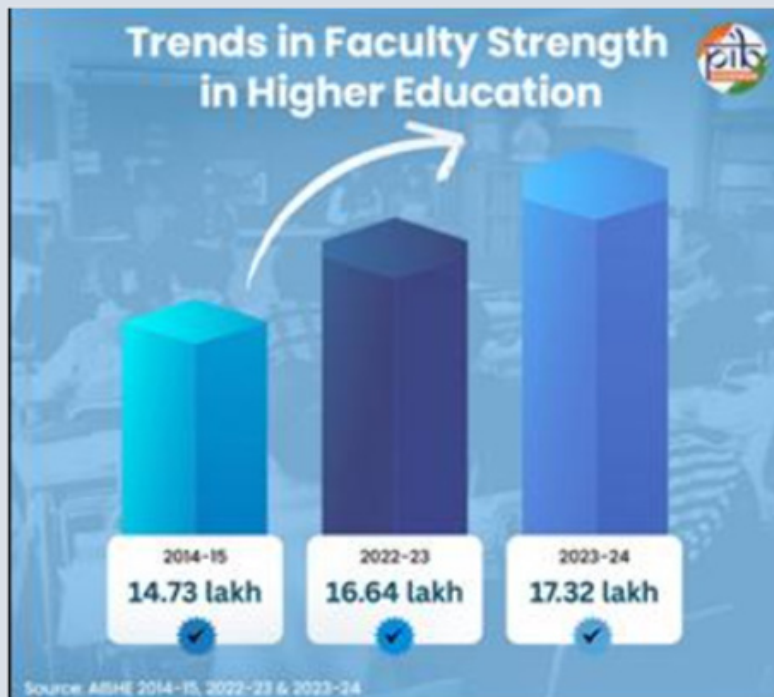
Chapter- 9

SOCIAL ISSUES

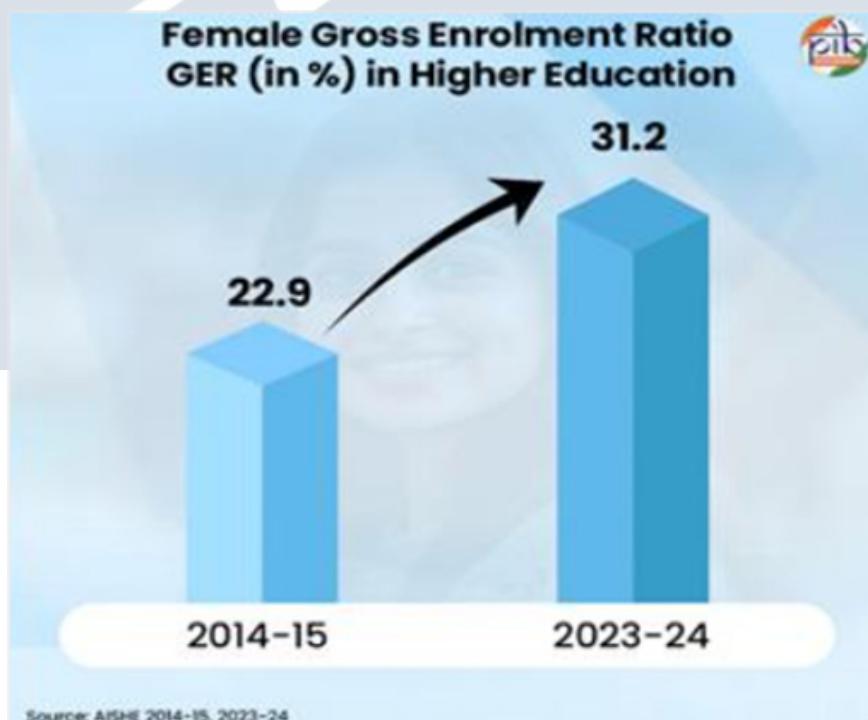
India's Higher Education Transformation

Context:

The Ministry of Education released a decadal performance review based on the All India Survey on Higher Education (AISHE) data, highlighting that India's higher education system underwent massive structural expansion between 2014-15 and 2023-24.



India's Higher Education Transformation



India's Higher Education Transformation

About India's Higher Education Transformation:

What It Is?

- India's higher education ecosystem represents the world's second-largest tertiary education network, operating as a primary engine for transitioning into a knowledge-driven economy under the National Education Policy (NEP) 2020 and advancing SDG 4 (Inclusive & Equitable Quality Education).
- Over the past decade, policy interventions have shifted the sector from restricted elite access toward broad-based mass inclusion, multidisciplinary universities, expanded research programs (Ph.D.), and enhanced social-gender equity.

Key Data & Statistics (A Decade of AISHE Trends: 2014–15 to 2023–24)

Expansion of Institutional Footprint:

- Universities: Increased from 760 to 1,289 (a growth of 69.6%).
- Colleges: Grew from 38,498 to 48,246 (25.3% increase).
- Standalone Institutions: Rose from 12,276 to 15,221 (~24% growth).

Enrolment & Gross Enrolment Ratio (GER):

- Total enrolment expanded 31.5%, rising from 3.42 crore to 4.50 crore.
- Overall GER increased from 23.7% in 2014–15 to 30.0% in 2023–24 (targeting 50% by 2035 under NEP 2020).

Sharp Growth in Research & Post-Graduate Degrees:

- Ph.D. Enrolment: Surged 192.9%, from 1.17 lakh to 3.43 lakh.
- Postgraduate (PG): Grew 50.2%, from 38.53 lakh to 57.85 lakh.
- Integrated Programs: Jumped 301.4%, from 1.41 lakh to 5.69 lakh.

Gender Parity & Women Leadership:

- Female enrolment rose 42.2% (from 1.57 crore to 2.24 crore), outpacing total enrolment growth.
- Female GER (31.2%) surpassed male GER (28.9%) for the seventh consecutive year.
- Gender Parity Index (GPI): Improved from 0.92 to 1.08 overall, with SC GPI reaching 1.11 and ST GPI reaching 1.08.

Social Category Inclusivity:

- OBC Participation: Rose from 32.8% to 40.1% of total enrolments (largest share increase).
- SC Enrolment & GER: Share increased from 13.4% to 15.5%; SC GER climbed from 18.9% to 27.8%.
- ST Enrolment & GER: Share grew from 4.8% to 6.4%; ST GER rose from 13.5% to 22.8%.

STEM & Internationalization:

- STEM Enrolment: Reached 1.02 crore in 2023–24 (an 11.5% decadal increase).
- International Students: Grew 37.5%, from 42,293 to 58,134.
- Higher Education Out-turn: Rose 24.1%, crossing 1.09 crore graduates annually.

Key Drivers Behind the Decadal Progress:

- Targeted Inclusivity & Welfare Schemes: Dedicated scholarships, fee waivers, post-matric assistance, and reservation frameworks enabled deeper participation among SC, ST, and OBC communities.
- National Education Policy (NEP) 2020 Catalysts: Multiple entry-exit options, Academic Bank of Credits (ABC), and multidisciplinary curriculum structures reduced rigid institutional barriers.
- Capital Outlays for Campus Infrastructure: Substantial improvements in physical and digital assets across HEIs—over 98% now have library facilities, 94%+ have functional playgrounds, and 85%+ have specialized laboratories.
- Expansion of the Faculty Base: Faculty strength increased by 17.6% to 17.32 lakh, with female faculty count rising by 36.7% (accounting for 44.9% of the total teaching workforce).

Challenges & Persistent Gaps:

- Graduate Employability & Industry Disconnect: Despite high out-turn (1.09+ crore annually), significant skill deficits persist, with over 29% of tertiary-educated youth facing job-market search delays.
- Gender Imbalance in Disability Access (PwBD): Enrolment among Persons with Benchmark Disabilities shows an unequal gender ratio (34,080 males vs. 20,000 females in 2023–24), indicating barriers for women with disabilities.
- Faculty Shortages & Ad-Hoc Staffing: Chronic vacancies in sanctioned teaching posts, especially in state universities and rural colleges, impair faculty-to-student ratios and teaching quality.
- Concentration of R&D Funds: Advanced research infrastructure remains clustered within premier central institutes (IITs/IISc), leaving state-affiliated colleges with limited research grants.
- Underrepresentation in Top Global Rankings: Limited international faculty integration and lower citation metrics constrain Indian institutions from climbing higher in global university ranking tables.

Way Ahead:

- Accelerating Curricular Alignment with Industry 4.0: Mandate apprenticeship-embedded degree programs and AI/digital skill modules across tier-2 and tier-3 colleges to raise immediate graduate employability.
- Expanding Dedicated PwBD Infrastructure & Stipends: Provide targeted financial aid, assistive technology labs, and accessible campus transport specifically tailored for female students with disabilities.
- Institutionalizing Faculty Recruitment Drives: Conduct time-bound, transparent recruitment to clear backlogs in sanctioned professorships across state and central universities.
- Democratizing Research Grants via ANRF: Allocate dedicated funding windows under the Anusandhan National Research Foundation specifically to upgrade lab infrastructure in state public universities.
- Scaling the Study in India Global Campaign: Streamline visa clearances, offer standardized housing, and expand academic exchange programs to attract more international students toward the target of 100,000+ foreign enrolments.

Conclusion:

India's higher education sector has achieved impressive progress over the past decade by expanding its institutional network, achieving gender parity, and broadening social inclusion. However, sustaining this momentum toward the NEP 2020 target of a 50% GER by 2035 requires shifting focus from quantitative expansion to qualitative excellence. Bridging the graduate employability gap, funding research in state universities, and upgrading faculty strength will be essential to realizing India's vision of becoming a global knowledge powerhouse.

Mission Rangeen Machhli 2031

Context:

Vice-President of India released the Mission Rangeen Machhli 2031 Strategic Action Plan for Ornamental Fisheries Development during a fisheries outreach programme at Agatti in Lakshadweep.

Mission Rangeen Machhli 2031

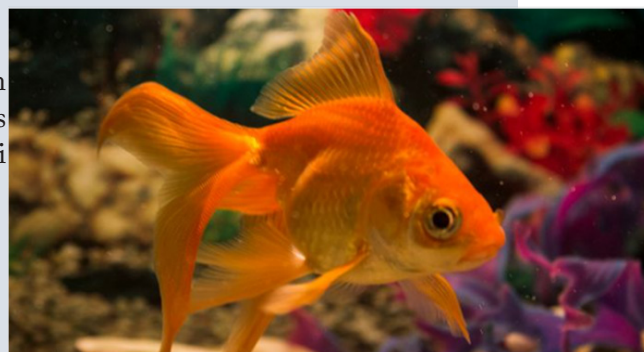
About Mission Rangeen Machhli 2031:

What It Is?

- Mission Rangeen Machhli 2031 is an initiative by the Government of India to develop, regulate, and scale the ornamental fisheries sector (breeding, rearing, and trading of decorative fish for home aquariums and commercial displays) into an organized, globally competitive industry.
- Organisations Involved: Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying, Government of India.
- Location Focus: Lakshadweep Islands (launched from Agatti Island).

Key Features of Mission Rangeen Machhli 2031:

- Standardized Value Chain SOPs: Establishes nationwide Standard Operating Procedures (SOPs) covering broodstock management, captive breeding, hatchery protocols, disease prevention, and safe live-fish packaging/transportation.



- **Comprehensive Biosecurity & Quality Framework:** Sets up standardized quarantine mechanisms, fish health surveillance, and quality assurance to prevent invasive pathogens and meet stringent international import standards.
- **End-to-End Traceability & Certification:** Implements traceability systems to verify captive-bred origins, preventing illegal capture of endangered reef fauna and enabling global sustainability certifications.
- **Cluster-Based Value Chain Integration:** Aligns with the Pradhan Mantri Matsya Sampada Yojana (PMMSY) to build specialized infrastructure clusters for production, processing, air-cargo logistics, and domestic/export market linkages.
- **Livelihood & Women Empowerment:** Focuses on training coastal fishers, youth, and women-led Self-Help Groups (SHGs) in low-investment, high-return backyard ornamental fish rearing and reef-friendly aquaculture.

Lakshadweep and Ornamental Fishing:

- **Vast Maritime Resource Base:** Lakshadweep commands an Exclusive Economic Zone (EEZ) of nearly 4 lakh sq. km (around 17% of India's total EEZ) and over 4,200 sq. km of calm, shallow atoll lagoons, offering an ideal natural setting for controlled mariculture.
- **Rich Coral Reef Biodiversity:** The archipelago's pristine coral reefs host an abundance of high-value marine ornamental fish species—such as clownfish, damselfish, butterflyfish, angelfish, and wrasses.
- **Diversifying Island Livelihoods:** Traditionally dependent on oceanic tuna capture (Yellowfin and Skipjack) and coconut farming, climate-resilient alternative through captive breeding and live-fish exports without degrading native reef ecosystems.
- **Integrated Blue Economy Synergies:** Complements Lakshadweep's notified status as a dedicated Seaweed Cluster and the development of the Lakshadweep Sustainable Tuna brand, establishing an integrated, sustainable blue-economy ecosystem.

Tenzing Norgay National Adventure Awards

Context:

The Ministry of Youth Affairs and Sports announced the Tenzing Norgay National Adventure Awards (TNNAA) 2024 across four categories: Land Adventure, Water Adventure, Air Adventure, and Lifetime Achievement.

Tenzing Norgay National Adventure Awards

About Tenzing Norgay National Adventure Awards:

What It Is?

- The Tenzing Norgay National Adventure Award (formerly the National Adventure Awards) is the highest national adventure sports honour of the Republic of India. Conferred annually, it recognizes individuals who have demonstrated extraordinary endurance, courage, risk-taking, and technical mastery in adventure activities across land, sea, and air. Its status is held equivalent to the Arjuna Award conferred in mainstream sports.



Origin & History:

- **Pre-Creation Era (Arjuna Awards):** Before the institutionalization of a dedicated adventure award, mountaineers and explorers were recognized under the Arjuna Award (such as the 1965 Indian Everest Expedition team and Bachendri Pal in 1984).
- **Institution (1993–1994):** Instituted in 1993 by Union Minister Mukul Wasnik as the National Adventure Awards, with the first batch conferred in 1995 for the year 1994.
- **Renaming (2003):** Renamed in 2003 in honour of Tenzing Norgay—who, alongside Sir Edmund Hillary, became one of the first two individuals to summit Mount Everest on May 29, 1953—to commemorate the golden jubilee of the historic ascent.
- **Presidential Investiture:** Since 2002/2004, the honours are presented alongside the National Sports Awards in the formal investiture ceremony at Rashtrapati Bhavan.

- Nodal Organisation: Ministry of Youth Affairs and Sports, Government of India.
- Aim: To recognize outstanding individual and collective human endurance in challenging natural environments, promote risk-taking, discipline, and quick decision-making under stress, and nurture a culture of adventure participation among Indian youth.

Key Features of the Award:

- Four Established Categories: Conferred across four specific domains: Land Adventure, Water (Sea) Adventure, Air Adventure, and Lifetime Achievement.
- Standardized High-Value Cash Prize: Award money stands revised at 15 lakh per awardee (upgraded progressively from 50,000 in 1994, 1.5 lakh in 1999, 3 lakh in 2002, and 5 lakh in 2008), matching the cash purse of the Arjuna Award.
- Sculpted Bronze Insignia: Awardees receive a 15-inch, 1.5 kg polished bronze statuette depicting Tenzing Norgay in high-altitude mountain gear holding his climbing ice axe, accompanied by a formal citation scroll and ceremonial blazer.
- Equal Footing with Major Sports Honours: Conferred directly by the President of India alongside the Major Dhyan Chand Khel Ratna, Arjuna Award, and Dronacharya Award at Rashtrapati Bhavan.

Winners of TNNAA 2024:

S. No.	Awardee Name	Award Category
1.	Ms. Baljeet Kaur	Land Adventure
2.	Shri Skalzang Rigzin	Land Adventure
3.	Shri Rimo Saha	Water Adventure
4.	Shri Shiv Prasad Chamoli	Lifetime Achievement

Geothermal Energy & Its Geological Genesis

Context:

Analysis highlighted India's progress in geothermal energy following the commissioning of the country's first two 1,000-metre-deep geothermal wells in Puga Valley, Ladakh, under the National Policy on Geothermal Energy (2025).

Geothermal Energy & Its Geological Genesis

About Geothermal Energy & Its Geological Genesis:

What it is?

- Geothermal energy is low-carbon, renewable thermal energy generated deep within the Earth's interior through the radioactive decay of naturally occurring isotopes (uranium, thorium, potassium) and primordial heat left over from planetary formation.
- In geologically active zones (tectonic plate boundaries, rift basins, and deep crustal faults), mantle convection drives hydrothermal fluids toward the surface, trapping steam and superheated water in permeable reservoir rocks.
- When drilled, the fluid ascends to spin steam turbines connected to electric generators, after which condensed fluids are reinjected into the reservoir to maintain hydrostatic pressure and avoid depletion.

Key Data & Geothermal Resource Profile:

- Theoretical Capacity: The Geological Survey of India (GSI) estimates India's theoretical geothermal power potential at approximately 10.6 GW (10,600 MW).
- Geographical Mapping: GSI has mapped 381 natural hot springs across 10 distinct geothermal provinces:
- Himalayan Geothermal Province (Ladakh, Himachal Pradesh, Uttarakhand)



- Naga-Lusai Belt (Northeastern fold mountains)
- Andaman & Nicobar Islands (Volcanic arc)
- Son-Narmada-Tapi (SONATA) Lineament (Central India)
- West Coast Province (Konkan geothermal belt)
- Cambay Graben (Gujarat rift basin)
- Aravalli Province (Rajasthan/Haryana)
- Mahanadi Basin (Odisha)
- Godavari Basin (Telangana/Andhra Pradesh)
- South Indian Cratonic Region
- High-Altitude Puga Milestone: The Puga Valley project sits at an altitude exceeding 14,000 feet in Ladakh's Changthang region. Two 1,000-metre wells will support India's maiden 1 MW demonstration-scale geothermal power plant, advancing the Carbon-Neutral Ladakh vision.

Status of Key Government-Supported Projects:

Project Location	Implementing / Research Focus	Current Operational Status
Puga Valley, Ladakh	ONGC Energy Centre, Ladakh Administration, LAHDC Leh	Two 1,000 m deep production wells commissioned; reservoir evaluation underway for a 1 MW pilot plant.
Ankleshwar, Gujarat	MNRE Pilot Project with Oil & Gas PSUs	Retrofitting abandoned/depleted oil and gas wells for geothermal power; baseline geological studies complete.
Gandhinagar, Gujarat	Integrated Solar-Geothermal Demonstration	Three wells drilled producing fluids at 70°C–80°C; demonstrated 50–90 kW hybrid electricity generation.
Tawang, Arunachal Pradesh	High-altitude Geothermal Resource Assessment	Geochemical analysis and geophysical studies active across 5 localized thermal spring sites.
Hyderabad, Telangana	Shallow Geothermal Air-Conditioning	Developing closed-loop geothermal cooling systems for space cooling to replace conventional energy-intensive HVACs.
National Shallow Geothermal Study	Research Institutions under RE-RTD Scheme	Formulating analytical modeling for Borehole Heat Exchangers (BHE) to drive Ground Source Heat Pumps (GSHPs).

National Policy on Geothermal Energy (2025): Key Pillars

- Lease Tenures & Single-Window Clearance: Empowers State and UT governments to award exploration permits (3–5 years) and long-term development leases (up to 30 years) through designated State Nodal Agencies.
- Repurposing Inactive Oil and Gas Wells: Establishes guidelines to convert abandoned, depleted, or sub-commercial hydrocarbon wells into geothermal heat and electricity producers, leveraging ONGC/OIL subsurface datasets.
- Fiscal Subsidies & Market Enablers: Provides up to 100% financial assistance for government R&D and up to 70% for private start-ups under the Renewable Energy Research and Technology Development Programme (RE-RTD); incorporates geothermal under Renewable Purchase Obligations (RPO) and the Indian Carbon Credit Trading Scheme.
- Promotion of Next-Gen Technologies: Promotes investments in Enhanced Geothermal Systems (EGS)—which hydraulically fracture hot dry rocks to create artificial permeability—and closed-loop Advanced Geothermal Systems (AGS).
- National Geothermal Data Repository (NGDR): Integrates subsurface exploration logs, gravity surveys, and thermal gradient maps across GSI, the Ministry of Mines, and the Directorate General of Hydrocarbons (DGH).

Strategic Advantages & Applications:

- **Round-the-Clock (RTC) Clean Baseload:** Unlike weather-dependent solar and wind, geothermal operates at very high Capacity Utilization Factors (CUF > 85%–90%), providing constant baseload without expensive battery storage.
- **Decarbonizing Fragile Border Regions:** Displaces costly, polluting diesel generators in off-grid Himalayan zones (Ladakh, Lahaul-Spiti, Tawang), ensuring winter energy security for civilian settlements and military defense outposts.
- **Direct-Use Multi-Sector Applications:** Beyond power generation, medium-to-low temperature geothermal water (30°C–90°C) is utilized for:
 - District space heating and passive building architecture.
 - Year-round greenhouse farming and aquaculture in sub-zero terrains.
 - Agro-processing, fruit dehydration, and temperature-controlled cold chains.
 - Eco-friendly balneotherapy and geo-tourism.
- **Critical Mineral Extraction:** Geothermal brines often contain dissolved high-value critical minerals—such as lithium, cesium, rubidium, and boron—which can be extracted as valuable by-products under the Mines and Minerals (Development and Regulation) Act, 1957.

Challenges in Developing Geothermal Energy:

- **High Upfront Exploration Risk:** Deep exploratory drilling carries high capital expenditure with no guarantee of locating commercially viable permeability or flow rates (resource discovery risk).
- **High-Altitude Logistical Friction:** Prime prospects like Puga Valley sit above 14,000 feet, where sub-zero temperatures, thin atmospheres, short working seasons, and narrow mountain passes restrict heavy drilling operations.
- **Corrosion & Mineral Scaling:** Geothermal fluids are laden with dissolved silica, hydrogen sulfide, and salts, causing rapid corrosion, pipe scaling, and mechanical degradation of turbine blades.
- **Environmental & Induced Seismicity Concerns:** Hydraulic stimulation in Enhanced Geothermal Systems (EGS) carries the risk of triggering micro-earthquakes, while improper fluid disposal can contaminate freshwater aquifers with toxic heavy metals.
- **Absence of Mature Indigenous Supply Chains:** India remains reliant on imported deep-well logging tools, downhole pumps, and binary organic Rankine cycle (ORC) turbomachinery adapted to low-to-medium enthalpy reservoirs.

Way Ahead:

- **Derisking Private Capital via Viability Gap Funding (VGF):** Offer sovereign-backed early-stage exploratory risk insurance and VGF grants to absorb preliminary drilling losses, following the Icelandic and US models.
- **Fast-Tracking Multilateral Knowledge Partnerships:** Deepen bilateral agreements with global geothermal leaders—specifically Iceland, Australia, and Saudi Arabia—for directional deep-drilling and EGS reservoir stimulation expertise.
- **Synergizing Hydrocarbon Data with Geothermal Mapping:** Mandate public sharing of legacy seismic, core-sample, and temperature data from ONGC and OIL to identify low-enthalpy aquifers without repeating costly surveys.
- **Standardizing District Direct-Use Infrastructure:** Formulate municipal building bye-laws encouraging Ground Source Heat Pumps (GSHP) for centralized heating and cooling across urban residential and commercial hubs.
- **Enforcing Closed-Loop Reinjection Standards:** Require strict environmental oversight ensuring 100% reinjection of extracted geothermal brine to prevent groundwater contamination, prevent surface subsidence, and preserve long-term reservoir pressure.

Conclusion:

As India works toward its Net Zero 2070 goal and targets 500 GW of non-fossil energy capacity, geothermal power provides the critical missing link: dependable, round-the-clock renewable baseload power. Integrating targeted fiscal support, advanced EGS drilling, and oil-well repurposing will ensure geothermal energy becomes a permanent, resilient pillar of India's clean energy landscape.

The National Commission for Safai Karamcharis (NCSK)

Context:

The Department of Social Justice and Empowerment appointed Shri Bhagwat Prasad Makwana as Chairperson, Shri Kaishab Bihari as Vice-Chairperson, and three Members to the National Commission for Safai Karamcharis (NCSK).

- These appointments are effective until March 31, 2028, completing the tenure of the present 10th Commission.

NCSK

About The National Commission for Safai Karamcharis (NCSK):

What it is?

- A non-statutory body under the Ministry of Social Justice and Empowerment mandated to look after the welfare, dignity, socioeconomic rehabilitation, and rights of sanitation workers (Safai Karamcharis) and manual scavengers in India.

Established in:

- Originally constituted on August 12, 1994, as a statutory body under the National Commission for Safai Karamcharis Act, 1993.
- Following the sunset/lapse of the 1993 Act on February 29, 2004, it has continued to function as a non-statutory body whose tenure is renewed periodically via Central Government executive resolutions (currently extended up to March 31, 2028).
- Composition: Consists of one Chairperson (rank and status of Union Minister of State), one Vice-Chairperson, and five Members (including at least one woman member), all holding the status of Secretary to the Government of India, supported by an administrative Secretary (Joint Secretary rank).
- Aim: To eliminate social, economic, and occupational inequalities faced by Safai Karamcharis and their dependents, abolish hazardous manual scavenging practices, ensure statutory compensation and safety gear, and facilitate their comprehensive rehabilitation.

Key Functions:

- Policy Recommendations & Scheme Evaluation: Formulates and submits actionable policy recommendations to the Centre to promote equal status, facilities, and opportunities, while evaluating the progress of socioeconomic rehabilitation schemes for manual scavengers.
- Grievance Redressal and Suo-Motu Cognizance: Investigates individual and group complaints, with powers to take suo motu notice of administrative delays, non-implementation of protective guidelines, or violations of laws affecting sanitation workers.
- Monitoring Workplace Safety and Wages: Evaluates on-ground working conditions, including health risks, minimum wage enforcement, and safety equipment standards across municipal corporations, gram panchayats, and private contractors.
- Statutory Oversight under MS Act, 2013: Performs statutory duties assigned under Section 31 of The Prohibition of Employment as Manual Scavengers and Their Rehabilitation Act, 2013, which empowers the Commission to monitor implementation, inquire into legal breaches, and advise governments.
- Enforcement of Supreme Court Directives on Compensation: Oversees the disbursement of mandatory compensation ordered by the Supreme Court, ensuring 30 lakh is released to dependents in cases of sewer deaths and 10 lakh– 20 lakh for sewer-related permanent disabilities.

Significance:

- Holds local bodies, contractors and State departments accountable for ending hazardous sewer and septic tank cleaning.



- Safeguards sanitation workers' rights, health and socioeconomic welfare through field visits and legal interventions.

e-FAST India

Context:

NITI Aayog's e-FAST India initiative launched the Platform for Aggregating Clean Transport (PACT) alongside the ZET Marketplace at the 5th e-FAST India Summit 2026.

e-FAST India

About e-FAST India:

What it is?

- e-FAST India (Electric Freight Accelerator for Sustainable Transport – India) is India's first national collaborative platform dedicated to accelerating freight electrification, particularly focusing on the medium- and heavy-duty vehicle (MHDV) segment.
- Nodal Organisation: Spearheaded by NITI Aayog.
- Aim: To decarbonize India's road freight transport, bridge market barriers for zero-emission trucks (ZETs), and transition freight logistics from isolated pilot projects to commercially viable, large-scale deployment to support India's Net-Zero 2070 targets.

Key Features:

- Demand Aggregation via PACT: Consolidates freight demand from major cargo shippers, e-commerce giants, and logistics service providers (LSPs) to provide clear demand visibility and justify fleet investments along designated freight corridors.
- B2B ZET Marketplace: Operates an interactive business ecosystem connecting truck manufacturers (OEMs), fleet operators, charge point operators (CPOs), and clean-tech startups to turn commercial intent into contracts.
- Corridor-Based Charging Infrastructure: Guides the strategic placement and investment in high-capacity, heavy-duty fast-charging hubs along high-density national highways.
- Innovative Financing & De-Risking: Explores alternative financing structures—such as green credit lines, risk-sharing facilities, leasing arrangements, and battery health monitoring—to overcome high upfront vehicle acquisition costs.
- Policy & Regulatory Harmonization: Coordinates with government ministries to formulate technical standards, battery governance frameworks, and fiscal incentive structures that support domestic EV manufacturing.

Significance:

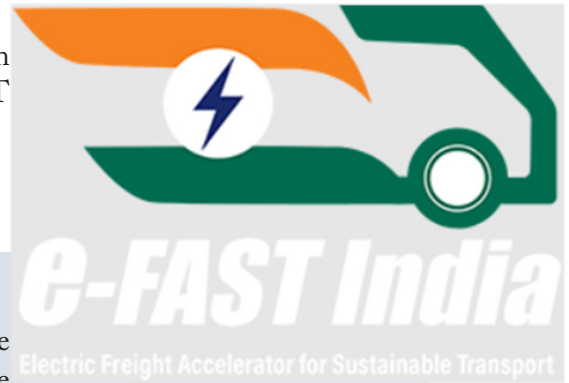
- Cuts Transport Emissions: Targets heavy-duty trucks, which contribute disproportionately to GHG emissions and particulate pollution.
- Improves Logistics Efficiency: Reduces long-term TCO, improving supply-chain efficiency and lowering logistics costs.

ASUSE 2025: Mapping India's Unincorporated Economy at the District Level

Context:

The National Statistics Office (NSO), operating under the Ministry of Statistics and Programme Implementation (MoSPI), released India's first-ever comprehensive district-level estimates for the unincorporated non-agricultural sector.

- Drawing from the Annual Survey of Unincorporated Sector Enterprises (ASUSE) 2025, the report establishes a granular statistical portrait across 757 districts to support decentralized, evidence-based economic planning.



Mapping India's Unincorporated Economy at the District Level

About ASUSE 2025: Mapping India's Unincorporated Economy at the District Level

What It Is?

- The unincorporated non-agricultural enterprise landscape covers informal and small-scale business units operating outside corporate frameworks across three core sectors: Manufacturing, Trade, and Other Services.
- Ownership types encompass proprietorships, partnerships (excluding LLPs), cooperatives, and trusts/societies. Because these informal units employ a major portion of India's non-farm labor force, granular district-level metrics—measuring enterprise concentration, Gross Value Added (GVA), emoluments, and labor productivity—are critical to identifying sub-state regional disparities.

Key Macro Highlights & Sectoral Data:

High Geographical Concentration:

- The top 10 districts (concentrated across Gujarat, Telangana, Uttar Pradesh, and West Bengal) generate roughly one-tenth (10%) of all establishments, workers, and GVA.
- The top 50 districts (distributed across 12 states) drive nearly one-third (~33%) of the entire sector's total establishments, aggregate workforce, and Gross Value Added.

Scale Distribution Across Districts:

- Roughly one-third of all districts host over 1,00,000 unincorporated establishments each.
- Around 9% of districts have fewer than 10,000 units.
- Only 16 mega-districts host more than 5,00,000 units each (8 in West Bengal, 3 in Maharashtra, 2 in Gujarat, and 1 each in Karnataka, Telangana, and Uttar Pradesh).

Productivity & GVA Benchmarks:

- In 280 districts, economic productivity exceeds the national benchmark, recording a GVA per worker higher than the all-India average of 1,56,539.
- In 331 districts, labor productivity remains clustered in the range of 1,00,000 to 1,50,000 GVA per worker.

Female Entrepreneurship & Workforce Share:

- In 237 districts, women comprise at least one-third (33.3%) of the unincorporated workforce.
- In 25 districts, female workers represent more than 50% of the labor force.
- In Mizoram, female-owned proprietary units account for at least 50% of all establishments across every single district.
- Districts in Telangana, Manipur, Meghalaya, and Mizoram lead nationally in both female-headed ownership and female labor participation.

Top Contributing Districts Across Major States (By Share of State Establishments):

- West Bengal: North 24 Parganas accounts for 15.99% of the state's total units.
- Telangana: Rangareddy contributes 23.53% of all state establishments.
- Gujarat: Surat leads with a 19.43% share within the state.
- Punjab: Ludhiana represents 14.74% of state units.
- Karnataka: Bengaluru (Urban) commands 12.83% of the state total.
- Kerala: Thiruvananthapuram leads the state at 12.38%.
- Rajasthan: Jaipur accounts for 11.70% of units.
- Maharashtra: Pune contributes 9.14% of the state establishment base.
- Bihar: Patna captures 8.23% within the state.
- Tamil Nadu: Chennai represents 7.13% of state units.
- Uttar Pradesh: Prayagraj leads the state at 5.77%.

Survey Scope, Methodology & Data Exclusions:

- Sampling Design: ASUSE 2025 deployed a multi-stage stratified sampling scheme. First Stage Units

(FSUs) were census villages in rural zones (panchayat wards in rural Kerala) and Urban Frame Survey (UFS) blocks in towns. Ultimate Stage Units (USUs) were individual enterprises.

- Coverage Scope: Covers 757 out of the 770 sampled districts across all States and UTs. Data was collected through monthly oral enquiry recall via Computer Assisted Personal Interviewing (CAPI) on handheld tablets.

Exclusions & Methodological Caveats:

- Delhi: Because of a minimal rural population, urban and rural areas were each collapsed into a single sampling stratum; therefore, separate district-level breakdowns could not be generated.
- Chandigarh & Lakshadweep: Each consists of only one district; thus, district figures coincide directly with their respective published UT-level reports.
- Relative Standard Error (RSE): NSO cautions users that in certain smaller districts, higher sampling variability and RSEs require careful statistical consideration when interpreting trends.

Policy Significance:

- Targeting Sub-State Economic Disparities: Moves national economic planning beyond broad state aggregates, allowing district collectors and state planners to identify local industrial clusters and underperforming pockets.
- Calibrating Credit Delivery: Enables public sector banks and SIDBI to target micro-credit schemes (such as PM MUDRA Yojana and PM SVANidhi) toward low-productivity districts where GVA per worker falls below 1 lakh.
- Strengthening Formalization Interventions: Assisting state governments in transitioning informal proprietary units onto the Udyam Assist Platform (UAP) to access formal banking channels, priority sector lending, and public social security benefits.
- Fostering Women-Led Micro-Enterprises: Provides spatial evidence to expand targeted initiatives—such as Stand-Up India and the PM Vishwakarma scheme—into districts with low female business ownership while leveraging the successful female-led models observed in the Northeast and Telangana.

Conclusion:

By demonstrating that nearly one-third of all unincorporated non-agricultural output and employment is concentrated within just 50 industrial and urban hubs, the findings underscore the need to decentralize infrastructure and credit access. Combining localized credit delivery, skill development, and formalization pathways will be essential to raising labor productivity across India's informal heartland.

The Call to Action for 6G Leadership and Security

Context:

India officially endorsed the 'Call to Action for 6G Leadership and Security', joining a United States-led coalition of 26 like-minded governments to shape next-generation telecommunications networks.

The Call to Action for 6G

About The Call to Action for 6G Leadership and Security:

What it is?

- A multilateral, government-to-government policy and security initiative dedicated to coordinating the development, deployment, and governance of secure, open, interoperable, and resilient 6G wireless communication networks.

Origin:

- Spearheaded by the United States through the National Telecommunications and Information Administration (NTIA) under the US Department of Commerce, formally released in July 2026 under the US G20 Presidency.
- In India, the Department of Telecommunications (DoT) leads domestic and international engagement.
- Participating Members (26 Governments): Includes India, the United States, the United Kingdom, Japan,



the Republic of Korea, Germany, France, Canada, Australia, Sweden, Norway, Denmark, Czechia, Estonia, Greece, Italy, Latvia, Lithuania, Romania, Costa Rica, Honduras, Paraguay, and others.

- Aim: To establish early democratic governance over the 6G architectural stack, secure trusted telecom supply chains, mitigate emerging cyber and national security risks, and prevent authoritarian monopolization over next-generation global connectivity standards.

Key Features:

- Graduated 12-Month Action Roadmap: Sets milestones for expert contacts, industry and R&D mapping, resilient supply-chain strategies, and an intergovernmental review in 2027.
- Guiding Network Principles: Commits signatories to build 6G systems that are open, interoperable, secure, resilient, AI-supported, and resource/energy-efficient.
- Trusted Supply Chains & Threat Mitigation: Mandates joint assessment of strategic cybersecurity vulnerabilities in telecom investments, promotion of Open RAN architectures, and greater transparency in global hardware/software components.
- Coordination in Global Standards Bodies: Encourages aligned technical proposals across standard-setting organizations to embed rigorous security baselines directly into 6G protocol definitions.
- Preservation of National Strategic Autonomy: Explicitly avoids replacing existing industry-led bodies and clarifies that membership does not compromise any nation's independent positioning, domestic policy choices, or spectrum allocation autonomy.

The Consumer Protection (E-Commerce) (Amendment) Rules, 2026

Context:

The Department of Consumer Affairs notified the Consumer Protection (E-Commerce) (Amendment) Rules, 2026, tightening norms on dark patterns, search manipulation, price transparency and grievance redressal from January 1, 2027.

The Consumer Protection (E-Commerce) (Amendment) Rules

About The Consumer Protection (E-Commerce) (Amendment) Rules, 2026:

What it is?

- A regulatory update notified under the statutory framework of the Consumer Protection Act, 2019, amending the primary Consumer Protection (E-Commerce) Rules, 2020 to govern both marketplace and inventory-based digital commerce entities operating in India.
- Aim: To address emerging deceptive practices in the digital economy, enhance marketplace transparency and algorithmic accountability, institutionalize robust grievance redressal, and balance consumer welfare with Ease of Doing Business (EoDB).

Key Features:

- Mandatory Convergence with National Consumer Helpline (NCH): Requires all e-commerce entities to become partners in the NCH convergence framework, integrating grievance redressal directly with the national consumer support mechanism.
- Transparent Grievance Documentation: Mandates that e-commerce entities must furnish complainants with a verbatim copy of their complaint as recorded by the Grievance Officer.
- Prohibition of Search Manipulation & Clear Sponsored Ads: Bars platforms from manipulating internal search result algorithms to mislead consumers or distort relevance. Paid or sponsored listings must be accompanied by prominent visual disclosures.
- Curbing Deceptive Price Drops (Prior Price Display): Mandates that whenever a discount or price reduction is advertised, the platform must display both the reduced price and the prior price—defined explicitly as the lowest price offered during the 30 days preceding the promotion.



- **Dark Patterns Compliance & Annual Self-Audits:** Enforces mandatory compliance with the Guidelines for Prevention and Regulation of Dark Patterns, 2023, requiring platforms to undergo an annual self-audit and prominently display a compliance certificate on their user interface.
- **Comprehensive Seller & Product Disclosures:** Requires marketplace platforms to clearly display crucial product lifecycle information, including best-before/use-before dates, detailed return/refund terms, warranty coverage, delivery expectations, and payment specifics.
- **Stringent Consumer Data Protection:** Prohibits platforms from processing or utilizing consumers' personal and behavioral data for specified purposes without explicit, affirmative consent.
- **Ban on Arbitrary Bundled Fees:** Restricts platforms from auto-adding or levying bundled fees for ancillary services unrelated to the primary platform transaction.
- **Traceability for Imported Goods:** Enforces full country-of-origin disclosure along with designated domestic importer details for all foreign-sourced products.

Significance:

- **Fair Digital Markets:** Curbs misleading pricing, hidden charges and algorithmic bias, ensuring genuine price discovery and fair competition.
- **Consumer Trust:** Improves transparency in e-commerce and quick-commerce, aligning platform accountability with consumer rights.

The 18th BRICS Summit

Context:

India is set to host the 18th BRICS Summit in New Delhi on September 12–13, 2026, marking its fourth Chairship of the grouping since its inception.



The 18th BRICS Summit:

About The 18th BRICS Summit:

What it is?

- The annual apex summit of heads of state and government of BRICS—a major intergovernmental and geopolitical alliance of leading emerging market economies dedicated to restructuring multilateralism, fostering economic integration, and coordinating political and security strategies.
- **Host & Venue:** Hosted by India in New Delhi.
- **Theme:** “Building for Resilience, Innovation, Cooperation and Sustainability.”

Logo:

- **Lotus Symbol:** Represents purity, resilience and progress.
- **Colourful Petals:** Reflect the colours of all BRICS members, symbolising collective strength and unity.
- **Namaste Gesture:** Represents India's spirit of warmth, respect and harmonious cooperation.

Full & Partner Membership:

- **11 Full Members:** Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Iran, Saudi Arabia, the UAE (joined 2024), and Indonesia (joined January 2025).
- **Partner Countries (10):** Belarus, Bolivia, Cuba, Kazakhstan, Malaysia, Nigeria, Thailand, Uganda, Uzbekistan, and Vietnam.

History of BRICS:

- Origin of Concept (2001): The acronym “BRIC” was coined by Goldman Sachs economist Jim O’Neill in the paper “The World Needs Better Economic BRICs,” projecting Brazil, Russia, India, and China to be among the world’s most dominant economic engines over the next half-century.
- Formal Institutionalisation (2006–2009): The grouping coalesced politically on the sidelines of the UN General Assembly in 2006. In the wake of the 2008 global financial crisis, the first formal BRIC Summit was held in Yekaterinburg, Russia, in 2009 to demand a more representative international financial order.

Expansion Phases:

- 2010–2011: South Africa was admitted as a full member, transforming the acronym into BRICS.
- 2024–2025: Major expansion waves integrated key West Asian, North African, and Southeast Asian powerhouses (Egypt, Ethiopia, Iran, Saudi Arabia, UAE, and Indonesia), transitioning BRICS into a cross-continental geopolitical heavyweight.

India and the BRICS Chairship:

India holds the rotating annual Chairship for a fourth time in 2026, having earlier chaired summits in 2012, 2016, and 2021:

- 2012 (New Delhi – 4th Summit): Laid the foundation for establishing the New Development Bank (NDB) and the Contingent Reserve Arrangement (CRA), alongside the Master Agreement on Extending Credit Facility in Local Currencies.
- 2016 (Goa – 8th Summit): Solidified the rollout of the NDB’s first green loans, instituted the BRICS Agriculture Research Platform, and convened the landmark BRICS–BIMSTEC Outreach Summit.
- 2021 (Virtual – 13th Summit): Adopted the unified BRICS Counter-Terrorism Action Plan, launched the BRICS Vaccine R&D Centre, and operationalized the BRICS Remote Sensing Satellite Constellation Agreement.
- 2026 (New Delhi – 18th Summit): Culminates over 350 meetings across 25 cities, establishing key deliverables such as the BRICS Startup Innovation Fund, BRICS MSME Cooperation Portal, Agro-Ecology Centres of Excellence, BRICS CONNECT for Skilling, and the GVC Action Plan 2026–2030.

Key Functions of BRICS:

- Reforming Global Economic & Financial Architecture: Advocates for comprehensive quota and governance reforms in the IMF, World Bank, and WTO to ensure emerging economies have decision-making power proportional to their current economic weight.
- Mobilising Alternative Development Finance: Operates the New Development Bank (NDB) and the Contingent Reserve Arrangement (CRA) to finance sustainable infrastructure and provide short-term balance-of-payments liquidity without western conditionalities.
- De-Dollarisation & Local Currency Settlements: Facilitates intra-bloc trade settlements in domestic currencies and promotes interoperable cross-border payment platforms to reduce vulnerability to external currency shocks and unilateral sanctions.
- Multilateral Security & Counter-Terrorism Coordination: Aligns positions on international peace, cybersecurity, transnational crime, and counter-terrorism financing under the BRICS Counter-Terrorism Action Plan and FATF standards.
- Advancing Practical South-South Cooperation: Promotes practical integration across agriculture, food security, satellite data sharing, traditional medicine, climate adaptation technologies, and SME digital ecosystems.

BRICS 2026 Selected Meetings & Host Cities:

Meeting / Event	Host City
1. 1st Finance Ministers & Central Bank Governors’ Meeting	Jaipur, Rajasthan Second ministerial meeting wrapped up in Mumbai.
2. 12th Environment Ministers’ Meeting	New Delhi, Delhi NCR
3. 14th Science, Technology & Innovation Ministerial Meeting	Chennai, Tamil Nadu
4. 12th Communications Ministers’ Meeting	Pune, Maharashtra
5. Tourism Ministers’ Meeting	Jaipur, Rajasthan
6. BRICS Youth Ministers’ Meeting	Visakhapatnam, Andhra Pradesh

Chapter- 10

DEFENCE

Exercise Super Garuda Shield

Context:

The United States and Indonesia kicked off their annual joint military drills, Super Garuda Shield, spanning until September 11 across multiple Indonesian regions.

Exercise Super Garuda Shield

About Exercise Super Garuda Shield:

What It Is?

- Super Garuda Shield is a flagship annual multilateral joint military exercise hosted by the Indonesian National Armed Forces (TNI) and co-led by the United States Indo-Pacific Command (USINDOPACOM).
- Originally established in 2006 as a bilateral army exchange (Garuda Shield), it expanded significantly into a combined, joint-service, multilateral war-game covering land, air, maritime, and cyber domains.
- Nations Involved: Indonesia and the United States.
- Participating & Observer Nations: 13 additional international partners, including Japan, South Korea, Australia, Canada, the United Kingdom, France, Singapore, and others across the Indo-Pacific and NATO partner networks.
- Aim: To strengthen combined interoperability, tactical readiness, and multilateral cooperation among partner militaries, enhancing collective capabilities in regional deterrence, crisis response, territorial defense, and Humanitarian Assistance and Disaster Relief (HADR).



Key Features of the Exercise:

- Multi-Domain Combat Operations: Encompasses complex maneuvers spanning tactical airborne drop jumps, live-fire missile drills, amphibious beach assaults, and coordinated cyber defense scenarios.
- Specialized Jungle & Infiltration Warfare: Leverages Indonesia's varied terrain to conduct joint special operations infiltration, tactical reconnaissance, and close-quarters combat inside dense tropical jungle environments.
- HADR and Disaster Preparedness Protocols: Integrates simulated large-scale Humanitarian Assistance and Disaster Relief (HADR) operations to enhance rapid-response capabilities for archipelagic crisis zones prone to severe earthquakes, tsunamis, volcanic eruptions, and seasonal wildfires.
- Multilateral Joint-Force Interoperability: Enhances command-and-control synchronization, communications integration, and logistics coordination between Western allied systems and Southeast Asian defense architectures.

Significance

- US-Indonesia Defence Partnership: Strengthens Indonesia's military modernisation through US training, doctrines and tactical expertise.
- Strategic Autonomy: Reflects Indonesia's non-aligned approach, balancing defence cooperation with the US alongside ties with China.
- Maritime Security: Enhances security of critical SLOCs, including the Malacca, Sunda and Lombok Straits, vital for global trade.

The RAKSHA Document

Context:

Defence Minister released 'RAKSHA', a landmark strategic document outlining India's 10-year defence diplomacy roadmap and vision for global partnerships during a special event at Kartavya Bhawan.

The RAKSHA Document

About The RAKSHA Document:

What It Is?

- 'RAKSHA' is a strategic 10-year defence diplomacy vision document formulated by the Ministry of Defence. It serves as an institutional blueprint defining how India will leverage its military engagements, multilateral security frameworks, domestic defence-industrial ecosystem, and maritime presence to foster global stability, protect vital national security interests, and advance a rules-based international order over the next decade.
- Nodal Organisation: Ministry of Defence (MoD), Government of India, in coordination with the Ministry of External Affairs and the National Security Council Secretariat.
- Aim: To systematically align national security priorities with proactive foreign policy, transforming defence diplomacy into a tool for mutual economic growth, strategic autonomy, and a rules-based international order.



Key Features:

- Strategic Partnerships: Deepens formal bilateral defence frameworks, expands intelligence sharing, and strengthens multilateral security architectures with friendly foreign nations.
- Capacity Building: Enhances international interoperability through expanded joint military exercises, institutional training exchanges, and technical knowledge transfer.
- Indigenous Defence Exports: Promotes homegrown military hardware built under the Make in India initiative to position the country as a reliable global defence manufacturing and supply hub.
- Maritime Security Leadership: Consolidates India's operational footprint across the Indian Ocean Region (IOR), reinforcing its role as a primary Net Security Provider and First Responder in humanitarian or security crises.
- Integrated Foreign Policy Approach: Merges military engagement directly with diplomatic missions, utilizing defence attaches, Lines of Credit (LoC) for military hardware, and joint industrial ventures to support geopolitical goals.

Significance:

- Formulates a long-term, actionable policy doctrine for the military establishment, shifting India from ad-hoc security agreements to sustained, structured international cooperation.
- Directs global diplomatic channels to open export markets for indigenous platforms, supporting domestic aerospace and defence ecosystems.

The El Alamein International Airshow

Context:

The Indian Air Force's (IAF) Sarang Helicopter Display Team reached Egypt to participate in the second edition of the El Alamein International Airshow.

El Alamein International Airshow

About The El Alamein International Airshow:

What it is?

- A premier international aerospace, defence, and commercial aviation exhibition serving Africa and the Middle East, showcasing static and flying aircraft displays alongside high-level industry conferences.



- Host: Egypt.
- Aim: To accelerate regional industrialization, digitalization, and defense-space partnerships, positioning Egypt as a strategic aviation crossroads between Africa, the Middle East, and Europe.

Key Features:

- Static and Aerobatic Flight Displays: Features over 50 military, commercial, and private aircraft conducting live precision aerobatics, formation flying, and up-close static tarmac exhibitions.
- Cross-Sector Coverage: Unites diverse domains under one roof—encompassing commercial aviation, defence platforms, satellite and space exploration, avionics, and next-generation advanced air mobility.
- High-Level Aerospace Conference: Hosts dedicated symposia and roundtables for defense chiefs, procurement leaders, and aviation policymakers to exchange market intelligence and technical breakthroughs.
- Structured B2B & G2B Delegations: Facilitates targeted bilateral and commercial engagements connecting original equipment manufacturers (OEMs) with procurement heads and regional operators.

Significance:

- Regional Defence Gateway: Connects African and Middle Eastern nations with aerospace suppliers and defence partnerships.
- Indigenous Defence Showcase: Offers countries like India a global platform to promote indigenous systems such as ALH Dhruv.

Exercise Veer Guardian-2026

Context:

The Indian Air Force (IAF) and the Japan Air Self Defence Force (JASDF) have commenced the 14-day bilateral air combat exercise 'Veer Guardian-2026' at Air Force Station Jodhpur.

Exercise Veer Guardian-2026

About Exercise Veer Guardian-2026:

What it is?

- A high-tempo bilateral fighter-combat exercise conducted between the air forces of India and Japan to develop tactical air-combat interoperability, fine-tune joint aerial operational concepts, and enhance mutual defense cooperation.
- Host & Venue: Hosted by the Indian Air Force at Air Force Station Jodhpur, Rajasthan.
- Nations Involved: India (Indian Air Force) and Japan (Japan Air Self Defence Force).
- Aim: To enhance India-Japan air force interoperability through joint combat training, mission planning and aerospace safety cooperation.

Key Features:

- First-Ever Japanese Fighter Deployment to India: Marks the first time JASDF fighter aircraft have touched down and operated from an Indian air base for bilateral combat drills.
- Diverse Frontline Fleet Integration: Deploys a multi-type fleet from the IAF—comprising indigenous Light Combat Aircraft (LCA) Tejas, multirole Su-30MKI, and Dassault Rafale jets—training directly alongside Japan's F-2A multirole fighters.
- Tactical Exposure to F-16 Kinship: Because Japan's F-2A shares its core airframe lineage with the American F-16 Falcon, the drills afford the IAF critical tactical experience countering and integrating with an F-16-derivative platform.
- Comprehensive Ground & Aerospace Interactions: Integrates advanced air combat simulations with engineering roundtables, joint debriefs, subject matter expert exchanges (SMEEs), and aerospace maintenance protocols.



Significance:

- Strengthens Quad Security: India-Japan air exercises improve defence interoperability and deterrence in the Indo-Pacific.
- Expands Japan's Operational Reach: Gives the JASDF experience in long-distance deployments and diverse flying conditions alongside Indian aircraft.

India's Advanced Ocean Research Vessel ORV Sagar Manthan**Context:**

Union Minister launched India's state-of-the-art Ocean Research Vessel 'ORV Sagar Manthan' (Yard 3041) at the Rishi Bankim Shipyard in Kolkata.

Advanced Ocean Research Vessel ORV Sagar Manthan**About India's Advanced Ocean Research Vessel ORV Sagar Manthan:****What it is?**

- An all-weather, multidisciplinary, deep-sea research vessel engineered to operate in extreme oceanic environments, including the Southern Ocean. It has a projected service life of 30 years and is built under Vertical-4 (Deep Ocean Survey and Exploration) of the flagship Deep Ocean Mission (DOM) at an estimated cost of 840 crore.
- Built By: Garden Reach Shipbuilders & Engineers Limited (GRSE), Kolkata.
- Aim: To promote Atmanirbharta in ocean science, explore deep-sea minerals, improve climate and tsunami forecasting, and strengthen India's global ocean presence.

Key Features:

- Comprehensive Sensor Suite: Integrated with dynamic positioning systems, underway swath multibeam bathymetry, multichannel seismic reflection systems, sub-bottom profilers, and meteorological weather radar.
- Submersible Launch & Recovery Support: Equipped with specialized deck handling gear and drop keels to deploy deep-rated Remotely Operated Vehicles (ROVs), Autonomous Underwater Vehicles (AUVs), and deep-sea benthic corers.
- Deep-Sea Mineral Exploration: Optimized to survey Indian Ocean mid-ocean ridges to detect and map seabed polymetallic hydrothermal sulphide mineralization and cobalt-rich ferromanganese crusts.
- Atmospheric & Water-Column Profiling: Outfitted with specialized laboratories to collect upper-air atmospheric soundings, continuous baseline water-column sampling, and conductivity, temperature, and depth (CTD) observations.
- Dual-Class Certification: Built to rigorous international maritime standards with dual-class classification by the Indian Register of Shipping (IRS) and the American Bureau of Shipping (ABS).

Significance:

- Shifts India from importing scientific vessels to designing and building advanced research ships domestically.
- Strengthens exploration of India's EEZ and seabed areas while supporting climate, monsoon and disaster research.

Exercise Yudh Abhyas 2026**Context:**

The 22nd edition of the India-US joint military exercise Yudh Abhyas 2026 commenced with an opening ceremony at the Auli Foreign Training Node in Uttarakhand.





Exercise Yudh Abhyas 2026

About Exercise Yudh Abhyas 2026:

What it is?

- The premier annual bilateral army-to-army training exercise conducted between the Indian Army and the United States Army. Alternating between both countries since its institutional inception in 2004, it is designed to enhance tactical cooperation, exchange best combat doctrines, and foster combined operational interoperability.
- Host: Hosted by India, operating concurrently across two distinct geographical sectors:
- Auli Foreign Training Node (Uttarakhand): For high-altitude, cold-weather, and mountain warfare drills.
- Mahajan Field Firing Range (Rajasthan): For semi-desert mechanized maneuvers, live firing, and advanced weapons validation.
- Participating Nations: India and the United States.

Key Features:

- Simultaneous Dual-Terrain Execution: In a first for the series, drills are deployed simultaneously across the high-altitude Himalayan ecology of Auli and the arid desert conditions of Mahajan to test tactical adaptability.
- Employment of Integrated Battle Groups (IBGs): Focuses heavily on infantry-dominated operations and the tactical employment of agile, composite Integrated Battle Groups in mountainous and semi-mountainous terrain.
- Technology Infusion & Unmanned Systems: Extensive focus on operationalizing drones, autonomous reconnaissance platforms, counter-unmanned aircraft systems (C-UAS), and multi-domain warfare networks.
- Live-Fire & Heavy Weaponry Demonstrations: Field drills at Mahajan incorporate modern firepower assets, live-firing exercises, and tactical integration of contemporary weapon systems.

Significance:

- Serves as a vital operational pillar supporting the US–India Major Defence Partnership, reinforcing strategic alignment and mutual trust for a free, open, and rules-based Indo-Pacific.
- Enhances joint planning, command-post synchronization, and combat readiness between conventional forces across complex operational environments, from electronic and cyber warfare to asymmetric mountain combat.

Exercise KAZIND-2026

Context:

A 60-member Indian Armed Forces contingent has departed for Oskemen, Kazakhstan, to participate in the 9th edition of Exercise KAZIND.

Exercise KAZIND-2026

About Exercise KAZIND-2026:



What it is?

- The 9th edition of the India–Kazakhstan Joint Military Exercise, designed to strengthen interoperability and joint counter-terrorism capabilities between the armed forces of the two countries.
- Host: Kazakhstan — Oskemen.
- Participants: India and Kazakhstan.
- Aim: To enhance interoperability and joint capability for counter-terrorism operations in a sub-conventional environment under a United Nations mandate.

Key Features:

- Counter-Terrorism Training: Joint operations in semi-urban and mountainous terrain, including raids, search-and-destroy and cordon-and-search missions.
- Air Mobility Operations: Training includes securing helipads and landing sites and conducting Special Heliborne Operations.
- Advanced Technology Integration: Focuses on integrated deployment of Unmanned Aerial Systems (UAS) and Counter-UAS capabilities during operations.
- Joint Command Structure: Establishes a Joint Command Post and Intelligence & Surveillance Centre, culminating in a validation exercise against a simulated terrorist threat.

Significance:

- Military Interoperability: Enables both forces to exchange operational experience and improve coordination in complex counter-terrorism environments.
- India–Kazakhstan Defence Cooperation: Deepens military-to-military relations, professional bonds, mutual trust and understanding between the two countries.

