KERALA STATE CIVIL SERVICE ACADEMY

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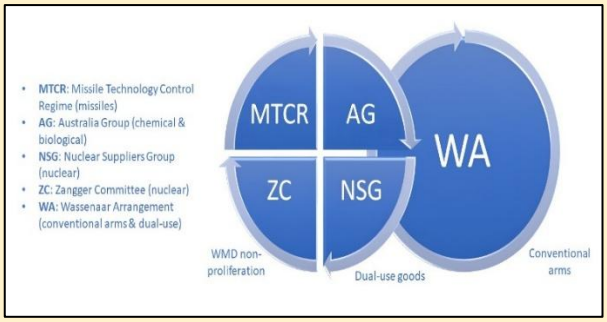
WASSENAAR ARRANGEMENT (WA)

Wassenaar Arrangement in governing modern digital technologies and argues for reforming export control regimes to address challenges posed by cloud services, AI, and surveillance tools.

- Modern Internet dependence: Cloud infrastructure, dominated by few companies like Microsoft, is crucial for states but can also aid repression (e.g., in Palestine).
- Export control regimes: Agreements like the Wassenaar Arrangement aim to regulate export of sensitive goods and dual-use technologies to prevent misuse.
- Limitations of current framework:
  - Focused mainly on physical exports (devices, chips, hardware).
  - Struggles to regulate cloud services, APIs, and remotely accessed technologies.
  - Leaves loopholes for "intrusion software" and surveillance misuse.
- India's role: Joined in 2017, regularly updates control lists but faces challenges in ensuring compliance.
- Reform needs:
  - Expand definitions to cover remote access, cloud exports, and digital surveillance.
  - Introduce binding global treaties with clearer licensing and oversight.
  - Create domain-specific controls for AI and high-risk digital tools.
- Global implications:
  - Divergent national licensing can create loopholes.
  - Stronger coordination needed to prevent misuse across borders.
- Possible measures:
  - Tighter export scrutiny for cloud services.
  - Binding international commitments.
  - Technical expert committees to guide regulation.
- Conclusion: Existing arrangements are outdated; comprehensive reforms are essential to regulate 21st-century technologies without stifling innovation.



Wassenaar Arrangement (WA)

- Nature: A multilateral export control regime for conventional arms and dual-use goods and technologies.
- Established: 1996, in Wassenaar, Netherlands.
- Objective:
  - To promote transparency and responsibility in transfers of arms and sensitive technologies.
  - To prevent destabilising accumulations of weapons and technologies that could aid in proliferation or repression.
- Membership: 42 participating states (as of 2025), including India, the U.S., most EU states, Japan, etc.
- India's membership: Joined in December 2017.
- Mechanism:
  - States exchange information on transfers/denials of items listed in WA control lists.
  - It is non-binding; decisions on licensing remain at the discretion of each state.
- Scope:
  - Covers conventional arms.
  - Covers dual-use goods and technologies (civilian use but potential military/security application).
  - In 2013, scope expanded to include "intrusion software" and surveillance technologies.

- Challenges:
  - Primarily designed for physical goods, struggles to regulate cloud services, AI, and remote-access technologies.
  - Implementation uneven across members; often influenced by political and commercial interests.

Present Issues

- The Arrangement was made when only physical items like devices, chips, and hardware were controlled. Software was not taken seriously.
- Many activities in cloud computing are unclear under the rules:
  - Using or managing software remotely may not count as an "export."
  - Different countries understand technology transfer in different ways.
- In Software-as-a-Service, users access software over the internet without installing it. The rules cannot clearly say if this is an export.
- Any country in the Arrangement can block changes, making updates slow.
- Each country follows its own export rules, which may be weak or inconsistent.
- Loopholes exist for safe research or transferring technology within a country.

India and the Wassenaar Arrangement

- India became a **Wassenaar Arrangement** participant in 2017.
- Incorporated **Wassenaar Arrangement** control lists into its SCOMET (Special Chemicals, Organisms, Materials, Equipment, and Technologies) framework.
- Engagement has largely been about gaining legitimacy in global export-control regimes, rather than driving reforms for the digital era.

Reforms Needed

Expand Scope:

- Include technologies and services that enable large-scale surveillance, profiling, discrimination, or cross-border control.
- Example: Regional biometric systems or policing-related data transfers.
- Clearly define capacity limits and allow safe, defensive uses under strict rules.

Redefine 'Export':

- Treat remote access, administration, or API calls in cloud systems as exports.
- Include end-use controls considering the user, country, legal mandate, and risk of misuse.
- Focus not just on military risks but also human rights risks from digital surveillance.

Make it Binding:

- Move from voluntary participation to a binding treaty with Minimum licensing standards, Export bans in high-risk regions and Peer-review supervision.

Global Coordination:

- Share information and align policies across countries.
- Maintain shared watchlists and real-time alerts for flagged users or entities.
- Include technical standards for cross-border interoperability.

Agility for Fast-Moving Technology:

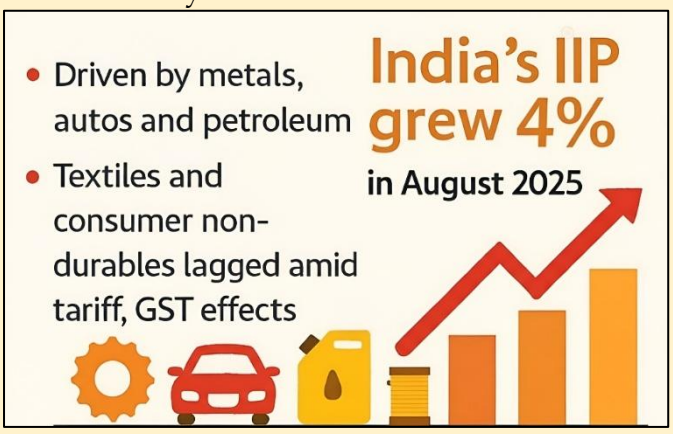
- Set up a technical committee or secretariat for quick updates and expert inputs.
- Introduce a sunset mechanism so technologies leave the control list unless renewed.
- Consider domain-specific regimes for AI, cyber weapons, and digital surveillance that can evolve faster than the main framework.

The Wassenaar Arrangement remains important for global export control but faces gaps in regulating cloud services, SaaS, AI, and digital surveillance technologies. Reforms are needed to expand scope, redefine export, enforce binding obligations, coordinate globally, and remain agile.

INDEX OF INDUSTRIAL PRODUCTION (IIP)

India's Index of Industrial Production (IIP) grew by 4.0% in August 2025, showing broad-based recovery in industrial activity.

- IIP growth accelerated from 3.5% in July 2025 to 4.0% in August.
- Mining output rose sharply by 6.0%, rebounding from contraction.
- Manufacturing grew 3.8%, led by basic metals (12.2%), motor vehicles (9.8%), and petroleum products (5.4%).
- Electricity generation increased by 4.1%.
- Use-based growth:
  - Infrastructure/Construction Goods: +10.6% (highest).
  - Primary Goods: +5.2%, Intermediate Goods: +5.0%, Capital Goods: +4.4%.
  - Consumer Durables: +3.5%; Consumer Non-durables: –6.3% (weak demand).
- Growth driven by post-monsoon mining recovery, strong demand in metals, vehicles, and construction activity.



Index of Industrial Production (IIP)

- Definition:
  - The IIP measures the volume of production of a basket of industrial products in the economy.
  - It serves as a short-term indicator of industrial growth.
- Base Year:
  - Current base year: 2011–12 (revised periodically to reflect structural changes).
- Released by:
  - National Statistical Office (NSO), Ministry of Statistics and Programme Implementation (MoSPI).
  - Released monthly with a time lag of about six weeks.
- Coverage:
  - Divided into 3 major sectors:
    1. Mining (14.4% weight)
    2. Manufacturing (77.6% weight – largest share)
    3. Electricity (8.0% weight)
  - Further classified into Use-based categories: Primary Goods, Capital Goods, Intermediate Goods, Infrastructure/Construction Goods, Consumer Durables, and Consumer Non-durables.
- Significance:
  - Acts as a proxy for industrial activity and short-term economic performance.
  - Influences monetary policy (RBI monitors it for inflation and growth signals).
  - Used by businesses, analysts, and policymakers for planning and forecasting.
- Limitations:
  - Provisional data, often revised later.
  - Limited coverage compared to GDP or GVA.
  - Heavily manufacturing-driven, may not fully capture services-led growth in India's economy.

Core Industries

- Definition:
  - The Core Industries are the eight key industries of India that form the backbone of the economy and have a high impact on overall industrial growth.

- They have a combined weight of 40.27% in the Index of Industrial Production (IIP).

- The Eight Core Industries (with weights in IIP):

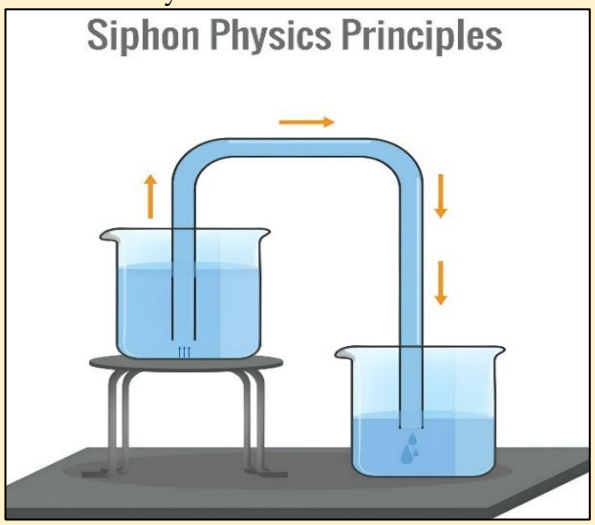
1. Coal – 10.33%
2. Crude Oil – 8.98%
3. Natural Gas – 6.88%
4. Refinery Products – 28.04% (highest weight)
5. Fertilizers – 2.63%
6. Steel – 17.92%
7. Cement – 5.37%
8. Electricity – 19.85%

- Released by:
  1. Office of Economic Adviser (OEA), Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.
  2. Released monthly, usually at the end of the following month.
- Significance:
  1. Acts as a lead indicator of industrial performance and overall GDP trends.
  2. Closely tracked by policymakers, RBI, and businesses to gauge economic health.
  3. Growth or slowdown in these industries directly affects related sectors (e.g., steel impacts construction, coal impacts power generation).

SIPHON PRINCIPLE

IISc has developed a siphon-powered desalination technology that converts saltwater into clean drinking water more efficiently than conventional solar stills.

- Uses a fabric wick with a grooved metal surface to create a siphon, moving salty water onto a heated surface.
- Continuous flushing prevents salt crystallization, avoiding blockages common in older designs.
- Water evaporates as a thin film and condenses just 2 mm away, enhancing efficiency.
- Modular design allows stacking multiple units, recycling heat for higher output.
- Produces over six liters of potable water per sq. meter per hour, much higher than standard solar stills.
- Handles high salinity (up to 20% salt) without clogging.
- Built with low-cost materials like aluminum and fabric; powered by solar or waste heat.
- Suitable for off-grid villages, disaster zones, and arid coastal areas.
- Represents a scalable, sustainable, and affordable solution for global water security.



Siphon Principle

- Definition:
  A siphon is a device that allows liquid to flow from a higher level to a lower level through a tube, even if the tube rises above the surface of the liquid in the higher container.
- Working Principle:
  - Relies on gravity and the difference in liquid pressure at the two ends of the tube.
  - Once the tube is filled, the liquid continues to flow because the pressure at the lower outlet is less than at the higher source.
  - The liquid column in the descending limb (heavier) pulls the liquid up the ascending limb.
- Key Conditions:
  - Outlet must be below the liquid surface of the source container.

- The tube must be primed (filled with liquid) initially.
- Works only until the source liquid level drops below the inlet end.

- Applications:
  - Emptying tanks, aquariums, and fuel tanks.
  - Irrigation and drainage systems.
  - Some modern technologies (like IISc's desalination system) use siphon action for fluid movement.

PM VIKAS SCHEME

Convergence for Viksit Bharat 2047: Industry Conclave on Skilling & Employment" was organized by the Ministry of Minority Affairs under the PM VIKAS scheme in New Delhi to boost inclusive development.

- Organized with support from Delhi Sikh Gurdwara Management Committee and State Institute of Hotel Management, Tripura.
- Union MoS for Minority Affairs, George Kurian, attended the conclave.
- Industry participation from 11 sectors including healthcare, aviation, electronics, tourism, and hospitality.
- Two MoUs signed:
  - Ministry of Minority Affairs + DSGMC + Wadhwani Foundation
  - DSGMC + SIHM Tripura
- Focus on convergence of government schemes, industry needs, and emerging technologies in skilling.
- Panel discussion stressed industry-ready, globally mobile workforce, apprenticeships, and new job roles.
- PM VIKAS scheme: blends modern skills with traditional expertise; 41 projects in 30 States/UTs, benefiting 1.34 lakh youth and artisans.
- Conclave urged industry's role in curriculum design, apprenticeships, and placements.
- Part of Viksit Bharat 2047 vision to achieve a developed, competitive India by centenary of independence.

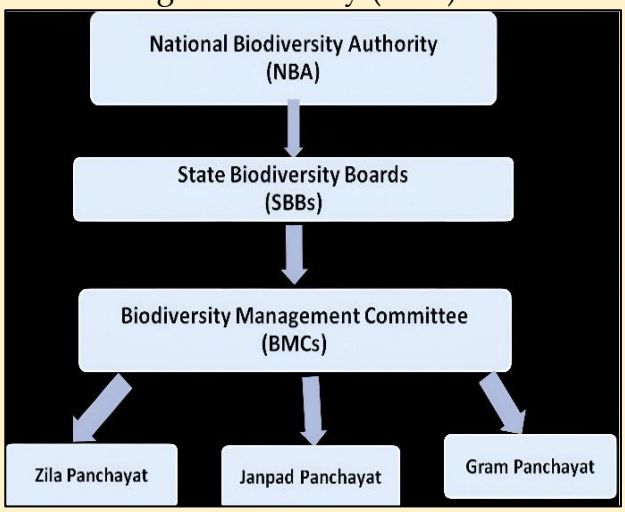
PM VIKAS (Pradhan Mantri Virasat Ka Samvardhan)

- Ministry: Implemented by the Ministry of Minority Affairs.
- Launch: Announced in 2022–23 Union Budget as an umbrella scheme.
- Objective:
  - To integrate modern skill training with India's traditional expertise.
  - Provide end-to-end support for education, skilling, entrepreneurship, and credit linkages to minority and marginalized communities.
- Key Features:
  - Combines skill development with preservation of artisanal crafts and heritage trades.
  - Offers credit assistance, training, market linkages, and digital empowerment.
  - Focus on youth, women, and artisans from minority communities.
- Impact (till 2025):
  - 41 projects rolled out across 30 States/UTs.
  - Benefited 1.34 lakh youths and artisans through transparent and efficient processes.
- Significance:
  - Enhances employability and self-reliance of minority youth.
  - Supports the vision of Viksit Bharat 2047, aligning skilling with livelihoods and dignified employment.

NATIONAL BIODIVERSITY AUTHORITY (NBA)

The National Biodiversity Authority (NBA) has sanctioned ₹82 lakh to the Andhra Pradesh Biodiversity Board for conserving the endangered Red Sanders tree under the Access and Benefit Sharing (ABS) mechanism.

- Objective: Raise 1 lakh Red Sanders saplings for farmers under the Trees Outside Forests (ToF) program.
- ABS Mechanism: Funded through benefit-sharing contributions from enterprises using Red Sanders.
- Community Involvement: Local and tribal communities, Biodiversity Management Committees, and stakeholders engaged in nursery, plantation, and care.
- Geographic Focus: Native to Southern Eastern Ghats (Anantapur, Chittoor, Kadapa, Kurnool).
- Protection Status: Endangered, threatened by smuggling; protected under Wildlife Protection Act, 1972, and listed under CITES.
- Impact: Generates rural employment, skills, and sustainable livelihoods while strengthening conservation.
- Past Efforts: NBA has already provided ₹31.55 crore to Andhra Pradesh's forest department for enforcement and protection.
- Significance: Supports India's biodiversity targets and global commitments under the Convention on Biological Diversity (CBD).



National Biodiversity Authority (NBA)

- Establishment:
  - Set up in 2003 under the Biological Diversity Act, 2002.
- Headquarters:
  - Located in Chennai, Tamil Nadu.
- Nature:
  - A statutory autonomous body under the Ministry of Environment, Forest and Climate Change (MoEFCC).
- Functions:
  - Regulates access to biological resources and associated traditional knowledge.
  - Ensures fair and equitable benefit-sharing (ABS) arising from the use of biological resources.
  - Issues approvals for research, commercial use, IPRs, and technology transfer involving India's biodiversity.
  - Advises the Central and State Governments on matters related to biodiversity conservation and sustainable use.
  - Supports State Biodiversity Boards (SBBs) and Biodiversity Management Committees (BMCs) at local levels.
- Key Role in Conservation:
  - Implements provisions of the Convention on Biological Diversity (CBD) at the national level.
  - Promotes People's Biodiversity Registers (PBRs) to document local biological resources and knowledge.
  - Facilitates community participation in conservation and livelihood generation.

Red Sanders (Pterocarpus santalinus)

- Description:
  - A rare and highly valued endemic tree species known for its distinctive red-colored heartwood.
  - Belongs to the family Fabaceae.

- Geographic Range:
  - Found mainly in the Southern Eastern Ghats, particularly in the districts of Chittoor, Kadapa, Anantapur, and Kurnool in Andhra Pradesh.
- Uses & Value:
  - Heartwood is used in fine furniture, medicinal preparations, musical instruments, and as a dye.
  - High international demand makes it one of the most smuggled tree species from India.
- Threats:
  - Over-exploitation and smuggling due to high market value.
  - Habitat loss and degradation.
- Protection Status:
  - IUCN Red List: Endangered.
  - CITES: Appendix II (international trade regulated).
- Conservation Efforts:
  - National Biodiversity Authority (NBA) funds conservation under the Access and Benefit Sharing (ABS) mechanism.
  - Plantation programs and community participation promoted under Trees Outside Forests (ToF) initiatives.
  - Enforcement measures by Andhra Pradesh Forest Department to curb illegal felling and smuggling.

NATIONAL SECURITY ACT (NSA)

Climate activist Sonam Wangchuk was recently detained under the National Security Act (NSA), reigniting debate over its scope and misuse.

- **About NSA (1980):** Allows preventive detention to safeguard defence, foreign relations, security of India, public order, or essential supplies.
- **Powers:** Centre, states, District Magistrates, and Police Commissioners can authorize detention.
- **Nature:** Not punitive but preventive — meant to stop individuals before they act.
- **Safeguards:**
  - Grounds of detention must be communicated within 5–15 days.
  - Review by Advisory Board of High Court judges within 3 weeks.
  - Detention can extend up to 12 months.
  - No legal representation before Advisory Board; government can withhold facts citing "public interest."
- **Past use:** Invoked against separatists, gangsters, and protesters.
- **Controversies:**
  - Criticized for misuse against dissenters and activists.
  - High-profile cases: Dr. Kafeel Khan (2020), Chandrashekhar Azad (2017), Amritpal Singh (2023).
  - Used during anti-CAA protests and in states like UP and MP against cow slaughter and habitual criminals.
- **Criticism:** Civil liberties groups see it as a draconian law often misused by governments to silence opposition rather than protect security.

National Security Act (NSA), 1980

- The NSA, 1980 is a preventive detention law that empowers the Central and State governments to detain individuals to prevent them from acting in any manner prejudicial to the defence of India, relations with foreign powers, national security, public order, or maintenance of essential supplies and services.
- It continues India's long history of preventive detention laws, tracing back to the colonial era and the Maintenance of Internal Security Act (MISA).

Key Provisions

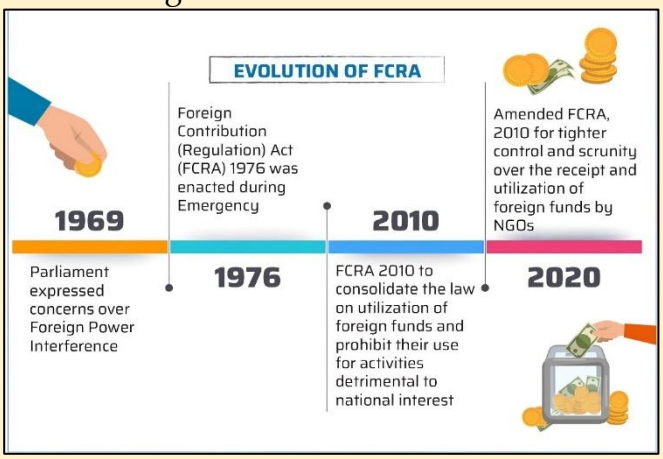
1. **Authority to Detain:**
   - The Central or State government can issue detention orders.
   - District Magistrates and Police Commissioners can also exercise this power when authorised.
2. **Grounds of Detention:**
   - Defence of India, security of the state, public order, and maintenance of essential supplies.
3. **Duration of Detention:**
   - A person can be detained **up to 12 months**, though orders can be revoked earlier.
4. **Communication of Grounds:**
   - Detainee must be informed of the grounds of detention within 5–15 days.
5. **Review Mechanism:**
   - An **Advisory Board of High Court judges** reviews the detention within 3 weeks.
   - If the Board finds "no sufficient cause," the detainee must be released.
6. **Safeguards and Limitations:**
   - No legal representation before the Advisory Board.
   - Government can withhold facts citing "public interest."
   - Preventive, not punitive — meant to stop anticipated threats.

FOREIGN CONTRIBUTION (REGULATION) ACT (FCRA), 2010:

The Union Ministry of Home Affairs directed NGOs to submit applications for renewal of their Foreign Contribution (Regulation) Act (FCRA) registration at least four months before expiry.

About Foreign Contribution (Regulation) Act (FCRA), 2010:

- Nature: The Foreign Contribution (Regulation) Act (FCRA), 2010, regulates foreign contributions to protect national sovereignty and security. It governs the receipt and use of foreign contributions by individuals, associations, and companies operating in India.
- Objective: The FCRA 2010 aims to ensure that foreign donations do not compromise the nation's sovereignty or internal security.
- Amendments: Amendments were made in 2020 which brought certain changes.



About Foreign Contribution (Regulation) Amendment Act, 2020:

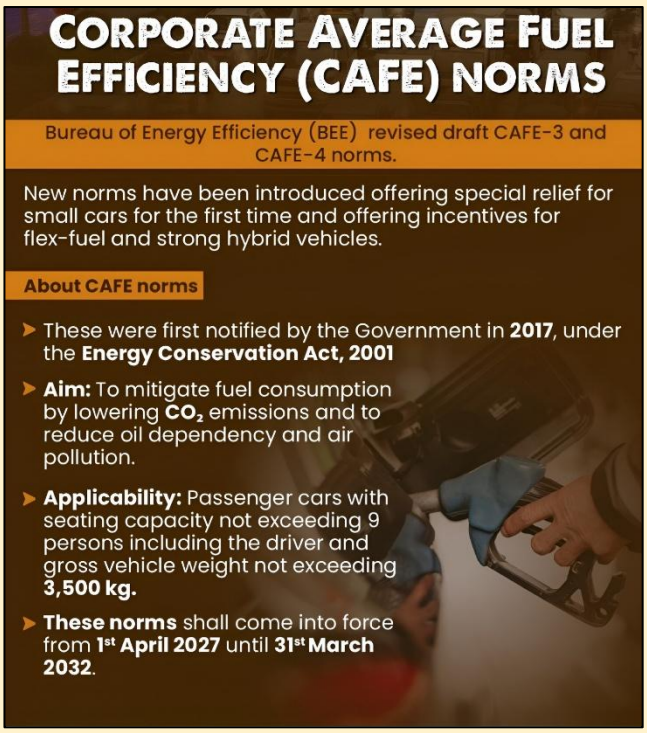
- Validity & Renewal: FCRA registration is valid for five years, and NGOs are required to apply for renewal within six months of the registration's expiry.
- Mandates Aadhaar: Office bearers must provide an Aadhaar or passport/OCI card for registration.
- Need for SBI account: Contributions must be received in a designated SBI branch in New Delhi.

- Puts a cap on administrative Use: Administrative expense limits were reduced from 50% to 20%.
- Suspension Extension: Initially, registration suspension can be enforced for a period of 180 days. This suspension can be further extended by an additional 180 days.
- Prohibits certain activities
  - The applicant must not represent fictitious entities.
  - The applicant should not have been involved in religious conversion activities, either directly or indirectly.
  - The applicant must not be engaged in activities related to sedition.
  - The FCRA prohibits candidates, journalists, media companies, judges, government servants, politicians, and political organizations from receiving foreign funds.
- FCRA Rules 2022
  - In July 2022, the MHA introduced changes to FCRA rules. These changes included increasing the number of compoundable offences from 7 to 12.
  - The rules also raised the limit for contributions from relatives abroad that do not require government intimation from Rs 1 lakh to Rs 10 lakh and extended the time limit for intimation of the opening of bank accounts.

CORPORATE AVERAGE FUEL EFFICIENCY (CAFE-3)

India has released draft Corporate Average Fuel Efficiency (CAFE-3) rules proposing new vehicle emission norms, with relief for small cars and incentives for EVs..

- What's new: Draft CAFE-3 norms issued by the Bureau of Energy Efficiency (BEE) for public consultation, covering all M1 category passenger cars (max 9 seats, 3,500 kg).
- Efficiency formula: Based on fleet weight with stricter targets over FY28–FY32; lighter vehicles get more relaxed targets.
- Relief for small cars: Special exemptions for models ≤1200cc engine, ≤4000mm length, and ≤900kg unladen weight → eligible for CO_2 reduction credits.
- Emissions pooling: Allows multiple carmakers to pool emissions targets, reducing compliance costs.
- EV incentives:
  - Each EV sale counts three times in compliance calculations.
  - Hybrid EVs, plug-in hybrids, and strong hybrids get multipliers.
  - EVs under 3,500 kg get special weight-based relaxation.
- Carbon Neutrality Factor (CNF): Additional relaxation based on fuel types (ethanol, CNG, biogas, hybrids).
- Penalties: Non-compliance attracts penalties under the Energy Conservation Act, 2001.
- Current norms: CAFE-2 (from FY22–23) required fleet CO_2 emissions ≤113 g/km; penalties apply for exceeding limits.
- EV charging infra: Govt plans ~72,300 stations under PM E-Drive, with subsidy support for installation across cities.



Corporate Average Fuel Efficiency (CAFE) Norms

- Definition:
  CAFE norms are fuel efficiency and emission standards that automobile manufacturers must follow for their fleet, aimed at reducing fuel consumption and lowering carbon dioxide (CO_2) emissions.
- Origin in India:

Introduced by the Bureau of Energy Efficiency (BEE) under the Energy Conservation Act, 2001.

  - CAFE–1: Notified in 2011, effective from 2017.
  - CAFE–2: Implemented from 2022–23, targeting 113 g/km CO_2 fleet average.
  - CAFE–3 (Draft, 2025): Proposes stricter norms for FY28–FY32 with new incentives for small cars and EVs.
- Key Features:
  - Applies to all M1 category cars (passenger vehicles ≤9 seats, ≤3,500 kg).
  - Uses a formula based on average fleet weight; heavier cars allowed slightly higher emissions than lighter cars.
  - Manufacturers must ensure that their entire fleet average meets prescribed targets.
  - Penalties: Non-compliance attracts fines under the Energy Conservation Act, 2001.
- Special Provisions in Draft CAFE-3:
  - Relief for small cars (≤1200 cc engine, ≤4000 mm length, ≤900 kg weight).
  - Pooling option: Carmakers can pool emissions with other firms.
  - EV incentives:
    - Each EV sale counts as 3 vehicles in compliance calculation.
    - Hybrid & CNG cars get partial credits.
  - Carbon Neutrality Factor (CNF): Additional credits for ethanol, CNG, and biogas fuel use.
- Objective:
  To align India with global climate commitments, reduce oil dependence, encourage electric mobility, and cut vehicular CO_2 emissions.

CHHATH PUJA

PM Modi, in *Mann ki Baat*, praised the RSS on its centenary journey and highlighted the government's push for Chhath Puja's inclusion in UNESCO's intangible cultural heritage list.

- **On RSS:**
  - Praised founder **K.B. Hedgewar** for fighting against "intellectual slavery."
  - Appreciated RSS's century-long role in national service, sacrifice, and discipline.
  - Emphasized "nation-first" spirit in every RSS worker's contribution.
- **On Chhath Puja:**
  - Govt making efforts for **UNESCO Intangible Cultural Heritage recognition**.
  - Said recognition would help spread Chhath's cultural and spiritual values worldwide.
- **Other mentions:**
  - Recalled **Bhupen Hazarika's birth centenary**
  - Expressed condolences on the passing of singer **Zubeen Garg**.
- **Significance:**
  - Strengthening cultural pride, heritage recognition, and linking traditions with India's global image.

Chhath Puja

- Nature of Festival: An ancient Hindu Vedic festival dedicated to the Sun God (Surya) and Chhathi Maiya (Usha, the wife of the Sun God).
- Observed in: Primarily in Bihar, Jharkhand, Eastern Uttar Pradesh, and the Mithila region of Nepal; also celebrated by diaspora communities.
- Timing: Held twice a year — most prominently after Diwali (October–November, Kartika month), known as Chhath Mahaparva.
- Rituals:
  - Lasts four days with strict rituals including fasting, holy bathing, and offering *Arghya* (water and prayers) to the rising and setting Sun.

- Devotees observe Nirjala Vrat (fast without water) as part of the worship.
- Celebrated on riverbanks and water bodies, symbolizing purity.

- Cultural significance:
  - Emphasizes gratitude to nature, ecological balance, and solar energy.
  - Promotes social harmony and collective participation.
- Global recognition: India is making efforts to get Chhath Puja inscribed in UNESCO's Intangible Cultural Heritage list.

India & UNESCO Intangible Cultural Heritage (ICH)

- Convention: UNESCO's *Convention for the Safeguarding of the Intangible Cultural Heritage* (2003) aims to preserve cultural practices, traditions, and knowledge systems.
- India's Status: India ratified in 2005; as of 2025, India has 15 elements inscribed on UNESCO's ICH Representative List.

India's ICH Elements (as of 2025):

1. **Kutiyattam, Sanskrit theatre** – Kerala – *2008*
2. **Tradition of Vedic Chanting** – Across India – *2008*
3. **Ramlila, the traditional performance of the Ramayana** – North India – *2008*
4. **Ramman, religious festival and ritual theatre** – Uttarakhand – *2009*
5. **Chhau dance** – Jharkhand, West Bengal, Odisha – *2010*
6. **Kalbelia folk songs and dances** – Rajasthan – *2010*
7. **Mudiyettu, ritual theatre and dance drama** – Kerala – *2010*
8. **Buddhist chanting of Ladakh** – Ladakh – *2012*
9. **Sankirtana, ritual singing, drumming and dancing** – Manipur – *2013*
10. **Traditional brass and copper craft of utensil making among the Thatheras of Jandiala Guru** – Punjab – *2014*
11. **Nowruz** – Celebrated in India by Parsi community (shared with other countries) – *2016*
12. **Yoga** – Across India – *2016*
13. **Kumbh Mela** – Haridwar, Prayagraj, Ujjain, Nashik – *2017*
14. **Durga Puja in Kolkata** – West Bengal – *2021*
15. **Garba of Gujarat** – Gujarat – *2023*

ASTROSAT

India's first space-based observatory AstroSat has completed 10 years since its launch in 2015, continuing to provide valuable astronomical data..

- Launch: AstroSat launched on September 28, 2015, by PSLV-C30 (XL) rocket from Satish Dhawan Space Centre, Sriharikota.
- Mission life: Originally designed for 5 years, but continues to function effectively after a decade.
- Significance: India's first dedicated multi-wavelength space observatory, comparable to NASA's Hubble.

- Discoveries:
  - Observed FUV photons from galaxies 9.3 billion light years away.
  - Enabled studies on black holes, neutron stars, and Proxima Centauri.
  - Provided insights across the electromagnetic spectrum (UV to X-rays).

- Payloads (5 instruments):
  - Ultra Violet Imaging Telescope (UVIT)
  - Large Area X-ray Proportional Counter (LAXPC)
  - Cadmium-Zinc-Telluride Imager (CZTI)
  - Soft X-ray Telescope (SXT)
  - Scanning Sky Monitor (SSM)

- Collaborative effort: Developed by ISRO in partnership with major Indian institutions (IUCAA, TIFR, IIA, RRI, several universities) and international partners (Canada & U.K.)

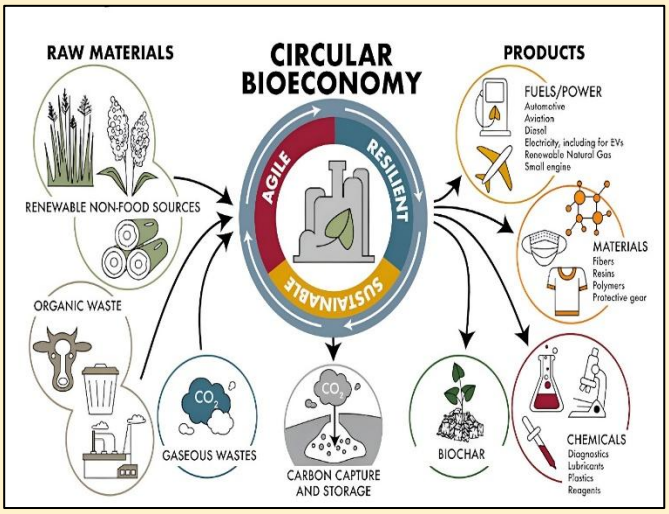
REIMAGINING BIO ECONOMY THROUGH LANDSCAPES

Context :

India stands at a critical juncture where traditional growth models must evolve into a green, resilient economic pathway to address climate risks, ensure competitiveness, and sustain livelihoods. This has given rise to the new concept of bioeconomy.

What is bioeconomy?

- Bioeconomy is an economic system that uses renewable biological resources—like plants, animals, forests, and microorganisms—to produce food, materials, chemicals, and energy, reducing dependence on fossil fuels and promoting sustainability.
- It combines biotechnology, biomass utilization, and circular economy principles to create eco-friendly goods and services.
- Examples: Biofuels, Bioplastics, etc.



Data on bioeconomy

- India's bioeconomy expanded from **$10 billion in 2014** to **$165.7 billion in 2024**, a **16-fold increase** in 10 years.
- It contributes **4.25% of India's GDP**.
- The growth is supported by **over 10,000 bio-economy start-ups**.
- The **industrial bioeconomy** (biofuels and bioplastics) accounts for **47%** of the sector's value.
- **Pharmaceuticals** contribute around **35%**, while research, IT, clinical trials, and bioinformatics are rapidly emerging.
- India has achieved **20% ethanol blending in petrol**.
- The country is the **third-largest pharmaceutical producer by volume** globally.
- The bioeconomy is expected to create **35 million jobs by 2030**.
- **Rural per capita spending** grew at **9.2%** from August 2023 to July 2024, outpacing **urban growth of 8.3%**.

The green economy is becoming **inevitable and imminent** for job creation, environmental returns, competitiveness, and climate resilience.

Challenges and Disparities

- **Rural region**
  - Climate disruptions impact inflation, worsening the rural bioeconomy context, especially pressures from losses in agriculture, fluctuations in energy demand, and disrupted supply chains.

- **Regional Inequities**
  - Maharashtra, Karnataka, Telangana, Gujarat, and Andhra Pradesh account for two-thirds of bioeconomy value, while eastern and northeastern states together contribute less than 6% despite rich agricultural and forest resources.
  - States like Madhya Pradesh, Chhattisgarh, Bihar, Odisha, and Jharkhand have untapped potential in ethanol, biomass power, agri-waste, and non-timber forest products.
- **Gender Gaps**
  - Women hold only 11% of jobs in rooftop solar. Women's representation in key roles remains particularly low: 1% in operations and maintenance, and 3% in construction and commissioning
- **Urban-Rural Divide**
  - Urban areas dominate green investments, EV infrastructure, and solar rooftops, while rural regions lag in clean energy access, water-saving irrigation, and sustainable livelihoods.
  - Digital divide limits rural participation in smart grids, carbon markets, and green tech solutions.
- **Policy & Regulatory Bottlenecks**
  - The BioE3 policy was rolled out in 2024 to promote the bioeconomy, but regulatory frameworks remain fragmented, and it remains a very urban-centric, industrial-scale economy.

Green Transition and Rural Challenges

- A rapid green shift can disproportionately impact rural areas, coal workers, MSMEs, and small-scale manufacturers dependent on traditional energy sources.
- Trade offs
- Road transport dominates freight movement, with food miles contributing nearly 3 gigatonnes of CO_2 annually, creating a trade-off between emissions and food security.
- Biodiversity supports over 200 million livelihoods, but policies and markets often promote monocropping of wheat and paddy over crop diversification.
- India's push for ethanol blending creates a trade-off in the maize supply chain, affecting animal feed availability.

Hence a just transition requires targeted skill-building, reskilling, and local bioeconomic diversification to prevent social and environmental harm. This can be achieved using landscape approach.

Landscape Approach

- Green growth needs a model that integrates sustainability, climate action, and social inclusion while addressing regional disparities and unlocking potential in less-developed states.
- Landscapes should be treated as interconnected systems of landforms, water resources, biodiversity, markets, and local institutions to assess ecological and human benefits.
- A shared landscape understanding enables improvement of air and water quality, climate regulation, habitat support, food and water security, and livelihoods.
- Transition requires participatory pathways from village (nano) to wider landscape (macro) levels for effective planning and monitoring.

Way Forward

- Leverage 2.5 lakh PRIs, 12 million women-led institutions, and local authorities in planning, execution, and monitoring of green transitions.
- Promote circular economy, green energy, and bioeconomy with gender-inclusive policies for leadership and technical roles.

- Encourage local entrepreneurship, such as small-scale oil extraction or biomass-based enterprises, to enhance local production and consumption.
- Integrate ecosystem valuation into economic strategies and policies for better resource management.
- Adopt measures like green budgeting, targeted fiscal incentives, green government procurement, and active involvement of gram panchayats and community-based organisations.
- Strengthen waste management, create financing and O&M support for decentralised renewables, coordinate policies across departments, and increase R&D spending for green innovations.

A landscape-driven growth model can balance ecological regeneration, economic resilience, and social equity. Such an approach will help India achieve its climate goals, sustainable development targets, and new engines of green growth, ensuring wellbeing for both people and ecosystems.

SOILIFICATION

Researchers in Rajasthan successfully grew wheat in desert land using an indigenous bioformulation-based soilification technology, showing potential to stop desertification and boost agriculture in arid regions.

- **Experiment site:** Conducted by Central University of Rajasthan (CUoR) at Banseli village, Ajmer district.
- **Technology:** Used desert 'soilification' with indigenous bioformulation to convert desert sand into soil-like structure.
- **Water efficiency:** Wheat required only 3 irrigations (vs. 5–6 normally) due to high water retention.
- **Key features:** Bioformulation enhanced water retention, improved soil structure, stimulated microbial activity, and increased crop stress resistance.
- **Pilot results:** 13 kg wheat seeds yielded 26 kg harvest per 100 sq. metres in April 2025.
- **Higher yield:** Experimental field with bajra, guar gum, and chickpea showed 54% higher yield in bioformulation-amended sand.
- **Support:** Facilitated by Krishi Vigyan Kendra (KVK) and Rajasthan Horticulture Department.
- **Impact:** Reduced water input, higher productivity, and potential to curb desertification in Thar desert region.
- **Future plan:** Expand technology to crops like millet and green gram in Rajasthan's dry regions.

Soilification

- **Meaning:**
  Soilification is a process of transforming loose, infertile sand (desert soil) into soil-like material that can support plant growth.
- **How it works:**
  - Uses polymers, bioformulations, or natural binders to cross-link sand particles.
  - Improves soil aggregation and water retention capacity.
  - Enriches the substrate with microbial activity to provide nutrients and resilience to crops.
- **Key Objectives:**
  - Convert arid, barren desert land into productive agricultural fields.
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- Reduce irrigation demand by retaining more water in sandy soils.
- Combat desertification and land degradation.

- **Applications:**
  - Tested in Rajasthan's Thar Desert for wheat, bajra, guar gum, and chickpea cultivation.
  - Used in dry and semi-arid regions globally (China, Middle East, Africa) to reclaim deserts.
- **Significance:**
  - Provides a sustainable land restoration method.
  - Helps ensure food security in desert-prone countries.
  - Supports climate change adaptation by reclaiming degraded lands.

DECOMMISSIONING MIG 21

India has formally decommissioned the MiG-21 jets after six decades of service, marking the end of an iconic era in the Indian Air Force.

- **Key Statement:** Defence Minister Rajnath Singh called MiG-21 a "symbol of India-Russia ties" and a lesson for future indigenous platforms.
- **Aircraft:** Last MiG-21 jets belonged to No. 23 Squadron (Panthers).
- **Ceremony:** Included symbolic switch-off of six MiG-21s and handing over of aircraft documents to Air Chief.
- **Attendees:** Senior IAF officials, veterans, pilots, engineers, and technicians who worked with MiG-21.
- **Tribute Performances:** Surya Kiran aerobatic team, Tejas, and Jaguar fighter jets performed aerial manoeuvres.
- **Legacy:** Played crucial roles in 1971 war, Kargil conflict, Balakot air strike, and Operation Sindoor.
- **Impact:** Reduced IAF's effective fighter squadron strength to **29**, the lowest since 1960s.
- **Future Outlook:** Govt emphasized success of indigenous platforms like LCA-Tejas and upcoming Advanced Medium Combat Aircraft (AMCA).

MiG-21 Fighter Aircraft

- **Full Name:** Mikoyan-Gurevich MiG-21.
- **Origin:** Developed by the Soviet Union (first flew in 1956).
- **Induction in India:** Entered Indian Air Force (IAF) service in 1963, becoming the first supersonic fighter jet of India.
- **Service Duration:** Served for over 60 years, the longest-serving combat aircraft in IAF history.
- **Role in Wars:**
  - 1971 India-Pakistan War: Played a decisive role, including shooting down enemy aircraft.
  - Kargil War (1999): Actively used in ground attack and support missions.
  - Balakot Air Strike (2019): MiG-21 Bison piloted by Wing Commander Abhinandan Varthaman engaged in aerial combat.
  - Operation Sindoor and other missions.
- **Variants in India:** MiG-21FL, MiG-21M, MiG-21MF, and upgraded MiG-21 Bison.
- **Legacy:**
  - Known as the "backbone" of the IAF for decades.
  - Symbol of India-Russia defence cooperation.
  - Provided combat experience to generations of IAF pilots.

TEJAS MK 1A AIRCRAFT

Context India has signed its largest-ever contract for indigenous fighter jets with HAL to procure 97 Tejas Mk1A aircraft for the IAF."

- **Deal Value:** ₹62,370 crore
- **Date Finalized:** 25 September 2025
- **Aircraft Ordered:**
  - 68 single-seat Tejas Mk1A
  - 29 twin-seat Tejas Mk1A
- **Delivery Timeline:** From 2027, spread over six years
- **Indigenous Content:** Over 64%
- **Key Features:**
  - UTTAM AESA radar
  - Advanced Electronic Warfare (EW) systems
- **Impact:**
  - Boosts IAF squadron strength
  - Generates employment opportunities
  - Strengthens India's defence manufacturing ecosystem
  - Advances Aatmanirbhar Bharat (self-reliance in defence)

Tejas Mk1A

- **Type:** Lightweight, single-engine, 4.5 generation multirole fighter aircraft.
- **Developer**: Designed by Aeronautical Development Agency (ADA) and manufactured by Hindustan Aeronautics Limited (HAL).
- **Category:** Indigenous aircraft under India's Light Combat Aircraft (LCA) program.

Key Features

- **Avionics & Radar:** Equipped with UTTAM AESA (Active Electronically Scanned Array) radar.
- **Electronic Warfare:** Advanced EW suite with self-protection jammers and countermeasures.
- **Weapons Capability:** Can carry BVR (Beyond Visual Range) missiles, precision-guided munitions, and air-to-air/air-to-ground missiles.
- **Airframe:** Composite materials for reduced weight and radar cross-section.
- **Refueling:** In-flight refueling capability.
- **Indigenous Content:** Over 60–65% indigenous systems, contributing to Aatmanirbhar Bharat.

Operational Role

- Designed for air-to-air combat, ground attack, and reconnaissance missions.
- Enhances IAF squadron strength, replacing older MiG-21 aircraft.

INDIA ADDS TWO MORE WETLANDS TO RAMSAR LIST

India has recently added two more wetlands from Bihar to the Ramsar list of wetlands of international importance. This increases India's total Ramsar sites to 93, the highest in Asia and third globally. The new sites are Gokul Jalashay in Buxar district and Udaipur Jheel in West Champaran district. These additions reflect India's growing commitment to wetland conservation and biodiversity protection.

Ramsar Convention and Its Importance

The Ramsar Convention, adopted in 1971 in Ramsar, Iran, is an international treaty for wetland protection. It aims to conserve wetlands and promote their wise use. Currently, 172 countries are members.

Wetlands are crucial for water regulation, flood control, and supporting biodiversity. They also provide resources like food and raw materials.

India's Progress in Ramsar Site Designation

India's Ramsar sites increased from 26 in 2012 to 93 in 2025. These sites cover over 1.36 million hectares. Since 2020, 51 wetlands were added, showing accelerated conservation efforts. India ranks third worldwide after the UK and Mexico in the number of Ramsar sites.

Details of Gokul Jalashay Wetland

Gokul Jalashay is an oxbow lake on the southern edge of the Ganga river. It acts as a natural buffer during floods, protecting nearby villages. The wetland supports over 50 bird species. Local communities depend on it for fishing, farming, and irrigation. Villagers annually clean the wetland during a traditional festival to maintain its health.

Details of Udaipur Jheel Wetland

Udaipur Jheel is another oxbow lake surrounding a village. It hosts over 280 plant species, including Alysicarpus roxburghianus, a herb endemic to India. The wetland is a winter habitat for about 35 migratory bird species, including the vulnerable common pochard. This marks its importance for biodiversity conservation.

Role of Wetlands in Ecology and Livelihoods

Wetlands regulate the hydrological cycle and reduce flood risks. They provide habitats for diverse flora and fauna. They also support livelihoods through fishing, agriculture, and raw materials. Protecting wetlands is vital for climate resilience and sustainable development.

MUNICIPAL SOLID WASTE (MSW) MANAGEMENT RULES IN 2000

India marks 25 years since its first Municipal Solid Waste (MSW) Management Rules in 2000. Despite evolving regulations and infrastructure, many cities still face severe waste management issues.

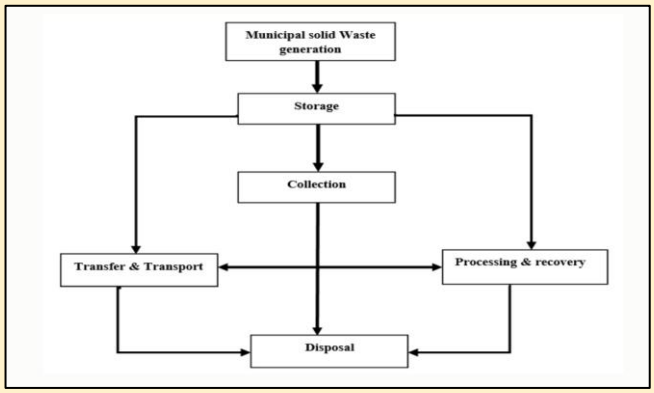
The upcoming 2025 draft Solid Waste Management (SWM) Rules aim to address these challenges with new goals like four-way source segregation and digital monitoring. However, systemic weaknesses remain a barrier to success.

Historical Context and Regulatory Evolution

India's MSW Rules originated from a Supreme Court order in 2000. Since then, the framework expanded with the 2016 SWM Rules and additional regulations for plastic, e-waste, biomedical, hazardous, and construction waste. These aimed for cleaner cities through mandatory segregation and landfill bans. Yet, implementation gaps persist.

Current Waste Management Challenges

Cities like Delhi, Bengaluru, and Gurugram struggle with overflowing landfills and dysfunctional treatment plants. Public spaces remain littered despite infrastructure investments.



Weak local governance, poor contract management, and low public trust undermine progress. Many treatment facilities receive mixed waste, reducing efficiency and increasing pollution.

Source Segregation – Myth and Reality

The 2016 Rules mandated 100% source segregation within two years, but this target proved unrealistic. Comparisons with cleaner cities abroad show that timely collection and strict anti-littering enforcement matter more than high segregation rates.

Indian cities often report inflated segregation figures that do not match on-ground realities due to lack of reliable waste data.

Systemic Issues and Data Deficiency

Waste characterisation data is scarce and irregular, leaving municipalities ill-equipped to design effective systems. Poor data leads to mixed messaging, where citizens are urged to segregate waste before proper handling systems exist.

This results in re-mixing of waste during transport and treatment, undermining facility performance and increasing landfill pressure.

Phased and Localised Approach to Waste Management

One-size-fits-all strategies fail in India's diverse urban contexts. A phased approach with realistic targets is essential. Priority should be on improving waste characterisation, robust collection and transport, and managing homogeneous waste streams like horticulture and construction debris separately. Strict enforcement of anti-littering rules can encourage public participation and reduce unmanaged waste.

Role of Governance and Leadership

Effective waste management depends on empowered local governance and committed leadership. Without these, even the best rules remain aspirational. The new draft SWM Rules for 2025 include digital portals and circular economy integration but require practical implementation aligned with local realities to succeed.

SAUDI-PAKISTAN DEFENCE AGREEMENT

Recent developments in 2025 have seen Saudi Arabia Pakistan formalise a Strategic Mutual Defence Agreement. This pact states that any aggression against one will be treated as aggression against both. The deal has caused concern in New Delhi, given India's tense relations with Pakistan. The agreement emerges amid heightened military and diplomatic tensions in South Asia and shifting alliances in West Asia.

Context of the Saudi-Pakistan Defence Agreement

The pact was signed after a major terror attack in Jammu and Kashmir in April 2025, which led to intense military exchanges between India and Pakistan. India sought global support to isolate Pakistan but faced limitations. The Saudi-Pakistan deal strengthens Islamabad's position internationally. It also comes as India and Saudi Arabia maintain a complex diplomatic relationship, with recent high-level meetings attempting to manage rising tensions.

Geopolitical Implications Beyond South Asia

The pact reflects broader shifts in West Asia, especially after the 2023 Hamas-Israel conflict. Saudi Arabia's strategic calculations now focus on autonomy and multipolarity.

Riyadh is realigning away from reliance on the United States and revisiting traditional alliances. Pakistan's nuclear capability and military expertise remain valuable to Saudi security concerns, especially amid regional conflicts like Yemen and tensions with Iran.

Historical and Strategic Background

Relations between Saudi Arabia and Pakistan have fluctuated over the years. In 2015, Pakistan declined to join Saudi Arabia's campaign in Yemen, causing strain.

However, Saudi Arabia has long valued Pakistan's military experience, particularly against India. The new pact restores and deepens this partnership. It also signals Riyadh's intent to diversify its strategic partnerships amid changing global power dynamics.

Impact on India's Regional Strategy

The defence agreement challenges India's efforts to diplomatically isolate Pakistan. It marks the limits of India's influence in West Asia. The pact puts stress on the enduring religious and ideological bonds between Saudi Arabia and Pakistan, centred on Sunni Islam.

It also questions India's cautious strategic approach. Experts suggest India must adapt quickly and engage more decisively to maintain its regional standing.

Changing Global and Regional Order

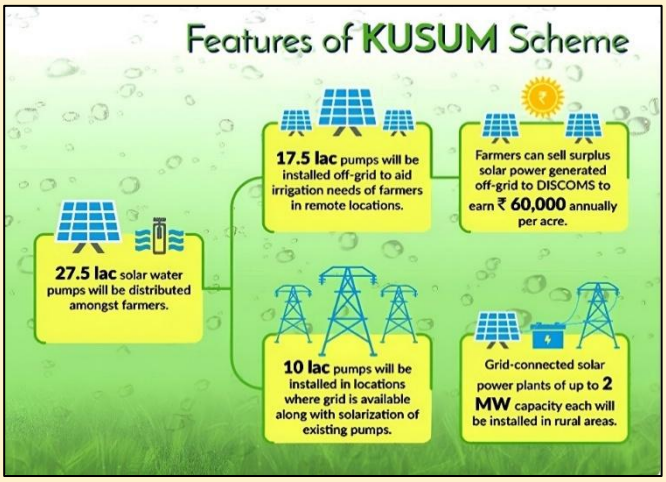
The pact exemplifies the move towards multipolarity and strategic autonomy by key states like Saudi Arabia. It also reflects Pakistan's ability to leverage its nuclear status amid global uncertainties.

India's pursuit of a peaceful, idealistic foreign policy may need recalibration in this evolving context. The agreement serves as a reminder that regional and global alliances are fluid and often driven by complex geopolitical interests.

PM-KUSUM

The Union government is looking to showcase the PM-KUSUM (Pradhan Mantri Kisan Urja Suraksha evam Utthan Mahabhiyan) programme to several African countries and island nations, Union Minister for Renewable Energy (MNRE) said.

- The PM-KUSUM was launched by the MNRE in 2019, in order to endow installation of off-grid solar pumps in rural areas and reduce dependence on grid, in grid-connected areas.
- Objective: It aims to enable farmers to set up solar power generation capacity on their arid lands and to sell it to the grid. It also seeks to increase the income of farmers by allowing them to sell surplus solar power to the grid.
- Components of the scheme:
  - 10,000 MW of decentralized ground-mounted grid-connected renewable power plants.
  - Installation of 20 lakh solar-powered agriculture pumps.
  - Converting 15 lakh agriculture pumps, already connected to the grid, into solar.



- Significance:
  - It incentivises the farmers to sell surplus solar energy to the states, which in turn will augment their income.
  - If farmers are able to sell surplus power, they will be incentivised to save power and, in turn, it will mean the reasonable and efficient use of groundwater.
  - The scheme is expected to create job opportunities in the installation, maintenance, and operation of solar power projects.

- Challenges:
  - The cost of setting up solar power projects can be high, and some farmers may not have access to the necessary financing.
  - Due to power subsidies, the recurring cost of electricity is so low that farmers keep on pumping water and the water table is going down.
  - Integrating decentralized solar power projects into the grid may pose technical challenges and stability issues, which need to be addressed.

CONTEMPT OF COURT

A Supreme Court lawyer has written to Attorney-General seeking consent to initiate criminal contempt proceedings against advocate who allegedly flung papers at Chief Justice of India (CJI) B.R. Gavai during court proceedings.

About Contempt of Court:

- Objective: Contempt of court seeks to protect judicial institutions from motivated attacks and unwarranted criticism, and as a legal mechanism to punish those who lower its authority.
- Legal backing:
  - When the Constitution was adopted, contempt of court was made one of the restrictions on freedom of speech and expression under Article 19 (2) of the Constitution of India.
  - Separately, Article 129 of the Constitution conferred on the Supreme Court the power to punish contempt of itself. Article 215 conferred a corresponding power on the High Courts.
  - The Contempt of Courts Act, 1971, gives statutory backing to the idea.

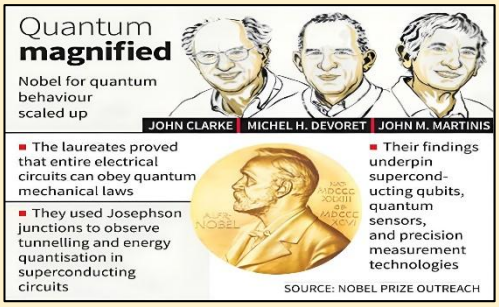
- Punishment:
  - A person found guilty of contempt of court can be sentenced to simple imprisonment for up to six months or fined up to Rs. 2,000 or both.
  - In the case of criminal contempt, the Supreme Court or the High Court may take action on its motion or a motion made by the Advocate-General or any other person, with the consent in writing of the Advocate-General.

Types of Contempt of Court:

- Civil Contempt: Section 2(b) of Contempt of Court Act 1971 defines civil contempt as wilful disobedience to any judgment, decree, direction, order, writ or other process of a court or wilful breach of an undertaking given to a court.
- Criminal Contempt: Section 2(c) of the Contempt of Court Act 1971 defines criminal contempt as the publication (whether by words, spoken or written, or by signs, or by visible representations, or otherwise) of any matter or the doing of any other act whatsoever which:
  - scandalises or tends to scandalise, or lowers or tends to lower the authority of, any court; or prejudices, or interferes or tends to interfere with the due course of any judicial proceeding; or interferes or tends to interfere with, or obstructs or tends to obstruct, the administration of justice in any other manner.

NOBEL PRIZE FOR PHYSICS

The Nobel Prize for Physics this year will be awarded to three scientists to tease greater insight into the workings of the quantum world.



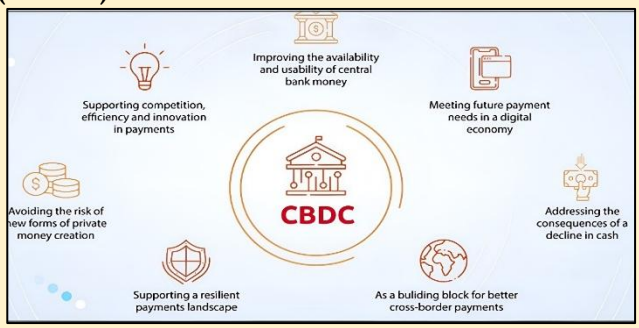
- Awardees: The Nobel Prize 2025 in Physics has been awarded to John Clarke from the University of California, Berkeley, Michel H. Devoret of Yale University and the University of California, Santa Barbara, and John M. Martinis of the University of California, Santa Barbara.
- Awarded for: They have been recognized for their pioneering work on the macroscopic quantum phenomena in electrical circuits, specifically the demonstration of quantum tunneling and energy quantization on a macroscopic scale.

- Significance: This groundbreaking research has significantly advanced our understanding of quantum mechanics in engineered systems and opened new avenues for quantum technology applications.
- About the experiment:
  - Much like early insight into quantum mechanics paved the way for transistors and silicon chips in the 1950s, the three scientists devised an electrical circuit with two superconductors, components that can conduct a current without any electrical resistance.
  - They separated these with a thin layer of material — called a Josephson junction — that did not conduct any current at all.
  - In this experiment, they showed that they could control and investigate a phenomenon in which all the charged particles in the superconductor behave in unison, as if they are a single 'particle' that fills the entire circuit.
  - Following this, they were able to demonstrate that such a particle could be made to behave simulating the flow of electricity even without voltage, a prerequisite for the flow of current.

CENTRAL BANK DIGITAL CURRENCY

- RBI is waiting for other countries to launch digital currency and is in no hurry to roll out Central Bank Digital Currency (CBDC) nationwide for retail, said Deputy Governor.

About Central Bank Digital Currency (CBDC):



- A CBDC is a legal tender issued by a central bank in digital form.
- Authorised by Central Bank: Unlike private cryptocurrencies, CBDCs are backed by the central bank, ensuring stability and trust.
- Objective: The main objective is to mitigate the risks and trim costs in handling physical currency, costs of phasing out soiled notes, transportation, insurance and logistics.
- Use of wallets: The digital fiat currency or CBDC can be transacted using wallets backed by blockchain.
- Difference with virtual currencies: Though the concept of CBDCs was directly inspired by Bitcoin, it is different from decentralised virtual currencies and crypto assets, which are not issued by the state and lack the 'legal tender' status.
- First country to launch: Bahamas was the first economy to launch its nationwide CBDC namely Sand Dollar in 2020.
- Major advantages:
  - CBDCs leverage digital security measures, potentially reducing the risk of counterfeiting and theft compared to physical cash.
  - Digital transactions can be settled instantly and efficiently, facilitating faster and more cost-effective payments.
  - Programmable features could be introduced to enable targeted disbursement of government benefits or encourage specific financial behaviours, promoting financial inclusion.
- Challenges associated:
  - Robust security measures are crucial to protect the e-rupee system from cyberattacks.
  - Balancing user privacy with the need for anti-money laundering and countering financing of terrorism measures is a critical aspect.
  - The RBI made CBDC non-remunerative and non-interest-bearing to mitigate potential risks of bank disintermediation.

PERIYAR TIGER RESERVE

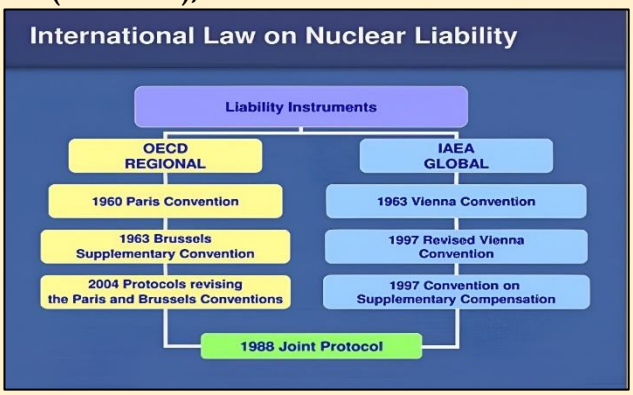
A 32-year-old forest watcher in the Periyar Tiger Reserve was found dead in the Ponnambalamedu forest area in Pathanamthitta district of Kerala.

- Nomenclature: It is named after the Periyar River, which originates within the reserve.
- Location: It is situated in the Idukki and Pathanamthitta districts of Kerala. It is set high at Cardamom Hills and Pandalam Hills of the Western Ghats, adjacent to the border with Tamil Nadu.
- Formation: It was established as a wildlife sanctuary in 1950 and later declared a Tiger Reserve in 1978.
- Terrain: The terrain is hilly and undulating with a maximum altitude of 2016 m. The highest peak is Kottamala (2016 m).
- Vegetation: It comprises tropical evergreen forests, semi- evergreen forests, moist deciduous forests, transitional fringe evergreen forests, grasslands, and eucalyptus plantations.
- Drainage: Major rivers flowing through the reserve are the Periyar and Mullayar.
- Dams: Mullaperiyar Dam is located within the PTR.
- Flora and fauna: Important flora includes teak, mangoes, rosewood, jamun, jacarandas, terminalias, tamarind, royal ponciana, bamboo, etc. Fauna includes Elephants, Wild Pigs, Sambar, Gaur, Mouse Deer, Barking Deer, Indian Wild Dog, and Tiger.
- Unique species: It hosts medicinal plants like Syzygium periyarensis, Habenaria periyarensis (an orchid), and Mucuna pruriense thekkadiensis.
- Tribes: It is home to six tribal communities including the Mannans, Paliyans, Malayarayans, Mala Pandarams, Uralis, and Ulladans, who live within the reserve.

CIVIL LIABILITY FOR NUCLEAR DAMAGE ACT (CLNDA), 2010:

- Finance Minister said that government intends to amend Civil Liability for Nuclear Damage Act as deliberations within the government continue on bringing in new legislation to allow the private sector to operate nuclear plants in India.

About Civil Liability for Nuclear Damage Act (CLNDA), 2010:

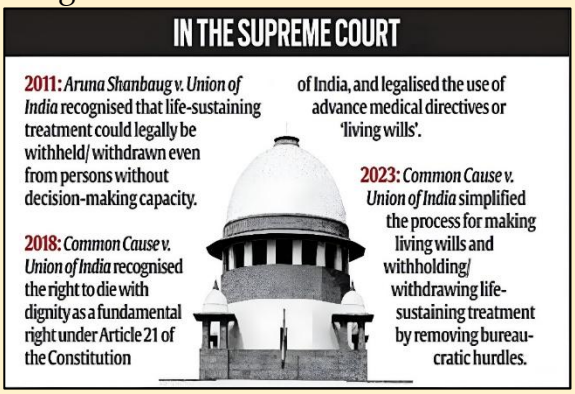


- Nature: It is India's nuclear liability law ensuring compensation for victims and defining responsibility for nuclear accidents.
- In sync with CSC: It aligns with the Convention on Supplementary Compensation (CSC, 1997), adopted post-Chernobyl to set global minimum compensation standards. India ratified CSC in 2016.
- Follows global conventions: It follows the nuclear liability principles of the Vienna Convention 1963, Paris Convention 1960, and Brussels Supplementary Convention 1963.
- Puts a cap on operator liability: The Act imposes strict, no-fault liability on operators, caps operator liability at Rs 1,500 crore.

- Provision for intervention of government: If damage claims exceed Rs 1,500 crore, the CLNDA expects the government to intervene. The government's liability is capped at the rupee equivalent of 300 million Special Drawing Rights (SDRs), roughly Rs 2,100 to Rs 2,300 crore.
- Nuclear Damage Claims Commission: The Act also establishes a Nuclear Damage Claims Commission to ensure fair compensation and resolve conflicts.
- Supplier Liability: India's CLNDA is unique as it introduces supplier liability under Section 17(b), enabling operators to seek recourse against suppliers; unlike global frameworks like the CSC, which place liability solely on the operator.
- Broadens supplier responsibility: Unlike CSC, which allows recourse only for contractual breaches or intentional acts, CLNDA broadens supplier accountability to cases where a nuclear incident results from a supplier's or their employee's act, including the supply of defective equipment, materials, or sub-standard services.

PASSIVE EUTHANASIA

- Recently, the U.K.'s House of Commons passed the Terminally Ill Adults (End of Life) Bill, reigniting a global conversation about euthanasia.



- Definition: Passive euthanasia refers to the intentional withholding or withdrawal of medical treatments or life-sustaining interventions, allowing a person to die naturally from their underlying condition.
- Mechanisms: This can include stopping treatments like ventilators, feeding tubes, or medications that keep the patient alive.
- Implementation: Decisions for passive euthanasia are typically made based on the patient's wishes, advance directives, or through family members and healthcare proxies when the patient cannot make decisions themselves.
- Legality in India: A five-judge bench of the Supreme Court in Common Cause vs Union of India (2018) recognised a person's right to die with dignity under Art. 21. It said that a terminally ill person can opt for passive euthanasia and execute a living will to refuse medical treatment.
- Draft guidelines on passive euthanasia: The guidelines for withdrawing or withholding medical treatment in terminally ill patients are based on four key conditions:
    - The individual has been declared brainstem dead.
    - There is a medical assessment that the patient's condition is advanced and unlikely to improve with aggressive treatment.
    - The patient or their surrogate has provided informed refusal to continue life support after understanding the prognosis.
    - The procedure follows the directives set by the Supreme Court.
- Legality in other parts of the world: Euthanasia is legal in several countries such as Netherlands, Belgium, Luxembourg, and Spain.
- Difference with Active euthanasia: Active euthanasia refers to the physician deliberate act, usually the administration of lethal drugs, to end an incurably or terminally ill patient's life. In India, active euthanasia is a crime.

SECURITIES TRANSACTION TAX

- The Supreme Court of India decided to examine a plea challenging the constitutional validity of the Securities Transaction Tax (STT), a direct tax levied on securities transactions through a listed stock exchange, as imposed under the Finance Act, 2004.

About Securities Transaction Tax (STT):

- Nature: It is a direct tax charged on the purchase and sale of securities listed on the recognized stock exchanges in India.
- Introduction: Finance Act 2004 introduced Securities Transaction Tax (STT), as a clean and efficient way of collecting taxes from financial market transactions. It is levied and collected by the central government of India.

- Regulation: STT is governed by Securities Transaction Tax Act (STT Act), and STT Act has specifically listed various taxable securities transactions, i.e., transactions on which STT is leviable.
- Taxable securities: These include equities, derivatives, or equity-oriented mutual funds investment units (excluding commodities and currency).
- Contract notes: The charges and rate of STT are reflected on the contract notes which a broker provides to its clients for every execution of trades.
- Excluded for certain transactions: The rate of taxation is different for different types of securities. STT is not applicable to off-market transactions or to commodity or currency transactions.
- Liability: The liability of applying the STT is on the broker when the client undertakes transactions in the stock market. The collected amount is then paid to the government.

SURGE IN CRIME AGAINST CHILDREN

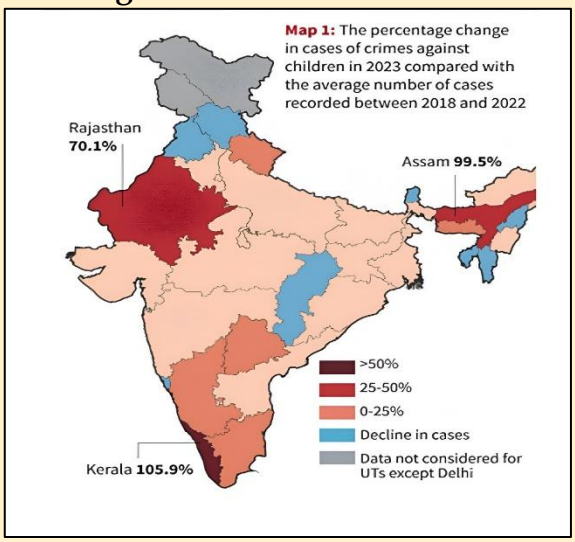
The latest *National Crime Records Bureau (NCRB)* data highlights a disturbing trend — a sharp surge in crimes against children in 2023, especially in the states of **Assam, Rajasthan, and Kerala**.

While the overall number of cases across India increased by about **25%**, these three states alone witnessed an unprecedented spike — **Assam (99.5%)**, **Kerala (105.9%)**, and **Rajasthan (70.1%)**.

This data underscores both the growing vulnerability of children and the evolving dynamics of law enforcement, awareness, and reporting mechanisms in India. However, experts caution that a rise in numbers may also reflect **improved reporting and legal enforcement**, rather than merely an increase in actual crimes.

The Data and Its Key Highlights

- **National Trend:**
  Across India, recorded crimes against children rose by nearly **25%** in 2023 compared to the 2018–2022 average.
- **State-wise Surges:**
  - **Assam:** From around 5,100 cases (2018–2022 average) to over **10,000** in 2023 — a **99% increase**.
  - **Kerala:** From 2,800 to **5,900 cases** — a **106% increase**.
  - **Rajasthan:** From 6,200 to **10,500 cases** — a **70% rise**.
- **Types of Crimes:**
  The increase spans across categories — **child sexual offences (POCSO Act)**, **kidnapping/abduction**, and **child marriage violations**.



Major Factors Behind the Surge

- **(a) Improved Reporting & Awareness**
  - The increase may partly reflect **better reporting mechanisms**, public awareness campaigns, and child protection helplines such as **1098**.
  - In Kerala and Assam, digital police portals and child-friendly reporting cells have improved case documentation.
- **(b) Crackdown on Child Marriage (Assam)**
  - The Assam government initiated a **statewide crackdown on child marriage** in 2023, invoking the *Prohibition of Child Marriage Act, 2006*.
  - Thousands of arrests and FIRs inflated overall child-related crime figures.
  - *Chart 2* shows PCMA cases forming over **51% of total child-related crimes** in Assam — indicating a legal enforcement surge rather than a rise in actual incidents.
- **(c) Expansion of Legal Provisions (Kerala & Rajasthan)**
  - Many offences previously booked under IPC are now recorded under **POCSO Act (2012)**, broadening the definition of sexual offences.
  - *Chart 5* shows Kerala registering over **4,000 POCSO cases** in 2023, nearly double from 2020.
- **(d) Judicial and Administrative Focus**
  - The creation of *Special POCSO Courts* and *fast-track mechanisms* has encouraged more victims and families to come forward.
  - However, conviction rates remain low, indicating gaps between reporting and justice delivery.

The Broader Picture

- **Rising Vulnerability:** Increased digital exposure, child labour, trafficking, and early marriages continue to put children at risk.
- **Data Interpretation Challenges:** A rise in numbers does not always equate to rising crime incidence; it may signify **improved registration and sensitisation** among police and citizens.
- **Disparities Across States:** States like **Uttar Pradesh, Delhi, and Maharashtra**, despite higher populations, recorded smaller percentage increases — suggesting better baseline reporting or policy consistency.

Governance and Policy Dimensions

- **Legislative Framework:**
  - *POCSO Act, 2012* – criminalises all sexual offences against minors.
  - *Juvenile Justice (Care and Protection of Children) Act, 2015* – ensures child rehabilitation.
  - *Prohibition of Child Marriage Act, 2006* – penalises child marriage facilitators.
- **Institutional Gaps:**
  - Lack of coordination between police, child welfare committees, and judiciary.
  - Inconsistent data collection and underreporting in rural regions.
  - Inadequate victim rehabilitation and psychological support.

Way Forward:

- Strengthen **child protection units** and community vigilance systems.
- Train police and teachers to identify abuse early.
- Promote digital awareness campaigns on child rights.
- Integrate **NCRB data** with real-time monitoring under the **National Commission for Protection of Child Rights (NCPCR)**.
- Ensure fast-track trials with victim-friendly approaches.

The surge in child-related crime statistics in Assam, Kerala, and Rajasthan reflects a **complex mix of heightened vigilance, stronger laws, and persistent social challenges**.

While improved reporting is a positive trend, the data also signals the need for sustained policy attention toward **child safety, law enforcement efficiency, and preventive education**.
Protecting children must remain central to India's vision of inclusive social justice and human security.

UPSC Mains Practice Question
"The recent surge in crimes against children in India may signify better reporting rather than worsening safety." Critically analyse this statement in the context of NCRB 2023 data. *(250 words, 15 marks)*

INTERNATIONAL ATOMIC ENERGY AGENCY

Iran's top diplomat said that cooperation with the IAEA, the UN nuclear watchdog was no longer relevant following the reimposition of international sanctions on it.

- Nature: IAEA is an intergovernmental organisation that seeks to promote the peaceful use of nuclear energy and to inhibit its use for any military purpose, including nuclear weapons.
- Establishment: It was established in 1957 as the world's "Atoms for Peace" organisation within the UN, and governed by its own founding treaty, viz. the Statute of the IAEA.
- Main functions: The IAEA works to ensure that nuclear technology is used solely for peaceful purposes. It applies comprehensive nuclear safeguards, including: Monitoring, On-site inspections, Information analysis, and Other techniques to verify peaceful use.
- Relations with UN: It reports to both the UNGA and the UNSC and is headquartered at the UN Office at Vienna, Austria.
- Distinction: In 2005, it was awarded the Nobel Peace Prize for its work for a safe and peaceful world.
- Membership: The IAEA has 180 member states, India being one of the founding members of it.
- Institutional structure: The General Conference, composed of all member states, meets annually to approve budgets and set general policy directions.
- Headquarters: Its headquarters is located in Vienna, Austria.

WORLD FOOD PROGRAMME

- Millions of people in Somalia face worsening hunger as major cuts to donor aid leave the World Food Programme with a critical funding shortfall, the UN agency warned.

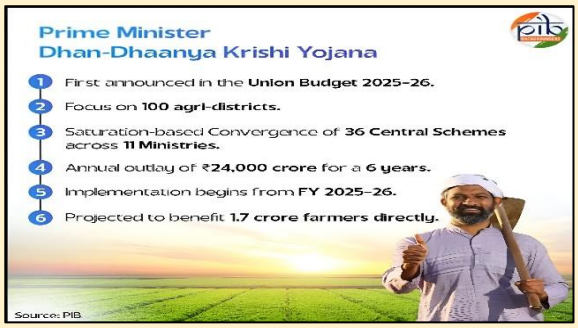
- Establishment: It is the world's largest humanitarian agency and was established in 1961.
- Associated with UN: It is a branch of the United Nations that deals with hunger eradication and promotes food security in the world.
- SDG 2: The organization's work is guided by Sustainable Development Goal 2, which aims to end hunger, achieve food security and improved nutrition, and promote sustainable agriculture by 2030.
- Extent: It operates in more than 120 countries, provides food assistance during emergencies and works with communities to enhance nutrition and generate resilience.

- Funding: The WFP has no independent source of funds, it is funded entirely by voluntary donations. Its principal donors are governments, but the organization also receives donations from the private sector and individuals.
- Nobel prize: The WFP has been awarded with the Nobel Prize for Peace 2020 for its efforts to combat hunger, bettering conditions for peace in conflict-affected areas and preventing the use of hunger as a weapon of war and conflict.
- Reports by WFP: The report released by the WFP is the Global Report on Food Crisis which describes the scale of acute hunger in the world.
- Headquarters: Its headquarter is located in Rome, Italy.

PRIME MINISTER DHAN-DHAANYA KRISHI YOJANA (PMDDKY)

The Government of India has launched the Prime Minister Dhan-Dhaanya Krishi Yojana (PMDDKY) to develop 100 Aspirational Agriculture Districts across 29 states and Union Territories. The scheme aims to enhance agricultural productivity and address regional disparities.

Uttar Pradesh leads with 12 districts selected, followed by Maharashtra with nine and Madhya Pradesh and Rajasthan with eight each. The initiative involves 100 Central Nodal Officers for monitoring and operational guidelines for effective implementation.



Selection Criteria of Aspirational Agriculture Districts

The districts were chosen based on three key factors – low agricultural productivity, moderate crop intensity, and below-average credit access.

The number of districts per state is proportional to the net cropped area and operational holdings. This ensures balanced regional development and targeted agricultural growth.

Objectives of PM Dhan-Dhaanya Krishi Yojana

PMDDKY focuses on five main goals – improving agricultural productivity, promoting crop diversification, adopting sustainable farming practices, enhancing post-harvest storage at local levels, and upgrading irrigation facilities. It also aims to facilitate both long-term and short-term agricultural credit for farmers.

Implementation and Convergence Strategy

The scheme does not have a separate budget but will be implemented by converging 36 schemes from 11 different departments.

The Department of Agriculture and Farmers Welfare will contribute up to 19 of these schemes. Each district will prepare a detailed agriculture development plan. The estimated investment under this scheme is ₹24,000 crore annually.

Geographical Spread and Districts Selected

Uttar Pradesh has the highest number of districts selected, including Mahoba, Sonbhadra, and Prayagraj. Maharashtra's districts include Palghar and Yavatmal. Madhya Pradesh and Rajasthan have eight districts each.

Bihar, which is preparing for elections, has seven districts on the list. Other states like Andhra Pradesh, Gujarat, Odisha, and Tamil Nadu have four districts each. Smaller states and Union Territories have one or two districts selected.

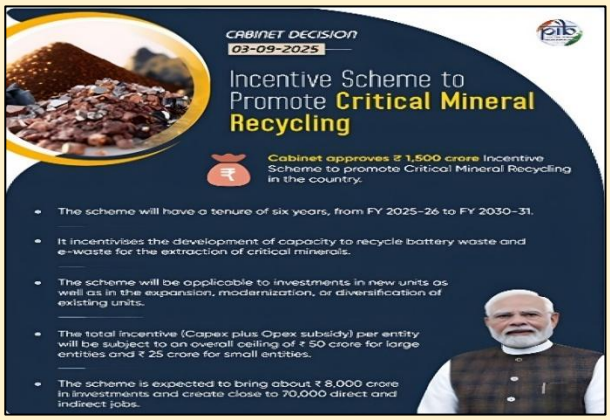
Monitoring and Administration

The Department of Personnel and Training appointed 100 Central Nodal Officers, mostly joint secretaries, to oversee scheme progress. These officers will monitor implementation and ensure convergence of schemes at the district level. Regular reporting and evaluation mechanisms are part of the operational guidelines.

CRITICAL MINERAL RECYCLING SCHEME

The Government of India has introduced a ₹1,500 crore incentive scheme to boost critical mineral recycling. This move aims to reduce the country's dependence on imports and build self-reliance in the critical minerals sector.

The scheme is part of the National Critical Mineral Mission and was approved by the Union Cabinet in September 2025. It focuses on developing recycling capacity from secondary sources such as e-waste and spent lithium-ion batteries.



Scheme Objectives and Scope

The scheme targets the extraction and production of critical minerals from recycled materials. It promotes recycling of e-waste, spent lithium-ion batteries, and other scrap. Both large and small recyclers, including start-ups, are eligible.

Support extends to new units, capacity expansion, modernisation, and diversification of existing units. The scheme excludes incentives for black mass production alone, focusing on actual mineral extraction processes.

Guidelines and Application Process

Detailed guidelines have been issued after consultations with industry and stakeholders. These outline incentive allocation, application, evaluation, disbursement, and performance monitoring.

Applications opened on 2 October 2025 and will close by 1 April 2026. The Ministry of Mines hosts the guidelines and application portal online. The scheme ensures transparency and institutional oversight to maintain efficiency.

Incentive Structure and Caps

Incentives cover capital expenditure (Capex) and operational expenditure (Opex) subsidies. Large entities can receive up to ₹50 crore in total, with a maximum Opex subsidy of ₹10 crore. Small entities have a total ceiling of ₹25 crore and an Opex cap of ₹5 crore. This structure aims to encourage wider participation and equitable distribution of benefits.

Expected Outcomes and Impact

The scheme aims to develop 270 kilo tonnes of annual recycling capacity. This is projected to yield 40 kilo tonnes of critical minerals yearly.

It is expected to attract investments worth around ₹8,000 crore. The initiative will create approximately 70,000 direct and indirect jobs. This will strengthen India's strategic mineral supply chain and support sustainable industrial grow

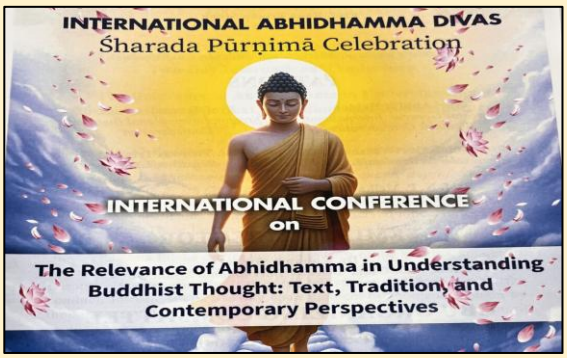
Significance for National Mineral Security

India's dependence on imports for critical minerals poses economic and security risks. Recycling reduces reliance on foreign sources and mitigates supply disruptions. It promotes circular economy principles by recovering valuable materials from waste. The scheme aligns with global trends towards sustainable resource management and technological innovation.

INTERNATIONAL ABHIDHAMMA DAY

The International Buddhist Confederation (IBC) and Gautam Buddha University hosted the celebration of International Abhidhamma Day on 6–7 October 2025. The event took place at Gautam Buddha University, Greater Noida, with support from the Ministry of Culture, and other Buddhist institutions.

It focused on the theme The Relevance of Abhidhamma in About Buddhist Thought – Text, Tradition and Contemporary Perspectives. This conference attracted scholars from India and several Asian countries. It explored the philosophical and practical dimensions of Abhidhamma and its significance in modern times.



Significance of International Abhidhamma Day

Abhidhamma Day marks the Buddha's teaching of the Abhidhamma to the gods in Tavatimsa Heaven and later to his disciple Sariputta. It is observed on the full moon of Śharada Pūrṇimā.

This day honours the deep doctrinal and ethical teachings contained in the Abhidhamma Pitaka, a major Buddhist scripture. The event marks the enduring spiritual and intellectual legacy of the Buddha's insights.

Conference Themes and Discussions

The conference featured over 35 scholarly papers covering philosophy, ethics, and psychology of Abhidhamma. Presentations compared Abhidhamma concepts with modern scientific fields such as psychology, artificial intelligence, and cognitive studies.

Experts debated how ancient Buddhist thought can inform contemporary mental health and well-being. The interdisciplinary approach enriched understanding of Abhidhamma's relevance .

Keynote and Addresses

Dr Uma Shankar Vyas, a distinguished scholar in Pali and Sanskrit, traced the evolution of Abhidhamma and called it special enlightenment. Prof Rana Pratap Singh emphasised Buddha's teachings as vital for personal and social progress.

The Chief Guest, 3rd Khenchen Rinpoche of Drikung Kagyu lineage, stressed Abhidhamma's practical use in overcoming ignorance and emotional afflictions. IBC Director General Shri Abhijit Halder brought into light its role in promoting holistic health.

Exhibitions and Cultural Programmes

The event included a unique exhibition of over 2,500 Buddhist stamps from 90 countries, curated by Vinod Kumar. Two thematic exhibitions showcased Buddha Dhamma on Body and Mind and artifacts related to Piprahwa relics, symbolising Buddhism's rich heritage.

Two films were screened, focusing on the spread of Buddha Dhamma in Asia and the life of Kushok Bakula Rinpoche, a revered monk. These cultural elements complemented the academic discussions.

Recognition of Pali as a Classical Language

The Government of India's declaration of Pali as a Classical Language puts stress on its importance. Pali is the canonical language of Theravada Buddhism and the Abhidhamma texts. This recognition helps preserve and promote Buddhist literature and philosophy worldwide. It also supports scholarly research and cultural exchange related to Buddhist studies.

INDIA'S DUGONG CONSERVATION RESERVE GETS INTERNATIONAL RECOGNITION

India's Dugong Conservation Reserve in Palk Bay has received formal recognition from the International Union for Conservation of Nature (IUCN). The motion was adopted at the IUCN World Conservation Congress 2025 held in Abu Dhabi.

This marks global endorsement of India's marine conservation efforts. The resolution received overwhelming support from governments, NGOs, and research bodies worldwide. Tamil Nadu's initiative is now seen as a model for dugong protection and marine ecosystem restoration.

Establishment and Location

The Dugong Conservation Reserve was established by the Tamil Nadu government on 21 September 2022. It covers 448.34 square kilometres in northern Palk Bay.

The area includes over 12,250 hectares of seagrass meadows. These meadows are critical feeding grounds for dugongs (Dugong dugon), a species classified as Vulnerable on the IUCN Red List. The reserve is vital not only for dugongs but also for many other marine species dependent on seagrass habitats.

Significance of Seagrass Meadows

Seagrass meadows play important ecological role. They provide food and shelter to dugongs and support diverse marine life. They also help maintain water quality and protect shorelines from erosion.

The degradation of these meadows threatens the survival of dugongs and the overall health of marine ecosystems. Conservation of seagrass is therefore essential for sustaining biodiversity in Palk Bay and beyond.

Threats to Dugongs and Habitat

The motion brought into light several threats to dugongs and their habitat. These include habitat destruction, destructive fishing practices, and climate change impacts such as rising sea temperatures and extreme weather events.

These factors reduce seagrass coverage and disturb dugong populations. Immediate action is necessary to curb these threats and safeguard the marine environment.

Innovative Conservation Efforts

The reserve has introduced innovative restoration techniques. Bamboo and coconut rope frames are used to rehabilitate damaged seagrass meadows.

This approach combines scientific knowledge with local community involvement. Such community-led conservation efforts enhance the sustainability of marine resource management. The success of these methods has drawn international praise and offers a replicable model for other regions.

Global Collaboration and Future Directions

The IUCN resolution encourages collaboration between India, Tamil Nadu, and international partners. It calls for strengthening monitoring systems, building fisheries management capacity, and sharing conservation knowledge.

The goal is to replicate the Indian model in other parts of the Indian Ocean and globally. This cooperation aims to protect dugong populations worldwide and promote sustainable marine ecosystems.

PALLIKARANAI MARSHLAND

The Southern Bench of the National Green Tribunal (NGT) has recently ordered a suspension of all construction activities within one kilometre of the Pallikaranai Marshland. This directive aims to protect the ecologically sensitive wetland until a detailed scientific study defines its precise zone of influence.

The order responds to reports of landfilling and construction inside the Perumbakkam wetland, which is hydrologically connected to the larger Pallikaranai Marsh system.

Chennai gets new ecopark at Pallikaranai marshland

Background and Context

Pallikaranai Marsh, declared a Ramsar Site in 2022, is one of the last remaining natural wetlands in Chennai. It plays important role in flood control and maintaining local biodiversity. Recent unregulated construction near the marsh poses risks to its ecological balance and the safety of surrounding communities.

Legal Intervention by National Green Tribunal

The NGT bench, led by Justice Pushpa Sathyanarayana and expert member Prashant Gargava, acted suo motu after media reports brought into light illegal activities near the marsh. The tribunal noted that Survey No. 286 in Perumbakkam village lies just 246 metres from the marsh boundary. The bench stressed that any unauthorised work here could disrupt water inflows and increase flood risks.

Role of Tamil Nadu State Wetland Authority

The Tamil Nadu State Wetland Authority (TNSWA) has provisionally identified a one-kilometre buffer zone around the marsh using topographical and hydrological models.

This zone marks the marsh's ecological influence area. The Integrated Management Plan (IMP), which will formalise this zone, is under revision and expected to provide clear guidelines for future activities.

Directions for Coordination and Compliance

The NGT has directed TNSWA, the Water Resources Department, and CMDA to expedite the completion of the IMP. Until the plan is finalised and the buffer zone officially notified, no new permissions or approvals for projects affecting the marsh or its hydrological systems shall be granted. This move aims to preserve the marsh's ecological functions and protect local communities from flood hazards.

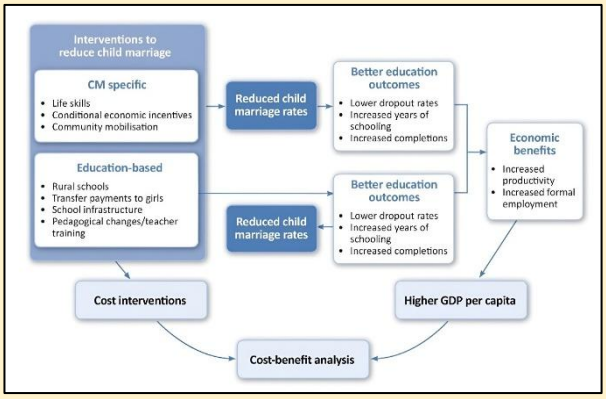
REDUCTION IN CHILD MARRIAGE ACROSS INDIA

Recent data reveals reduction in child marriage across India. A new report by Just Rights for Children marks a 69% decline among girls and 72% among boys. This progress results from coordinated efforts by the government, state authorities, and civil society. The report was revealed at a UN General Assembly side event in New York, marking a hopeful shift towards a child marriage-free India.

Current Status of Child Marriage in India

Child marriage rates have dropped dramatically in recent years. Assam leads with an 84% decline in girl child marriages. Maharashtra and Bihar follow with 70% declines each. Rajasthan and Karnataka show 66% and 55% decreases respectively.

Arrests and FIRs have been key deterrents. The government's Bal Vivah Mukt Bharat Campaign has achieved near-universal awareness. Most people now know the laws against child marriage and feel comfortable reporting violations.



Role of Government and Civil Society

The decline is credited to joint action by the Government of India, state governments, and NGOs. Over 250 organisations under the Just Rights for Children network have played a vital role. Campaigns through schools, panchayats, and community workers have increased awareness.

Frontline workers like ASHA, anganwadi workers, and PRI members helped collect data and support interventions. Legal enforcement has improved with more arrests and FIRs filed against offenders.

Education and Barriers for Girls

Education is a critical factor in reducing child marriage. In 31% of surveyed villages, all girls aged 6-18 attend school. However, disparities exist. Bihar shows only 9% full attendance while Maharashtra reaches 51%.

Major barriers include poverty (88%), lack of infrastructure (47%), safety concerns (42%), and transportation issues (24%). These factors limit girls' access to education and increase vulnerability to early marriage.

Reasons Behind Child Marriage

Poverty remains the primary cause, cited by 91% of respondents. Families often marry off girls to reduce economic burden or ensure safety. Traditions and social norms also play role.

Nearly half of respondents believe marriage protects minor girls from harm. Changing these deep-rooted beliefs is essential alongside economic and educational improvements.

Methodology of the Study

The report is based on data from 757 villages across five states, chosen to represent India's diverse social and cultural contexts. The study used Multistage Stratified Random Sampling. Data was collected through frontline workers and community members. This approach ensured reliable, ground-level vital information about child marriage trends and challenges.

NON-ALIGNED MOVEMENT (NAM)

Members of the Non-Aligned Movement (NAM) should harness the initiative to advance the aspirations of the Global South, said Minister of State for External Affairs.

Background: The Non-Aligned Movement was formed during the Cold War as an organization of States that did not seek to formally align themselves with either the United States or the Soviet Union, but sought to remain independent or neutral.

Origin: The basic concept for the group originated in 1955 during discussions that took place at the Asia-Africa Bandung Conference held in Indonesia.

Foundation: The Non-Aligned Movement was founded and held its first conference in Belgrade, Yugoslavia, in 1961 under the leadership of Josip Broz Tito of Yugoslavia, Gamal Abdel Nasser of Egypt, Jawaharlal Nehru of India, Kwame Nkrumah of Ghana, and Sukarno of Indonesia.

Objective: The purpose of the organization was enumerated in Havana Declaration of 1979 to ensure "the national independence, sovereignty, territorial integrity and security of non-aligned countries" in their struggle against imperialism, colonialism, neo-colonialism, racism, and all forms of foreign subjugation.

Members: It has 120 members comprising 53 countries from Africa, 39 from Asia, 26 from Latin America and the Caribbean and 2 from Europe (Belarus, Azerbaijan). There are 17 countries and 10 international organizations that are Observers at NAM.

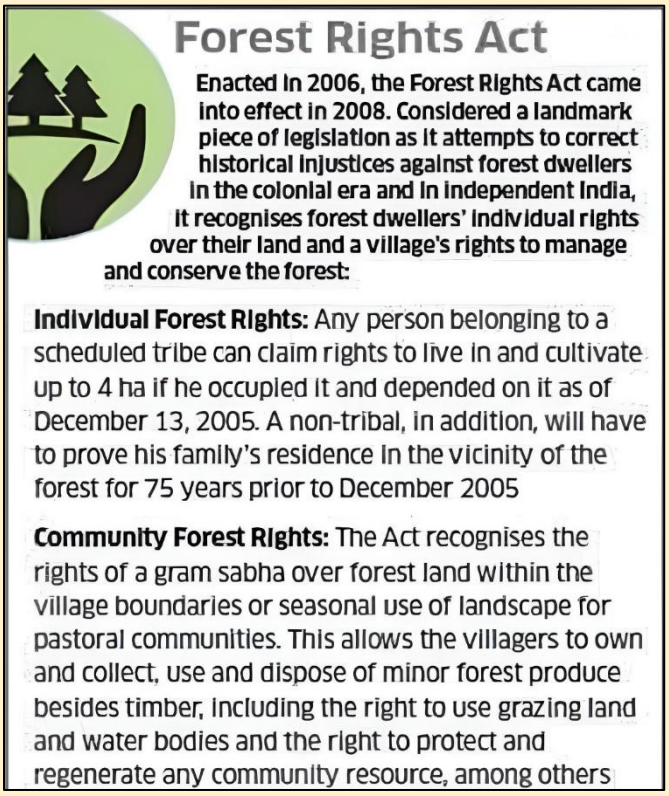
Significance: During the cold war era, the NAM played a vital role in stabilizing the world order and preserving peace and security. Non alignment of NAM doesn't mean the neutrality of state on global issues, it was always a peaceful intervention in world politics.

Panchsheel: The principles of NAM was largely guided by Panchsheel principles, some of them are:

- Respecting each other's territorial integrity and sovereignty.
- Not to take aggressive action against each other.
- Not to interfere in each other's internal matters.
- To follow the policy of equality and mutual benefit.
- Believe in the policy of peaceful co-existence.

FOREST RIGHTS ACT (FRA)

The Chhattisgarh High Court for the first time, addressed the question of whether forest rights granted under the 2006 Forest Rights Act (FRA) can be revoked or cancelled, given that the law does not explicitly provide for any such measure.



- Landmark legislation: The Forest Rights Act, 2006 (officially known as the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act) is a landmark legislation aimed at recognizing and securing the rights of forest-dwelling communities in India.
- Reasons behind bringing the Act:
    - The FRA, 2006 was implemented to recognize and vest the forest rights and occupation in forest land in forest dwelling Scheduled Tribes and other traditional forest dwellers who have been residing in such forests for generations but whose rights could not be recorded.
    - The Act also aimed to undo the historical injustice occurred to the forest dwelling communities due to the forest management policies of colonial and post-colonial India, which did not acknowledge their symbiotic relationship with the forests.
    - The Act further intended to empower the forest dwellers to access and use the forest resources in a sustainable manner, to conserve the biodiversity and ecological balance, and to protect them from unlawful evictions and displacement.

- Major provisions of the Act:
    - The Act recognizes and vests the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD) who have been residing in such forests for generations.
    - Forest rights can also be claimed by any member or community who has for at least three generations (75 years) prior to the 13th day of December, 2005 primarily resided in forest land for bona fide livelihood needs.
    - The Gram Sabha is the authority to initiate the process for determining the nature and extent of Individual Forest Rights (IFR) or Community Forest Rights (CFR) or both that may be given to FDST and OTFD.

- Four types of rights, identified by the Act:
    - Title rights: It gives FDST and OTFD the right to ownership to land farmed by tribals or forest dwellers subject to a maximum of 4 hectares. Ownership is only for land that is actually being cultivated by the concerned family and no new lands will be granted.

- Use rights: The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas etc.
- Relief and development rights: To rehabilitate in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection.
- Forest management rights: It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.

- Importance: It strengthens the conservation regime of the forests while ensuring livelihood and food security of the FDST and OTFD.

GREEN CRACKERS

Ahead of Deepavali, the Supreme Court relaxed the blanket ban on fireworks in Delhi and the National Capital Region (NCR) and allowed the sale of green fireworks approved by Petroleum and Explosives Safety Organisation (PESO).

Toxic nature

Conventional firecrackers contain chemicals which produce effects like bright lighting and colours. However, these chemicals can have adverse effects on human health and the environment

Initial ingredient	Use in crackers	Health hazards
Charcoal, potassium nitrate and sulphur	Black powder which is the primary fuel in the cracker	The dust released is hazardous when inhaled; different compounds formed can be carcinogenic
Strontium and lithium	Colouring agent (Red)	Strontium can replace calcium in the body which can be toxic; Lithium releases harmful fumes
Barium	Colouring agent (Orange)	Fumes can cause respiratory and other health issues
Nitrates, chlorates/ perchlorates	Oxidising agents	The compounds can hamper the growth of small children; they remain airborne for days and can be poisonous

- Nature: Green crackers are dubbed as 'eco-friendly' crackers and are known to cause less air and noise pollution as compared to traditional firecrackers.
- Designed by: These crackers were first designed by the National Environmental and Engineering Research Institute (NEERI), under the aegis of the Council for Scientific and Industrial Research (CSIR) in 2018.
- Objective: These crackers replace certain hazardous agents in traditional crackers with less polluting substances with the aim to reduce the noise intensity and emissions.
- Range of sound: Regular crackers also produce 160-200 decibels of sound, while that from green crackers are limited to about 100-130 decibels.

- Features:
  - Most green crackers do not contain barium nitrate, which is the most dangerous ingredient in conventional crackers.
  - Green crackers use alternative chemicals such as potassium nitrate and aluminium instead of magnesium and barium as well as carbon instead of arsenic and other harmful pollutants.

- Types of green crackers:
  - SWAS – Safe Water Releaser: These crackers do not use sulphur or potassium nitrate, and thus release water vapour instead of certain key pollutants. It also deploys the use of diluents, and thus is able to control particulate matter (PM) emissions by upto 30%.
  - STAR – Safe Thermite Cracker: Just like SWAS, STAR also does not contain sulphur and potassium nitrate, and besides controlling particulate dust emissions, it also has lower sound intensity.
  - SAFAL – Safe Minimal Aluminium: It replaces aluminium content with magnesium and thus produces reduced levels of pollutants.

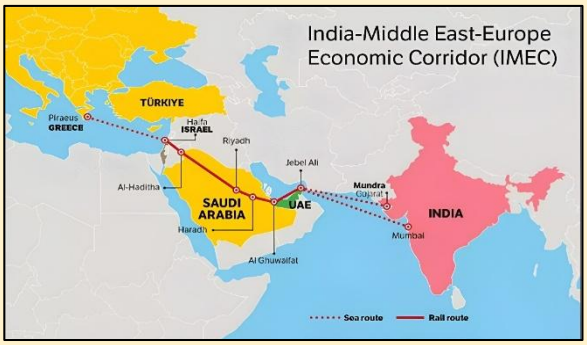
- Production: All three types of green crackers can currently only be produced by licensed manufacturers, approved by the CSIR.
- Certification: The Petroleum and Explosives Safety Organisation (PESO) is tasked with certifying that the crackers are made without arsenic, mercury, and barium, and are not loud beyond a certain threshold.

About Petroleum and Explosives Safety Organisation (PESO):

- Ministry: PESO is an office under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industries.
- Establishment: It was established in 1898 as a nodal agency for regulating safety of substances such as explosives, compressed gases and petroleum.
- Head office: Its head office is located in Nagpur, Maharashtra.

INDIA–MIDDLE EAST–EUROPE ECONOMIC CORRIDOR (IMEC)

The IMEC visualises the upgradation of maritime connectivity between India and the Arabian Peninsula, as well as high-speed trains running from the ports in the UAE to the Haifa port in Israel through Saudi Arabia and Jordan.



- Launch: The IMEC is a strategic multi-modal connectivity initiative launched through a Memorandum of Understanding (MoU) during the G20 Summit 2023 in New Delhi.
- Members: Signatories include India, US, Saudi Arabia, the United Arab Emirates, France, Germany, Italy and the European Union.
- Objective: It aims to develop an integrated network of ports, railways, roads, sea lines, energy pipelines, and digital infrastructure aimed at enhancing trade between India, the Middle East, and Europe.
- Alternative to BRI: IMEC seeks to position itself as a viable alternative to China's Belt and Road Initiative (BRI) by promoting transparent, sustainable, and debt-free infrastructure without compromising national sovereignty.
- Part of PGII: The initiative is a part of the Partnership for Global Infrastructure and Investment (PGII), launched by the G7 in 2021.
- Focus on cooperation: IMEC includes energy pipelines, clean energy infrastructure, and undersea cables to enhance trade and energy cooperation.
- Corridors: IMEC has two parts the Eastern Corridor (India to Gulf) and the Northern Corridor (Gulf to Europe).
- Significance for India:
  - IMEC is set to reduce logistics costs by up to 30% and transportation time by 40%, compared to the Suez Canal Maritime route making Indian exports more competitive globally.
  - In sync with OSOWOG: India's One Sun One World One Grid (OSOWOG) initiative aligns with IMEC's energy goals, enabling India to harness solar and green hydrogen power from the Middle East, a region rich in renewable energy potential.
  - It will attract Foreign Direct Investment into India, particularly in infrastructure, logistics, green energy, and digital technologies, helping India access low-cost renewable energy and transition to a low-carbon economy.
- Setback: The project faced a major setback due to the Israel-Hamas conflict in 2023. Geopolitical instability in the Middle East has temporarily slowed momentum.

NATIONAL COMMISSION FOR MINORITIES (NCM)

The Delhi High Court sought a response from the Union government on long-pending vacancies in the National Commission for Minorities (NCM).

- Genesis: The Minorities Commission (MC) was established in 1978 through a Ministry of Home Affairs Resolution and was moved to the newly created Ministry of Welfare in 1984.
- Nature: It is a statutory body established under the National Commission for Minorities Act, 1992. The first statutory Commission was constituted on 17th May 1993. In 1988, the Ministry of Welfare excluded linguistic minorities from the Commission's jurisdiction.
- Objective: It was formed with the vision to safeguard and protect the interests of minority communities.
- Composition: It consists of a Chairperson, a Vice-Chairperson, and five Members, all nominated by the Central Government but absence of a full body has led to concerns over inefficiency.
- Eligibility of members: Each member must belong to one of the six notified minority communities: Muslim, Christian, Sikh, Buddhist, Parsi, and Jain.
- Powers: It has quasi-judicial powers and each member serves a three-year term from the date they assume office.
- Removal: The Central Government may remove the Chairperson or any Member of the NCM if they:
  - Are adjudged insolvent,
  - Take up paid employment outside their duties,
  - Refuse or become incapable of acting,
  - Are declared of unsound mind by a court,
  - Abuse their office, or
  - Are convicted of an offence involving moral turpitude.

About Minorities in India:

- Not defined by Constitution: The Constitution of India does not provide a definition for the term 'Minority', but the Constitution recognises religious and linguistic minorities. The NCM Act, 1992 defines a minority as "a community notified as such by the Central government.
- List of Minority Communities: As per a 1993 notification by the Ministry of Welfare, the Government of India initially recognized five religious communities—Muslims, Christians, Sikhs, Buddhists, and Zoroastrians (Parsis) as minority communities. Later, in 2014, Jains were also notified as a minority community.

HENLEY PASSPORT INDEX

In a changing global mobility landscape, both India and the United States have seen notable drops in their passport power, according to the 2025 Henley Passport Index, which ranks the world's most travel-friendly passports.

- Nature: The Henley Passport Index ranks global passports based on the number of destinations their holders can travel to without a visa, with data sourced from the International Air Transport Association (IATA).
- Definition of a powerful passport: It is defined by travel openness, the freedom to enter more countries without having to deal with visa applications, long processing times, or bureaucratic hurdles.
- Published by: It is compiled and published by Henley & Partners, a global citizenship and residence advisory firm.
- Findings from Henley Passport Index 2025:
  - Leading the rankings in 2025 are three Asian countries: Singapore holds the top spot with access to 193 destinations visa-free, followed by South Korea with 190 destinations and Japan with 189 destinations.
  - India's passport has fallen to 85th place, offering visa-free access to 57 countries, down from 59 in 2024. This marks a further decline from the 77th position earlier this year, underscoring a steady reduction as per the index.
  - For the first time in the Index's 20-year history, the United States has dropped out of the global top 10. The US passport now ranks 12th, tied with South East Asian Malaysia, offering visa-free access to 180 destinations out of 227.

NATIONAL SECURITY GUARD (NSG)

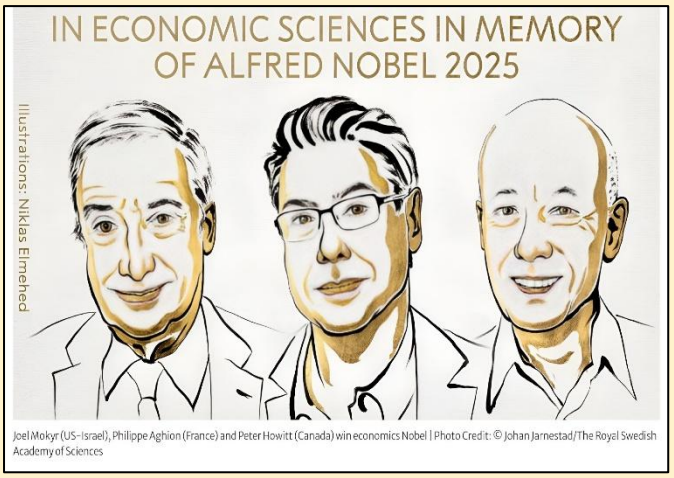
A new hub of the National Security Guard (NSG), the elite counter-terror and counter-hijack force, will be established at Ayodhya in Uttar Pradesh.

- Establishment: The NSG is a counter-terrorism unit that formally came into existence in 1986 by an act of Parliament- 'National Security Guard Act, 1986'.
- Incidents that led to its formation: The idea behind raising such force came in the aftermath of Operation Blue Star in 1984, Akshardham Temple attack and the assassination of former PM Indira Gandhi.
- Objective: It aims for 'combating terrorist activities with a view to protect states against internal disturbances.'
- Specialisations: The NSG is trained to conduct counter-terrorist task including counter hijacking tasks on land, sea, and air; Bomb disposal (search, detection, and neutralization of IEDs), Post Blast Investigation (PBI), and Hostage Rescue missions.
- Distinctive uniform: The NSG personnel are often referred to in the media as Black Cat Commandos because of the black outfit and black cat insignia worn on their uniform.
- Motto: The motto of 'Sarvatra, Sarvottam, Suraksha' has always been upheld by it with a focus on its basic philosophy of swift and speedy strike and immediate withdrawal from the theatre of action.

- Ministry: It operates under the Ministry of Home Affairs and is a task-oriented force that has two complementary elements in the form of:
  - Special Action Group (SAG) comprising of the Army personnel- is the main offensive or the strike wing of the NSG, and
  - Special Ranger Groups (SRG) comprising of personnel drawn from the Central Armed Police Forces/State Police Forces. They generally handle VIP securities.

NOBEL PRIZE IN ECONOMICS

The Nobel prize in Economics was declared for year 2025 by Royal Swedish Academy of Sciences.



- Awardees: Joel Mokyr, Philippe Aghion and Peter Howitt won the 2025 Nobel economics prize. Mr. Mokyr was awarded half the prize with the other half being shared between Aghion and Howitt.
- Awarded for: They were awarded the Nobel economics prize for "having explained innovation-driven economic growth."
- Significance: The laureates have taught us that sustained growth cannot be taken for granted.
- Economic stagnation, not growth, has been the norm for most of human history. Their work shows that we must be aware of, and counteract, threats to continued growth.

SNOW LEOPARD

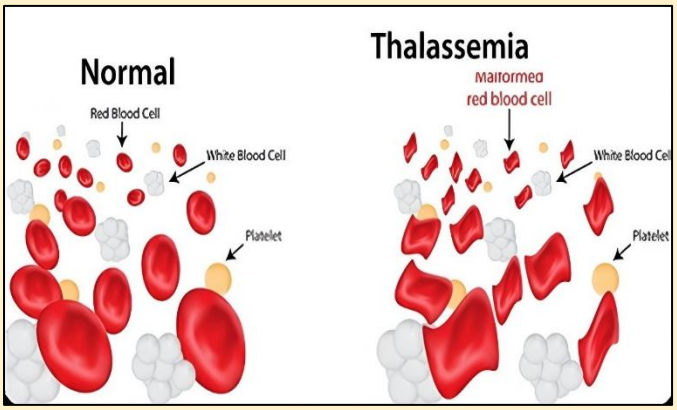
Snow leopard that inhabits the rugged ranges of 12 Asian countries, including India, has the lowest genetic diversity of any big cat species in the world, even lower than that of the dwindling cheetah.

- Physical features
  - Extra paws: Its extra large paws act like a pair of natural snow shoes preventing the cat from sinking into the snow.
  - Short ears: Its round, short ears reduce heat loss, and the wide, short nasal cavity warms the air before it reaches the cat's lungs.
  - Longer hind limbs: The cat has strong, short front limbs and longer hind limbs helping launch the cat up to 30 feet (10 meters) in one leap.
- Difference with other cats:
  - Unlike other big cats, snow leopards can't roar.
  - Despite being called the snow 'leopard', this big cat is more closely related to the tiger than the leopard.
- Habitat: Snow leopards (Panthera uncia) are considered medium-sized cats that are known for their elusive nature and ability to thrive in harsh, high-altitude environments.
- Native areas: They are native to the mountains of Central and South Asia and typically found at elevations between 9,800 and 17,000 feet in mountain ranges, including the Himalayas.

- Adaptations: They are known as "ghosts of the mountains" due to their elusive nature and ability to blend into their surroundings.
- Reproduction: They usually mate between January and March, a time when both sexes mark their territories intensively leaving signs such as scrapes, faeces, urine and scent-spray in prominent locations along their travel routes.
- Ecological Importance: They serve as top predators and Indicator species, as their presence reflects the health of their high-altitude ecosystems. Their kills provide food for scavengers like vultures and wolves, supporting other species.
- Conservation status:
    - IUCN: Vulnerable
    - CITES: Appendix 1
    - Wildlife (Protection) Act, 1972 :- Schedule 1

THALASSEMIA

Thalassemia patients flagged shortage of leukocyte filter sets and iron chelation drugs in Kerala.



- Nature: Thalassemia is an inherited blood disorder that reduces the body's ability to produce normal hemoglobin, leading to fewer healthy red blood cells and anemia.
- Cause: Thalassaemia is caused by inheriting a gene mutation (change in the normal DNA) from one or both parents.
-
- Symptoms: Symptoms range from growth issues, delayed puberty, and bone abnormalities in mild cases to poor appetite, jaundice, dark urine, and facial bone irregularities in severe cases.
- Types of Thalassemia:
    - Alpha Thalassemia: It is caused by defective alpha-globin genes inherited from both parents.
    - Beta Thalassemia: It is caused by defects in beta-globin genes.
- Treatments:
    - Blood transfusions – regular blood transfusions treat and prevent anaemia; in severe cases these are needed around once a month.
    - Chelation therapy – treatment with medicine to remove the excess iron from the body that builds up as a result of having regular blood transfusions.
    - The only possible cure for thalassaemia is a stem cell or bone marrow transplant, but this is not done very often because of the risks involved.

IRON AGE CULTURE

The first season of excavations carried out by the Tamil Nadu State Department of Archaeology (TNSDA) at Thirumalapuram in Tenkasi district has brought to light the presence of Iron Age culture close to the Western Ghats in Tamil Nadu.

- According to 'Archaeological Excavations in Tamil Nadu: A Preliminary Report', the burial site at Thirumalapuram covers nearly 35 acres and lies about 10 km northwest of the present-day village, between two seasonal streams that rise from the Western Ghats near the Kulasegarapereri tank.
- The excavations also yielded a rich collection of ceramics found in graves and among grave goods. These included white-painted black-and-red ware, red ware, red-slipped ware, black-polished ware, and coarse red ware.
- The black-and-red ware, black ware, and black-slipped ware types had white-painted designs, a unique feature first reported from T. Kallupatti and later from Adichanallur, Sivagalai, Thulukkarpatti, and Korkai.
- According to the report, symbols on the urns were among the most striking discoveries at Thirumalapuram. One red-slipped pot featured dotted designs showing a human figure, a mountain, a deer, and a tortoise.
- A total of 78 antiquities made of bone, gold, bronze, and iron were also found. They include a tweezer, sword, spearhead, gold ring, axe, dagger, chisel, bonehead, and arrowhead.

About Iron Age:

- Nature: The Iron Age is a prehistoric period that followed the Bronze Age, characterized by the widespread use of iron for tools, weapons, and other implements.

- Various cultures associated with it:
  - Black-and-Red Ware (BRW): It is characterized by distinctive pottery with black interiors and red exteriors due to inverted firing techniques. It is found in Harappan context (Gujarat), Pre-PGW context (northern India), and Megalithic context (southern India).
  - Painted Grey Ware (PGW) Culture: It is characterized by grey pottery with black geometric patterns. Iron reported at multiple sites in the Ganga valley and South Indian Megaliths (1st millennium BCE).
  - Northern Black Polished Ware (NBPW) Culture: It is characterized by wheel-made pottery which is fine, black, and highly polished. It is significant in north India.
  - Megalithic Culture: Megaliths (large stones used to construct a prehistoric structure), linked to iron, are found in the Vindhyas (southern Uttar Pradesh), Vidisha region, and much of South India.

WORLD FOOD DAY 2025

World Food Day 2025, observed on 16 October, focuses on global food security and sustainable agriculture. The theme, Hand in Hand for Better Foods and a Better Future, stresses worldwide cooperation to transform food systems. India's recent strides in food production, nutrition, and public distribution show its commitment to combating hunger and malnutrition.

Significance of World Food Day

World Food Day commemorates the founding of the Food and Agriculture Organization (FAO) in 1945.

It raises awareness about food security challenges and promotes sustainable agricultural practices. Over 150 countries participate annually, emphasising collective action for hunger eradication and sustainable food systems.

India's Progress in Food Production

India has seen increases in foodgrain, fruit, and vegetable production over the last decade. It leads globally in milk and millet production and ranks second in fish, fruit, and vegetable output.

Agricultural exports have almost doubled in 11 years. Honey and egg production have also doubled since 2014, reflecting enhanced agricultural productivity and diversification.

Key Government Schemes for Food Security

India's food security framework balances production and distribution through major schemes: National Food Security Mission (NFSM) – Launched in 2007-08, it boosts production of rice, wheat, pulses, and coarse cereals while improving soil health and farmer incomes. Renamed National Food Security & Nutrition Mission (NFSNM) in 2024-25, it now integrates nutrition goals. – National Food Security Act (NFSA), 2013 – Covers over 78 crore beneficiaries, guaranteeing subsidised foodgrains to priority households and Antyodaya Anna Yojana families.Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) – Provides free foodgrains to vulnerable groups, extended till 2028 with substantial government funding.

PM POSHAN Scheme – Provides nutritious mid-day meals to children in government schools to improve health and attendance.

Rice Fortification and Nutrition Enhancement

India's rice fortification programme began in 2019 to combat micronutrient deficiencies.

Fortified rice kernels contain iron, folic acid, and vitamin B12, blended with regular rice. By March 2024, all rice under central schemes was fortified. The government has approved continuation of universal fortified rice supply till 2028.

Modernisation of Public Distribution System

The SMART-PDS initiative aims to digitise and streamline foodgrain procurement, supply chain, ration card management, and biometric distribution. The Mera Ration 2.0 app enhances transparency, providing real-time beneficiary data.

Nearly all ration cards are Aadhaar-seeded, and most Fair Price Shops use electronic point-of-sale devices. The One Nation, One Ration Card scheme ensures portability of benefits nationwide.

Market Measures and Pulses Self-Reliance

The Open Market Sales Scheme (Domestic) stabilises foodgrain prices and availability. Bharat Atta and Bharat Rice offer subsidised wheat flour and rice to consumers.

The Mission for Aatmanirbharta in Pulses (2025-31) aims to increase pulse production by expanding cultivation area and supporting two crore farmers, enhancing nutritional security and self-sufficiency.

Global Recognition and Sustainable Diets

World Food India 2025 showcased India as a global food hub with participation from 90+ countries. The Indian Thali diet, rich in plant-based foods, received acclaim for its low environmental impact and nutritional benefits. It exemplifies sustainable food practices that could reduce global resource use by 2050.

INDIA BRAZIL DEFENCE COLLABORATION

India and Brazil have recently intensified their defence collaboration. On 15 October 2025, Defence Minister Rajnath Singh met Brazilian Vice-President Geraldo Alckmin and Defence Minister José Múcio Monteiro Filho in New Delhi. The talks focused on expanding bilateral defence ties, including the potential supply of India's Akash missile system to Brazil.

Recent Defence Talks

The meeting marked step in India-Brazil defence relations. Both sides discussed military cooperation and identified priority areas for joint work.

The talks included possibilities for co-development and co-production of defence equipment. India proposed supplying the Akash surface-to-air missile system to Brazil, enhancing Brazil's air defence capabilities.

Strategic Partnership Context

India and Brazil share a long-standing strategic partnership. Both countries aim to deepen defence ties as part of broader bilateral relations. This cooperation is seen as relevant to global strategic stability. The partnership includes military exchanges, joint exercises, and training visits, encouraging mutual trust and interoperability.

Akash Missile System

The Akash missile is an indigenously developed medium-range surface-to-air missile. It is capable of targeting multiple aerial threats simultaneously. The system is known for its cost-effectiveness and reliability. Exporting Akash to Brazil would mark a key milestone in India's defence exports.

Co-Development and Co-Production Prospects

Both nations expressed interest in exploring joint defence projects. Co-development and co-production could boost local defence industries in India and Brazil. This collaboration would promote technology transfer and enhance self-reliance. It aligns with India's 'Make in India' and Brazil's defence modernisation goals.

Military-to-Military Exchanges

The leaders reaffirmed commitments to increase military-to-military contacts. Joint exercises and training visits are planned to improve operational coordination. These exchanges help build strategic trust and share best practices. They also prepare forces for potential joint operations.

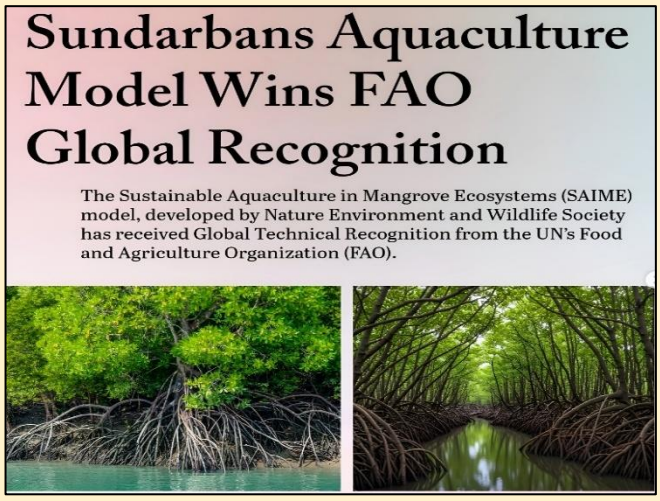
Impact on Global Defence Dynamics

The India-Brazil defence cooperation reflects shifting global defence partnerships. It signals South-South cooperation beyond traditional alliances. This collaboration may influence regional security balances in Latin America and Asia. It also enhances India's role as a global defence supplier.

SUSTAINABLE AQUACULTURE IN MANGROVE ECOSYSTEMS (SAIME) MODEL

The Nature Environment and Wildlife Society (NEWS) of West Bengal's Sundarbans has earned global acclaim for its Sustainable Aquaculture in Mangrove Ecosystems (SAIME) model. The Food and Agriculture Organization (FAO) of the United Nations honoured NEWS with Global Technical Recognition on 15 October 2025.

This award was given during FAO's 80th Anniversary Celebrations and the World Food Forum in Rome, Italy. SAIME is a pioneering approach that integrates aquaculture with mangrove conservation, climate adaptation, and sustainable livelihoods.



Background and Recognition

The SAIME model was developed to address the environmental and economic challenges in the Sundarbans, a unique mangrove ecosystem. It promotes aquaculture that sustains 5% to 30% mangrove coverage in shrimp farming ponds.

This balance helps maintain ecosystem health while supporting farmers' incomes. The FAO's recognition marks the global importance of such ecosystem-based approaches amid climate change.

Implementation and Impact

SAIME has been implemented over nearly 30 hectares by 42 fish farmers in North and South 24 Parganas districts. The farmers cultivate Black Tiger Shrimp (Penaeus monodon) using mangrove litter as natural fodder. This reduces reliance on costly external inputs. After several years, the average annual net profit for these farmers more than doubled. Cost savings and improved practices contributed to this financial success.

Community Participation and Good Practices

The model emphasises community involvement. Farmers collectively adopt good aquaculture practices that protect mangroves and sustain shrimp production. The participatory approach ensures shared responsibility and knowledge exchange. It also helps in adapting to climate challenges like sea-level rise, which threatens coastal areas including the Sundarbans.

Environmental and Climate Benefits

SAIME supports coastal resilience by preserving mangroves that act as natural buffers against storms and erosion. The chemical-free shrimp farming reduces environmental pollution. Mangrove conservation under this model aids carbon sequestration, contributing to climate change mitigation. This integrated approach aligns with global climate action goals and sustainable development.

Significance in the Sundarbans Context

Rampant shrimp farming has altered land use in the Sundarbans, often at the expense of mangroves. SAIME offers a sustainable alternative that balances economic needs with environmental conservation.It serves as a replicable model for other mangrove regions facing similar pressures from aquaculture expansion and climate threats.

UNITED NATIONS HUMAN RIGHTS COUNCIL

India has secured an unopposed election to the United Nations Human Rights Council for the seventh time. The new term will run from 2026 to 2028.

This repeated election marks India's consistent dedication to promoting human rights globally. India's Permanent Representative to the UN, P Harish, expressed gratitude for the widespread support and affirmed India's commitment to advancing fundamental freedoms during its tenure.

About the UN Human Rights Council

The Human Rights Council is the principal UN body focused on human rights. It has 47 member states elected by the UN General Assembly. The Council monitors human rights conditions worldwide. It reviews member states' situations and provides a platform for dialogue on human rights issues. Established in 2006, it replaced the earlier Commission on Human Rights to strengthen global human rights governance.

India's Role in the Council

India joined the Council in its inaugural year, 2006. Since then, it has been elected seven times, reflecting its active participation. India advocates for human rights based on its own constitutional values and democratic traditions.

It emphasises cooperation, dialogue, and respect for sovereignty in addressing human rights challenges. India also supports development and capacity-building initiatives within the Council's framework.

Election Process and Significance

Members of the Human Rights Council are elected by the UN General Assembly. Elections are often competitive but India's unopposed election indicates strong diplomatic support. Each term lasts three years with a limit of two consecutive terms. The Council's membership represents regional groups to ensure geographic balance. Being a member allows countries to influence global human rights policies and respond to violations.

Challenges and Opportunities for India

India faces complex human rights challenges domestically and internationally. Its membership offers a platform to address these issues constructively.

India can promote dialogue on emerging human rights concerns such as digital rights, migration, and climate justice. It can also contribute to reforms in the UN human rights system. India's tenure helps strengthen multilateralism and global cooperation on human rights.

India's Diplomatic Engagement

India's election reflects its growing diplomatic stature. It has built alliances through consistent engagement with other UN members. India's approach combines advocacy with respect for cultural diversity and development needs.

It uses the Council to show issues affecting developing countries. India supports balanced and fair mechanisms to protect human rights without politicisation.

GOMTI REJUVENATION MISSION

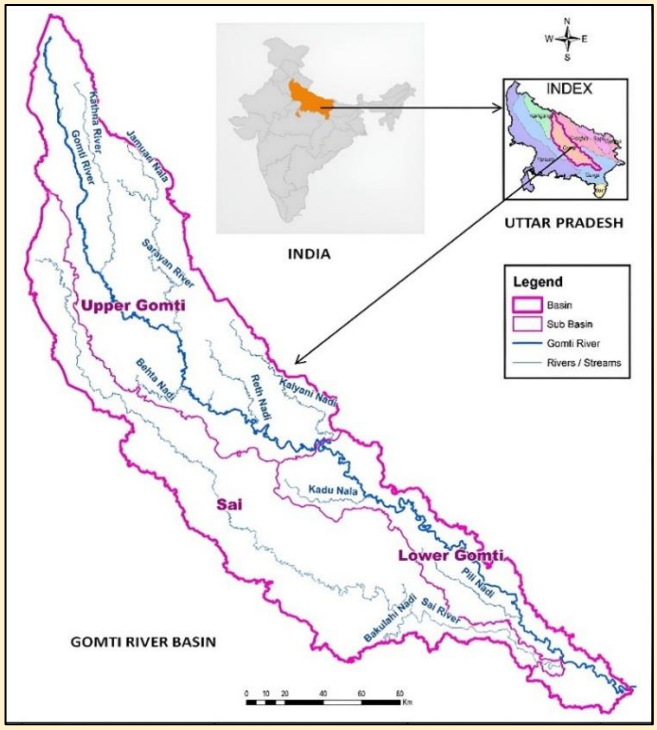
The Uttar Pradesh government launched the Gomti Rejuvenation Mission in October 2025. The mission aims to restore the Gomti River's natural flow by intercepting 95 per cent of urban sewage entering the waterway. Spanning from Pilibhit to Ghazipur, the initiative seeks to revive the river's ecosystem and improve water quality.

Scope and Objectives

The mission covers the entire Gomti river basin. Its primary goal is to ensure the river remains clean, uninterrupted, and pristine. Officials plan to intercept nearly all sewage from urban drains feeding into the river. This will reduce pollution and prevent untreated waste from entering the water.

Sewage Treatment Infrastructure

Currently, six sewage treatment plants (STPs) operate along the river with a combined capacity of 605 million litres per day. The mission includes expanding this capacity by constructing new STPs and upgrading existing ones. Additional drains will be diverted to these treatment plants to prevent untreated discharge.



Pollution Control Measures

The mission targets 39 major drains flowing into the Gomti. Of these, 13 drains currently release untreated sewage. These will be intercepted and treated. The government plans to remove encroachments that have narrowed the river's flow. This will help restore the river's natural width and improve water movement.

Ecological and Beautification Initiatives

New wetlands such as Ekana Wetland and Sajan Lake in Lucknow will be developed to support biodiversity and improve water retention. Campaigns will focus on removing encroachments, beautifying river ghats, and increasing green cover along the banks. These efforts aim to revive the ecosystem and enhance the river's aesthetic appeal.

Governance and Monitoring

The Gomti Task Force, formed under the National Mission for Clean Ganga, oversees the project. It includes representatives from various state departments and experts. Monthly reviews and quarterly progress reports will ensure accountability. The Chief Minister's Office will closely monitor implementation.

Resource Allocation and Equipment

The government has assured adequate funding for the mission. Essential equipment such as track boats, floating barriers, and excavators will be provided without delay. This will support efficient cleaning and restoration activities along the river.

About Gomti River

It is a tributary of the Ganges (Ganga) River, flowing entirely through the state of Uttar Pradesh.

The river is also known by the names Gumti or Gomati.

Course:

It originates from the Gomat Taal, otherwise called Fulhaar Jheel, a lake located in the Pilibhit District in Uttar Pradesh.

The river drains the area between the Ramganga and Sharda Rivers.

After flowing southwards through the districts of Lucknow, Barabhanki, Sultanpur, Faizabad, and Jaunpur, it joins with the River Ganga.

The river extends to about 900 km.

It drains a basin of about 18,750 sq.km.

The entire Gomti basin is underlain by thick alluvial sediments of the Quaternary age.

The alluvial sediments consist of boulders, pebbles, gravel, sand, silt, clay, and kankars.

The unconsolidated unit may be further subdivided into younger alluvium and older alluvium.

The younger alluvium occupies the present-day flood plains, while the older group occupies elevated portions, mainly the doab portions.

The older alluvium is characterized by kankar nodules at depth otherwise it is similar to the younger alluvium.

It is a perennial river. The river is characterised by sluggish flow throughout the year, except during the monsoon season, when heavy rainfall causes a manifold increase in the runoff.

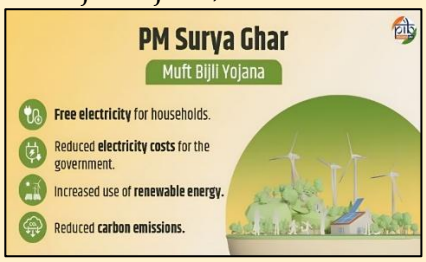
Significant tributaries of the Gomti include the Sai River, Chowka River, Kathina River, and Saryu River.

There are various cities that are situated on the banks of River Gomti, such as Sultanpur, Lucknow, Jaunpur, and Lakhimpur Kheri.

Over the years, Gomti has become one of the most polluted rivers in Uttar Pradesh.

PM SURYA GHAR: MUFT BIJLI YOJANA

Despite a near four-fold increase in applications between March 2024 and July 2025, only 13.1% of the targeted 1 crore solar rooftop installations, under the PM Surya Ghar: Muft Bijli Yojana, has been achieved.



- Feature: It is a central scheme to promote the adoption of solar rooftop systems by providing substantial financial subsidies and ensuring ease of installation.
- Objective: It aims to provide free electricity to one crore households in India, who opt to install roof top solar electricity units. The households will be able to get 300 units of electricity free every month.
- Implementation Agencies: The scheme will be executed at two levels.
  - National Level: Managed by the National Programme Implementation Agency (NPIA).
  - State Level: Managed by State Implementation Agencies (SIAs), which are the Distribution Utilities (DISCOMs) or Power/Energy Departments of the respective states or UTs.
- Supervision: As SIAs, DISCOMs are responsible for facilitating various measures to promote rooftop solar adoption, including ensuring the availability of net metres, and conducting timely inspections and commissioning of installations.
- Capping of subsidy: The scheme provides subsidies to reduce the cost of installing solar rooftop systems. The subsidy is capped at a maximum of 3kW capacity.
- Eligibility: Grid-connected rooftop solar systems on residential properties, including roofs, terraces, balconies, and elevated structures are eligible for Central Financial Assistance (CFA).

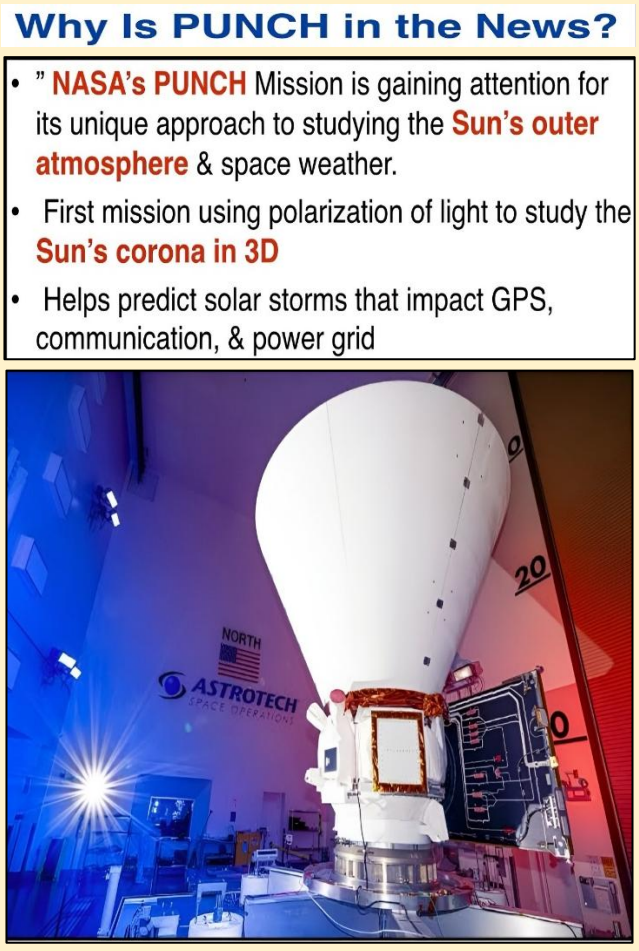
PUNCH SPACE MISSION

The PUNCH Space Mission, launched by NASA in 2025, is providing new vital information about the solar wind and the Sun's outer atmosphere.

It aims to visualise phenomena previously invisible to scientists. The mission is crucial during the current solar maximum, a period of intense solar activity that affects space weather and human technology.

Overview of the PUNCH Mission

PUNCH stands for Polarimeter to Unify the Corona and Heliosphere. It focuses on the Sun's corona and the solar wind as a connected system. The mission uses advanced imaging to capture the solar wind's behaviour as it moves away from the Sun. This helps scientists understand how solar particles travel through space.



Scientific Importance of Visualising Solar Wind

Solar wind is a stream of charged particles released by the Sun. It is invisible to the naked eye and difficult to study.

PUNCH makes this invisible visible by capturing detailed images. This allows researchers to track solar wind patterns and predict space weather events more accurately. Such events can disrupt satellites, power grids and communication systems on Earth.

Solar Maximum and Its Effects

The Sun is currently in a solar maximum phase. This means it has increased sunspots, solar flares and coronal mass ejections. These events release large amounts of energy and particles into space.

PUNCH helps monitor these ejections to improve forecasting. Although exact timings of ejections cannot be predicted, their frequency during solar maximum is known.

Applications in Space Weather Forecasting

Space weather forecasting is vital for protecting technology and astronauts. Solar storms can damage spacecraft and affect GPS and radio signals.

By understanding solar wind dynamics, PUNCH contributes to early warnings. This allows preventive measures to be taken to protect infrastructure on Earth and in space.

Collaborations and Public Engagement

The mission's findings are shared through lectures and scientific collaborations worldwide. Public talks, like the one in Thiruvananthapuram, help raise awareness of space science. Partnerships between NASA, academic institutions and science societies promote knowledge exchange and inspire future research.

FREE TRADE AGREEMENTS (FTAS) & FARMER'S RIGHTS

Recent reports reveal that free trade agreements (FTAs) are increasingly used by wealthy nations to impose strict intellectual property (IP) rules on seeds and biodiversity.

These rules threaten farmers' traditional rights and increase corporate control over agriculture globally. This trend is particularly evident in countries of the global South.

Role of Free Trade Agreements

FTAs now compel many countries to adopt UPOV 1991 standards. These deals are negotiated outside the World Trade Organization (WTO) framework.

Countries in the global South face pressure to accept these restrictive rules. FTAs often include clauses that go beyond WTO requirements, limiting public debate on their impact. UPOV is an intergovernmental organization established in 1961 to provide an effective system of plant variety protection. It administers the UPOV Convention, which provides a legal framework for plant variety protection implemented by its members.

Purpose: Under this framework, breeders of new plant varieties are granted an intellectual property right known as the breeder's right, which incentivizes innovation in plant breeding.

The UPOV Convention

The UPOV Convention entered into force in 1968 and was revised in 1972, 1978 and 1991, each time strengthening plant breeders' rights.

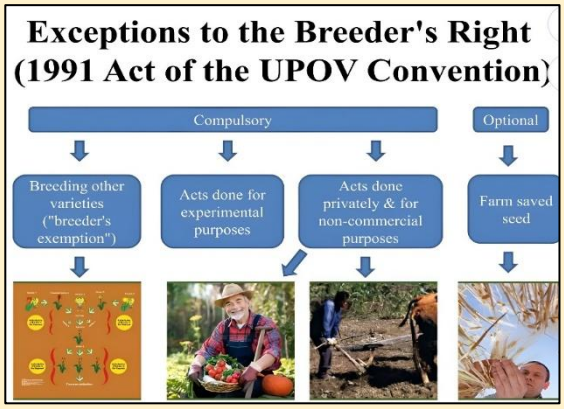
Member countries: 80 members have become members of UPOV. (India is not a member of this organization)

Headquarter: Geneva (Switzerland).

Governance of International Union for the Protection of New Varieties of Plants (UPOV)

The UPOV member countries hold annual meetings of the UPOV Council, a permanent body under the UPOV Convention.

Other UPOV bodies include the Consultative Committee, the Administrative and Legal Committee, and the Technical Committee



Key Players in Enforcing UPOV Rules

The United States, European Union, Australia and Japan have long pushed UPOV-aligned laws through FTAs. Recently, the United Arab Emirates (UAE) has emerged as a new force. The UAE has inserted UPOV-style clauses in agreements with Cambodia, Malaysia and Mauritius. However, India has resisted such pressure.

Implications for Food Sovereignty

The UAE's growing influence in global trade and overseas farming investments raises concerns. Its promotion of UPOV standards threatens food sovereignty worldwide. Corporations gain monopoly control over seeds, undermining farmers' independence. This shift favours industrial agriculture over traditional farming systems.

Additional Legal Measures in FTAs

Besides UPOV, many FTAs require countries to adopt plant patent laws or sign the Budapest Treaty. The Budapest Treaty facilitates patenting of micro-organisms. These measures further extend corporate control over biodiversity. They bypass democratic processes and reduce transparency.

Global Data and Visualisation

A newly updated global dataset maps two decades of FTAs containing UPOV-style seed clauses. It marks countries promoting restrictive seed laws and those pressured to comply. This data reveals the scale and geographic spread of the issue. It shows how trade deals shape agricultural policies worldwide.

WOMEN ENTREPRENEURSHIP PLATFORM(WEP)

The NITI Aayog's Women Entrepreneurship Platform(WEP) and DP World have launched a major programme titled 'We Rise: Women Entrepreneurs Reimagining Inclusive and Sustainable Enterprises'.

This initiative aims to help Indian women-led Micro, Small and Medium Enterprises (MSMEs) expand globally. It focuses on trade facilitation, mentorship, and strategic partnerships to boost women entrepreneurs' international market access.

Recent Initiative and Partnership

The 'We Rise' programme is part of WEP's Award to Reward (ATR) initiative. It was formalised through a Statement of Intent signed by Ms Anna Roy, Mission Director of WEP, in the presence of Shri B.V.R. Subrahmanyam, CEO of NITI Aayog.

DP World brings its global logistics and trade expertise to support 100 selected women entrepreneurs. The collaboration aims to enhance export readiness and strengthen business capacities.

Programme Objectives and Support Mechanisms

The initiative targets high-growth potential women-led MSMEs across India. It offers mentorship and curated interventions to help these enterprises meet global trade standards.

DP World will provide access to its global logistics network. Selected entrepreneurs will also showcase products at Bharat Mart in Dubai, a key international marketplace in the Jebel Ali Free Zone, connecting them to global buyers.

Role of Women Entrepreneurship Platform (WEP)

WEP was incubated by NITI Aayog in 2018 and became a public-private partnership in 2022. It acts as a national aggregator to strengthen India's women entrepreneurship ecosystem.

WEP addresses six ecosystem needs – access to finance, market linkages, training and skilling, mentoring and networking, compliance and legal assistance, and business development services. It currently engages over 90,000 women entrepreneurs and partners with 47 organisations.

Award to Reward (ATR) Initiative

Launched in 2023, ATR institutionalises WEP's partnership framework. It brings together stakeholders to address specific challenges faced by women entrepreneurs.

ATR promotes scalable collaborations and celebrates women's entrepreneurial success. 'We Rise' is a flagship ATR programme focusing on expanding trade access and global growth opportunities.

Significance and Impact

The partnership reflects a commitment to inclusive trade and women-led economic growth. It aligns with the Government of India's vision to create an enabling environment for women entrepreneurs.

The collaboration leverages DP World's supply chain expertise and WEP's ecosystem support to drive long-term impact and sustainable enterprise development.

RAKCHHAM CHITKUL WILDLIFE SANCTUARY

An international bird-watching programme was recently organised at the scenic Rakchham area of the Rakchham-Chitkul Wildlife Sanctuary in Himachal Pradesh.

About Rakchham Chitkul Wildlife Sanctuary

It is located in the Kinnaur district of Himachal Pradesh.

It is spread over an area of 30.98 sq.km.

It is situated at an elevation ranging from 3200 to 5486 meters above sea level.

It is a part of the Western Himalayan range.

It is surrounded by snow-capped mountains, lush green valleys, and gushing rivers.

The perilous Lamkhanga Pass is one of the many trekking routes that pass through this sanctuary.

This pass connects the Himachal Pradesh province of Kinnaur to the Uttarakhand region of Gangotri.

Unlike the climate of other sanctuaries in Himachal Pradesh, the sanctuary is located in a dry zone, hence it does not experience monsoons.

Flora: Some of the common flora found in the sanctuary include rhododendrons, oak trees, pine trees, and medicinal herbs.

Fauna: It is also home to various species of wildlife, such as snow leopards, Himalayan black bears, musk deer, and numerous bird species.

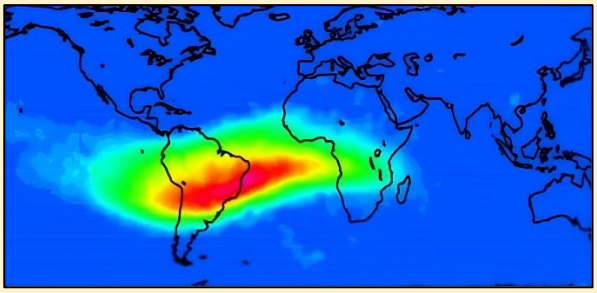
SOUTH ATLANTIC ANOMALY

A giant dent in Earth's magnetic field, called the South Atlantic Anomaly, is continuing to expand, according to the latest data from a trio of satellites monitoring our world.

About South Atlantic Anomaly It is a unique location on Earth where the magnetic field is weaker than normal.

It is southeast of South America and southwest of Africa. In this area, the planet's magnetic field dips down.

It was first identified in the 19th century.



Why does it occur?

Earth's magnetic field acts like a protective shield around the planet, repelling and trapping charged particles from the Sun.

SAA exists because the Earth's inner Van Allen radiation belt comes closest to the planet's surface, causing an increased flux of energetic particles. This leads to the penetration of solar energetic particles deep into Earth's atmosphere, posing severe problems for airplanes and ships' positioning systems as well as spacecraft electronic systems.

What are the Van Allen Radiation Belts?

The Van Allen radiation belt is a zone of energetic charged particles, most of which originate from the solar wind.

The particles are captured by and held around a planet by that planet's magnetic field. It surrounds Earth, containing a nearly impenetrable barrier that prevents the fastest, most energetic electrons from reaching Earth.

The outer belt is made up of billions of high-energy particles that originate from the Sun and become trapped in Earth's magnetic field, an area known as the magnetosphere.

The inner belt results from interactions of cosmic rays with Earth's atmosphere.The Van Allen belts are most intense over the Equator and are effectively absent above the poles.

TAFTAN VOLCANO

New research shows that Taftan volcano in Iran seems to be waking up after a 700,000-year-long sleep.

About Taftan Volcano

It is a 12,927-foot (3,940 meters) semi-active stratovolcano located in southeastern Iran, 56 km from the Pakistan border.

It is the only active volcano in the Makran continental volcanic arc.

It is situated among a rumple of mountains and volcanoes that was formed by the subduction of the Arabian ocean crust under the Eurasian continent.

It hosts an active hydrothermal system and smelly, sulfur-emitting vents called fumaroles.

The volcano contains two summits (Narkuh and Matherkuh).

It isn't known to have erupted in human history.

What is a Stratovolcano?

It is a tall, steep, and cone-shaped type of volcano.

Unlike flat shield volcanoes, they have higher peaks.

They are typically found above subduction zones, and they are often part of large volcanically active regions, such as the Ring of Fire that frames much of the Pacific Ocean.

Stratovolcanoes comprise the largest percentage (~60%) of the Earth's individual volcanoes, and most are characterized by eruptions of andesite and dacite, lavas that are cooler and more viscous than basalt.

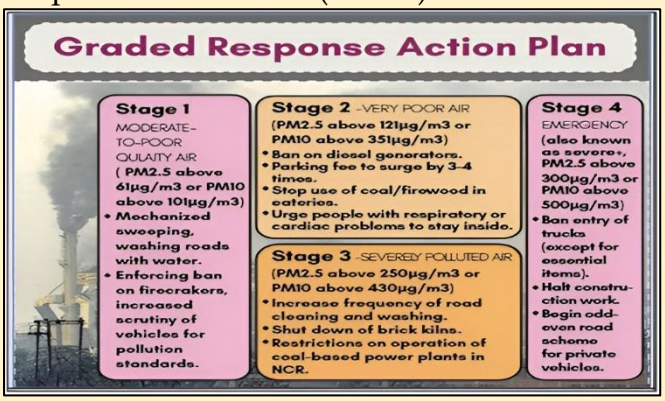
These more viscous lavas allow gas pressures to build up to high levels. Therefore, these volcanoes often suffer explosive eruptions.

They are usually about half-half lava and pyroclastic material, and the layering of these products gives them their other common name of composite volcanoes.

At the peak, stratovolcanoes usually have a small crater.

GRADED RESPONSE ACTION PLAN

Chief Minister of Delhi appealed to residents to celebrate Deepavali by bursting only certified green crackers as the Capital's air quality index (AQI) crossed 300, prompting the enforcement of stage II of the Graded Response Action Plan (GRAP).



- Nature: GRAP is a set of emergency measures that kick in to prevent further deterioration of air quality once it reaches a certain threshold in the Delhi-NCR region.
- Judgement: It was approved by the Supreme Court in 2016 after the Supreme Court's order in the matter of M. C. Mehta vs. Union of India (2016) and notified in 2017.
- Implementation: The Commission for Air Quality Management (CAQM) in NCR and adjoining areas oversees the implementation of GRAP. It collaborates with the Ministry of Environment, Forest and Climate Change (MoEFCC).
- Evolution:
  - Till 2020, the Supreme Court-appointed Environment Pollution (Prevention & Control) Authority (EPCA) used to order States to implement GRAP measures.
  - The EPCA was dissolved and replaced by the Commission for Air Quality Management (CAQM) in 2020.
  - From 2021 onwards, the GRAP is being implemented by the CAQM.
- Role of IITM and IMD: CAQM relies on air quality and meteorological forecasts by the Indian Institute of Tropical Meteorology (IITM) and the India Meteorological Department (IMD).
- Various stages of GRAP:
  - Stage I (Poor Air Quality – AQI 201-300): Enforce NGT / Hon'ble SC's order on over aged diesel / petrol vehicles.
  - Stage II (Very Poor- AQI 301-400): Targeted actions to combat air pollution at identified hotspots in the region. Regulated operations of DG (Diesel Generators) have been set across all sectors in the NCR.
  - Stage III ('Severe'- AQI 401-450): Impose strict restrictions on BS III petrol and BS IV diesel four-wheelers in certain areas and may suspend physical classes in schools for primary grade children up to Class 5.
  - Stage IV (Severe Plus- AQI greater than 450): When the AQI exceeds 450, four-wheelers registered outside Delhi, except for electric vehicles, CNG vehicles, and BS-VI diesel vehicles and vehicle carrying essential commodity, will not be allowed to enter the city.

CHILDREN DEATH DUE TO CONTAMINATED COUGH SYRUPS

The deaths of 25 children due to contaminated cough syrup highlight gaps in India's pediatric drug regulation. Despite bans on unsafe formulations, inadequate monitoring, weak pharmacovigilance, and lack of India-specific pediatric guidelines compromise the health rights of children under Article 39(f) of the Constitution.

Current Challenges in Pediatric Healthcare

- **Regulatory Gaps:** CDSCO regulates large manufacturers; state drug officers handle smaller units. Oversight is inconsistent, contributing to unsafe drug distribution.
- **Lack of Pediatric-Specific Guidelines:** Children are "therapeutic orphans" as most clinical trials are adult-focused; dosage often extrapolated from adult medicine, risking overdosage.
- **Over-the-Counter Medication Risks:** Urban use of OTC drugs for cough, cold, and fever is common; caregivers often lack awareness of correct dosage and potential side effects.
- **Inadequate Public Health Infrastructure:** Public health outlets need strict guidelines and zero tolerance for substandard or substitute medications; monitoring teenage drug misuse is also required.
- **Data Deficiency:** Policies rely on foreign or adult-centric data; Indian pediatric pharmacogenetics and environmental factors (e.g., malnutrition) are largely ignored.

Legal and Policy Framework

- **Child Protection Laws:** India has ~13 child-specific policies (e.g., National Policy for Children 1974, India Newborn Action Plan 2014) and ~10 legislations (e.g., PC-PNDT Act, Aadhaar Act) targeting labor, sexual exploitation, and welfare.
- **Limitations:** Most focus on labor and protection from abuse; pharmacovigilance in pediatric medicine lacks robust policy and legal oversight.
- **Global Comparison:** EU has Paediatric Use Marketing Authorisation; USA operates Best Pharmaceuticals for Children Act. Both incentivize pediatric research. India lacks a comparable legislative framework.

Economic and Social Considerations

- **Affordability:** High healthcare costs push impoverished families further into poverty; essential pediatric medicines must be affordable.
- **Essential Medicines Concept:** WHO's Essential Medicines List for Children (EMLc) guides priority healthcare needs; India's EMLc updates are irregular, affecting availability and accessibility.
- **Public Awareness:** Education of caregivers and pharmacists on correct dosage, labeling, and adverse effect monitoring is critical.

International Lessons and Responsibilities

- **Global Incidents:** Contaminated pediatric syrups have caused deaths in Gambia, Uzbekistan, Indonesia, and Cameroon; India's role as a pharmaceutical hub imposes responsibility for safe exports.
- **Holistic Policy Needs:** Adult medicines modified for children are off-label and unsafe; India requires a framework integrating safety, monitoring, and public education.

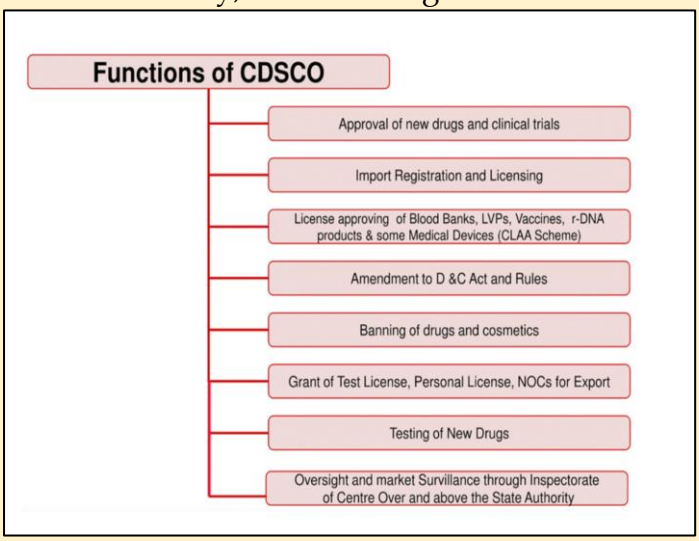
Reforms Suggested / Recommendations

- **Robust Pharmacovigilance:** Create specialized pediatric drug monitoring infrastructure at national and state levels.
- **Legislation:** Enact pediatric-specific drug laws with clear dosage, formulation, and safety standards.
- **Research & Data:** Promote India-centric clinical trials and pharmacogenetic studies for children.
- **Public Awareness & Training:** Mandatory training for caregivers, pharmacists, and public health workers on safe pediatric medicine practices.
- **EMLc Updates:** Regularly update India's pediatric essential medicines list; ensure affordability and availability in public health systems.

Children are dependent and vulnerable; safeguarding their health requires proactive policy, rigorous regulatory oversight, and public awareness. India must establish a holistic, India-specific framework to prevent medical tragedies, ensure safe pediatric medicines, and uphold constitutional health rights.

CENTRAL DRUGS STANDARD CONTROL ORGANISATION (CDSCO)

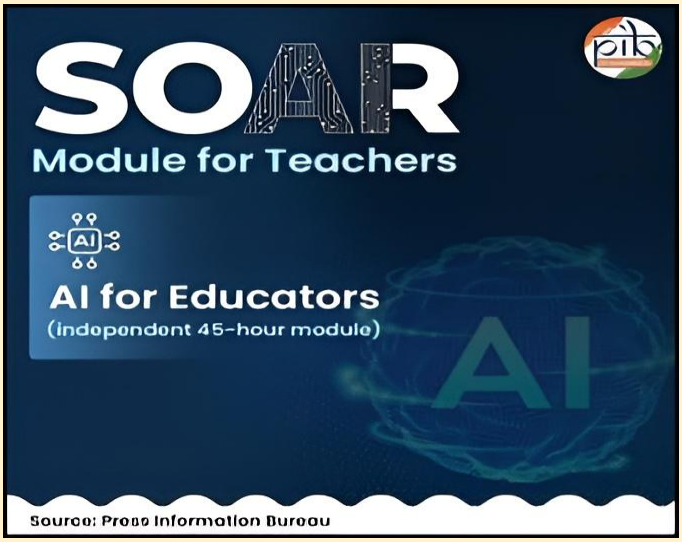
- It functions as India's national regulatory body overseeing cosmetics, pharmaceuticals, and medical devices.
- The CDSCO is organized with the Drug Controller General of India (DCGI) overseeing pharmaceuticals and medical devices.
- It is assigned duties under **Drugs and Cosmetics Act, 1940.**
- The DCGI is situated within the **Ministry of Health and Family Welfare** and receives guidance from the Drug Technical Advisory Board (DTAB) and the Drug Consultative Committee (DCC).
- The CDSCO operates through zonal offices that conduct inspections prior to licensing, post-licensing inspections, post-market surveillance, and, if necessary, initiates drug recalls.



Thus CDSCO plays a pivotal role in ensuring the safety, efficacy, and quality of drugs and medical devices in India, safeguarding public health through robust regulatory oversight.

SOAR PROGRAM

The Skilling for AI Readiness (SOAR) program has been launched by government of India, and it coincides with the 10-year milestone of the Skill India Mission, which has empowered people through various skilling schemes since 2015.



- Launch: It was launched by the Ministry of Skill Development and Entrepreneurship (MSDE) in July 2025.
- Objective: It aims to integrate artificial intelligence learning into India's school education and training ecosystem, preparing both students and teachers for a rapidly evolving digital world.
- Long-tern vision: SOAR's long-term vision is to position India as a global leader in AI by preparing its youth for AI-driven careers and entrepreneurial ventures.
- In sync with NEP 2020: The National Education Policy (NEP) 2020 emphasises the inclusion of contemporary subjects like Artificial Intelligence (AI) in school curricula, at appropriate stages, to foster innovation and digital literacy among students.
- Focus: It focuses on school students from classes six to twelve and educators across India. It is offering three targeted 15-hour modules for students and a 45-hour module for teachers. These courses introduce foundational AI and machine learning concepts, along with data literacy and the ethical use of technology.

- Centre of Excellence in AI: In support of this vision, the Union Budget 2025–26 has earmarked ₹500 crore to establish a Centre of Excellence in Artificial Intelligence for Education. The centre will focus on developing AI-based learning tools, promoting multilingual AI resources for Indian languages, and fostering innovative classroom practices.
- Linkage with IITs: It will also strengthen AI curriculum development across technical institutions and complement existing efforts by IITs and AICTE-approved colleges that already offer advanced courses in machine learning, deep learning, and data analytics.

SYNTHETIC MEDIA AND DEEPFAKE REGULATIONS

The proliferation of AI-generated deepfakes and synthetic media has raised significant concerns regarding misinformation, electoral integrity, and personal rights. In response, the Indian government has proposed amendments to the IT Rules, 2021, mandating the labelling of AI-generated content to enhance transparency and accountability in the digital ecosystem.

Key Arguments:

- **Widespread Proliferation:** Advancements in generative AI have made it easier to create photorealistic images and videos, leading to the widespread dissemination of AI-generated content across social media platforms. For instance, Meta has initiated the labelling of AI-generated content on Facebook, Instagram, and Threads to inform users about the nature of the content they encounter .
- **Democratic Risks:** The rapid spread of AI-generated misinformation poses a threat to democratic processes. During India's general election, over 75% of voters were exposed to political deepfakes, with nearly one in four believing the AI-generated content was real .
- **Personal Rights Violations:** Public figures have reported instances of their likenesses being misused in AI-generated media. For example, a deepfake video of Punjab Chief Minister Bhagwant Mann was created and circulated with the intent to defame him.
- **Industry Initiatives:** The Coalition for Content Provenance and Authenticity (C2PA) has developed an open technical standard, known as Content Credentials, to enable the verification of digital content's origin and edits. This initiative aims to establish trust in media content by providing transparent information about its creation and modifications.
- **Regulatory Challenges:** The current IT Rules, 2021, may not adequately address the complexities associated with AI-generated content. The proposed amendments seek to fill this regulatory gap by introducing clear guidelines for labelling AI-generated content, thereby enhancing user awareness and trust .

Criticisms / Drawbacks:

- **Enforcement Complexity:** Ensuring consistent identification and labelling of AI-generated content across diverse platforms and formats presents significant enforcement challenges.
- **Legal Ambiguities:** The introduction of subordinate legislation without thorough parliamentary scrutiny may raise concerns regarding democratic legitimacy and accountability.
- **Limited Impact Evidence:** Mandatory labelling, as observed in previous interventions, may have limited effectiveness in reducing misinformation without complementary measures such as user education and platform accountability.

- **Global Coordination:** Divergent approaches to AI content regulation across countries complicate efforts to establish standardized practices and may hinder international cooperation.

Reforms / Recommendations:

- **Dynamic Regulation:** Regularly update regulations to keep pace with advancements in AI technology and address emerging challenges effectively.
- **Public Awareness Campaigns:** Implement educational initiatives to enhance users' ability to critically assess AI-generated content and identify potential misinformation.
- **Industry Collaboration:** Encourage collaboration among tech companies, policymakers, and civil society to develop and adopt standardized labelling practices and verification tools.
- **Parliamentary Oversight:** Ensure that amendments to regulations undergo thorough scrutiny and debate in Parliament to uphold democratic principles.
- **Integration with Digital Literacy:** Incorporate AI content labelling into broader digital literacy programs to empower users to navigate the digital landscape responsibly.

Latest amendments

The IT Rules, 2021 were originally notified on **25th February, 2021** and subsequently amended on **28th October, 2022** and **6th April, 2023**. They prescribe due diligence obligations on intermediaries, including social media intermediaries, with the objective of ensuring online safety, security and accountability.

Under Rule 3(1)(d), intermediaries are required to remove unlawful information upon receiving actual knowledge either through a court order or notification from the Appropriate Government.

The review undertaken by MeitY highlighted the need for additional safeguards to ensure **senior-level accountability**, **precise specification of unlawful content**, and **periodic review of government directions at higher level**.

Key Features of the Amendments

1. **Senior-level Authorisation**:
   - Any intimation to intermediaries for removal of unlawful information can now only be issued by a senior officer **not below the rank of Joint Secretary, or equivalent**, **or**, where such rank is not appointed, **a Director or an officer equivalent in rank**—and, **where so authorised, acting through a single corresponding officer in its authorised agency, where such agency is so appointed**.
   - In case of police authorities, only an officer **not below the rank of Deputy Inspector General of Police (DIG)**, specially authorised, can issue such intimation.
2. **Reasoned Intimation with Specific Details**:
   - The intimation must clearly specify the **legal basis and statutory provision**, the **nature of the unlawful act**, and the **specific URL/identifier** or other electronic location of the information, data or communication link ("content") to be removed.
   - This replaces the earlier broad reference to 'notifications' with 'reasoned intimation' to align the Rules with the requirement of 'actual knowledge' as mandated under section 79(3)(b) of the IT Act, bringing clarity and precision.
3. **Periodic Review Mechanism**:
   - All intimations issued under Rule 3(1)(d) will be subject to a **monthly review** by an officer not below the rank of Secretary of the Appropriate Government.
   - This ensures that such actions remain **necessary, proportionate, and consistent with law**.

4. **Balance of Rights and Responsibilities**:
    - The amendments strike a balance between the **constitutional rights of citizens** and the **legitimate regulatory powers of the State**, ensuring that enforcement actions are transparent and do not lead to arbitrary restrictions.

Expected Impact

- **Transparency & Accountability**: Clear guidelines on who can issue directions and how, with periodic review, ensures checks and balances.
- **Clarity for Intermediaries**: By mandating detailed and reasoned intimations, intermediaries will have better guidance to act in compliance with law.
- **Safeguards and Proportionality**: The reforms ensure proportionality and uphold the principles of natural justice while reinforcing lawful restrictions under the IT Act, 2000.

The proposed mandatory labelling of AI-generated content represents a proactive step towards enhancing transparency and accountability in the digital realm. By implementing dynamic regulations, fostering public awareness, and promoting industry collaboration, India can mitigate the risks associated with AI-generated misinformation and uphold democratic values.

EC FLAGS DEEPFAKES AS A THREAT TO ELECTORAL INTEGRITY

With growing concerns over the manipulation of digital media, the Election Commission of India (EC) has issued new guidelines mandating all political parties and candidates to declare any artificial intelligence (AI)-generated or synthetic content used in their campaigns.

The move comes ahead of the upcoming Bihar elections and aims to curb misinformation that can distort the democratic process. The EC described the misuse of AI-generated or hyper-realistic synthetic media as a "deep threat and challenge" to free and fair elections.

It observed that fabricated videos and audio clips of political leaders often circulate as genuine, potentially influencing public opinion and misleading voters. The poll body noted that such practices undermine the credibility of the electoral process and could lead to false narratives.

New Labelling Rules for AI-Generated Content

Under the new directive, any campaign material created or altered using AI must carry a visible and prominent label such as "AI-Generated", "Digitally Enhanced", or "Synthetic Content".

The EC has specified that the label should cover at least 10 per cent of the visible area in visuals and appear during the first 10 per cent of audio duration. For video content, the label must be placed on the top band of the screen.

Record-Keeping and Removal Obligations

Political parties and candidates are now required to maintain detailed records of all AI-generated content used during campaigns, including creator details, timestamps, and metadata for verification purposes. If any misleading synthetic content is found on official social media accounts, it must be removed within three hours of detection or report. The EC warned that circulating manipulated media without consent or factual accuracy could attract action under the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.

Emphasis on Accountability and Transparency

The EC reiterated its commitment to safeguarding democratic values by promoting transparency in digital campaigning. It emphasised that political entities must act responsibly while adopting emerging technologies and comply with due diligence obligations to prevent misinformation. The advisory marks a decisive step in addressing the growing challenge of deepfake content in Indian elections.

NINGOL CHAKOUBA FESTIVAL

Manipur government holds fish fair ahead of the Ningol Chakouba festival and targets to sell 1.5 lakh kg of various fish varieties.

- Annual festival of Manipur: The festival is held every year in Manipur on the second day of the lunar month of Hiyangei of the Meitei calendar.
- Primarily celebrated by Meiteis: The festival is mainly celebrated by the Meiteis but nowadays many other communities also have started to celebrate it.
- Objective: It emphasises the importance of happiness and reunion of a family in bringing peace and harmony in a society.
- Nomenclature: Ningol means 'married woman' and Chakouba means 'invitation for feast'; so the festival is the one where the married women are invited to their parents' home for a feast.
- Uniqueness: The main component of the festival is the visit of married sisters to their maternal homes for grand feast and joyous reunion followed by giving away the gifts.

UDAN (UDE DESH KA AAM NAGRIK)

Ministry of Civil Aviation is celebrating the 9th anniversary of the Regional Connectivity Scheme – UDAN (Ude Desh Ka Aam Nagrik). It was held in New Delhi, chaired by Secretary (Civil Aviation) and other senior officers of the Ministry.

- Launch: The scheme was designed under the National Civil Aviation Policy (NCAP) 2016, with a focus on connecting Tier-2 and Tier-3 cities through a market-driven yet financially supported model.
- Objective: UDAN aims to democratize aviation and enhance regional connectivity, ensuring that even remote regions of the country are accessible by air.
- Nodal Ministry: It works under the Ministry of Civil Aviation.
- Implementing authority: The Airports Authority of India (AAI) serves as the nodal agency responsible for its implementation.
- Provision of subsidies: Under the UDAN Scheme, the government works in partnership with airlines to provide subsidies and incentives to operate flights on underserved and unserved routes.
- Works on VGF model: The government provides financial support to airlines through a Viability Gap Funding (VGF) model, which covers the difference between the cost of operations and the expected revenue on the identified routes.
- Use of bidding: Aviation companies bid for air routes. The company that asks for the lowest subsidy is awarded the contract. Under this fare for each flight, the airline has to book half, or a minimum of 9, or a maximum of 40 seats.
- Capping of price: Under the scheme, the airfare for a one-hour journey by a 'fixed wing aircraft' or half an hour's journey by a helicopter for about 500 km has been fixed at Rs.2500.

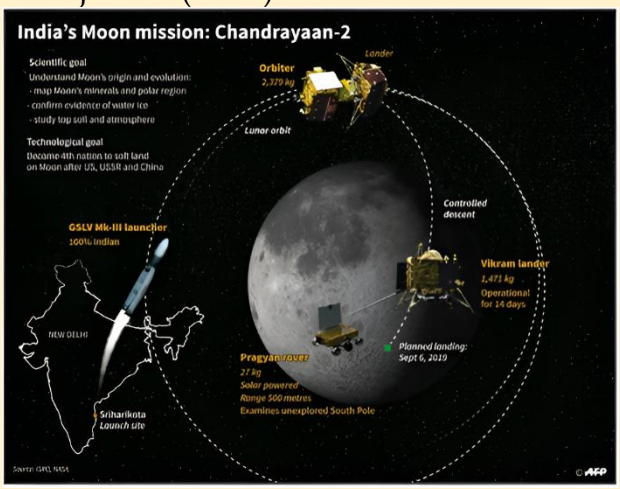
PRIME MINISTER'S SCHOOLS FOR RAISING INDIA (PM SHRI)

The ruling Left Democratic Front (LDF) appears divided over the Kerala government's move to sign a MoU with the Union government to access the Prime Minister's Schools for Raising India (PM SHRI) government school modernisation funds.

- Launch: It is a centrally sponsored initiative, launched in 2022, by the Government of India aimed at establishing over 14,500 PM SHRI Schools by enhancing existing schools to showcase the implementation of the National Education Policy (NEP) 2020.
- Objective: The primary objective is to create an inclusive and nurturing environment that promotes the well-being and safety of every student, offering diverse learning experiences and access to quality infrastructure and resources.
- Funding: The funding pattern is 60:40 between Centre and State Governments and UTs with legislature (except J&K). The sharing pattern is 90:10 for North Eastern and Himalayan States and UT of J&K and 100% central funding for the Union Territories without legislature.
- Need of MoU: States must confirm their participation by signing a Memorandum of Understanding (MoU) with the Education Ministry.
- Duration: The duration of the scheme is from 2022-23 to 2026-27, after which it shall be the responsibility of the states/UTs to continue to maintain the benchmarks achieved by these schools.
- Eligibility:
  - Schools managed by Central/State/UT Governments and local bodies.
  - All Kendriya Vidyalayas and Navodaya Vidyalayas which are non-project and run from permanent buildings.
- Main features of these schools:
  - These schools will focus on holistic student development of students including the skills of communication, collaboration and critical thinking.
  - Schools will have modern labs, libraries, art rooms, and promote "green" initiatives like water conservation and waste recycling.
  - Learning outcomes will be prioritized, with competency-based assessments that apply knowledge to real-life situations.

CHANDRAYAAN-2

- The lunar orbiter of India's second moon mission, Chandrayaan-2, has made the first-ever observation of the effects of the sun's coronal mass ejection (CME) on the moon.



- Nature: It is the second lunar exploration mission developed by ISRO after Chandrayaan-1. It is the 1st Indian expedition to attempt a soft landing on moon with indigenous technology.

- Objectives:
  - to study lunar topography, mineralogy, elemental abundance, the lunar exosphere, and signatures of hydroxyl and water ice;
  - to study the water ice in the south polar region and thickness of the lunar regolith on the surface; and
  - to map the lunar surface and help to prepare 3D maps of it.
- Launch vehicle: It was launched using India's most powerful launcher GSLV MK-III from Satish Dhawan Space Centre in Andhra Pradesh.

- Components:
  - There are three components of the mission, a lunar orbiter, the Vikram lunar lander, and the Pragyan rover. The mission's lander is named Vikram after Dr Vikram A Sarabhai, the Father of the Indian Space Programme.
  - The lander, rover and orbiter will perform mineralogical and elemental studies of the lunar surface. The orbiter is deployed at an altitude of 100 kilometers above the surface of the Moon.
- Major payloads:
  - Chandrayaan-2 Large Area Soft X-ray Spectrometer (CLASS)
  - Solar X-ray Monitor (XSM)
  - CHandra's Atmospheric Compositional Explorer 2 (CHACE 2)
  - Dual Frequency Synthetic Aperture Radar (DFSAR)
  - Imaging Infra-Red Spectrometer (IIRS)
  - Terrain Mapping Camera (TMC 2)
  - Orbiter High Resolution Camera (OHRC)
  - Dual Frequency Radio Science (DFRS) Experiment
- Step towards PLANEX: The mission is an important step in India's plans for planetary exploration, a program known as Planetary Science and Exploration (PLANEX).

BRAHMOS MISSILES

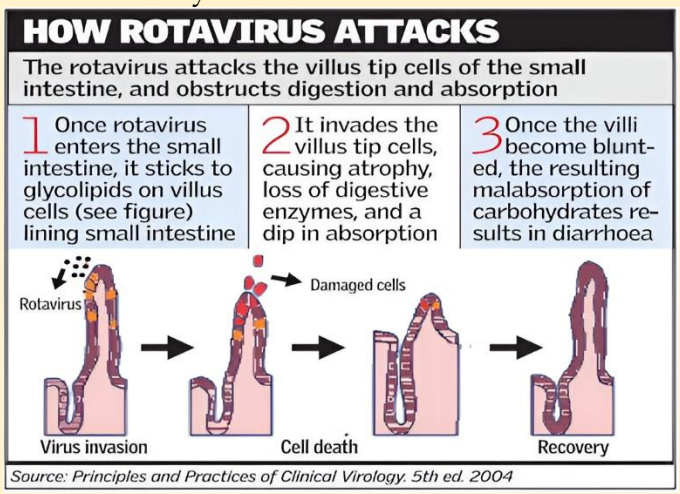
- Defence Minister Rajnath Singh said that the BrahMos missiles were a symbol of India's growing indigenous strength in defence manufacturing and every inch of Pakistan was within their reach.

- Nomenclature: It is named after the Brahmaputra River of India and the Moskva River of Russia.
- Range: An Indo-Russian joint venture, the standard BrahMos missile has a range of 290 km and but extended-range versions can reach up to 500 km. Future variants like the BrahMos-II are planned to have a much longer range of up to 1,500 km.
- Fastest cruise missile: It is the world's fastest cruise missile with a top speed of Mach 2.8 (about three times the speed of sound).
- Two-stage missile; It is a two-stage (solid propellant engine in the first stage and liquid ramjet in the second) missile. The solid propellant booster engine propels it to supersonic speed before separating, and during the cruise phase, the liquid ramjet or second stage, propels the missile closer to 3 Mach.
- Launch platforms: It is a multiplatform missile which can be launched with great accuracy from land, air and sea having multi-capability capabilities and can operate during day and night despite bad weather.
- Uniqueness: It operates on the "fire and forget" principle i.e. it does not require guidance after launch. It also carries a conventional warhead weighing 200 to 300 kg.

- Propulsion and Flight: Jet engines are the primary mode of propulsion for cruise missiles. Most cruise missiles are subsonic and use Turbofan and Turbojet engines. While less common, supersonic and hypersonic cruise missiles utilize Ramjet and Scramjet engines.

ROTAVIRUS

- A recent study on the impact of the indigenous rotavirus vaccine in India found marked reductions in rotavirus-based gastroenteritis in sites across the country.



About Rotavirus:

- Family: Rotavirus is a double-stranded RNA virus genus in the Reoviridae family.
- Contagious: Rotavirus is a contagious disease that spreads easily from child to child.
- Mortality: Rotavirus is a leading cause of severe diarrhoea and death among children less than five years of age. It is responsible for around 10% of total child mortality every year.
- Mode of spread: Rotavirus spreads easily through the fecal-oral route) when a person comes in contact with the feces of someone who has rotavirus and then touches their own mouth).
- For example, rotavirus can spread when a child with rotavirus doesn't wash their hands properly after going to the bathroom and then touches food or other objects.
- Symptoms
  - Severe diarrhea
  - Throwing up
  - Dehydration
  - Fever
  - Stomach pain
- Dosage: World Health Organisation (WHO) recommends that the first dose of rotavirus vaccine be administered as soon as possible after 6 weeks of age, along with DTP vaccination (diptheria, tetanus and pertussis).
- Inclusion in National Schedules: WHO has recommended the inclusion of rotavirus vaccine in the National Schedules of the countries where under five mortality due to diarrhoeal diseases is more than 10%.
- Vaccines available: Currently, two vaccines are available against rotavirus:
  - Rotarix (GlaxoSmithKline): is a monovalent vaccine recommended to be orally administered in two doses at 6-12 weeks.
  - Rota Teq (Merck) is a pentavalent vaccine recommended to be orally administered in three doses starting at 6-12 weeks of age.

GLOBAL FOREST RESOURCES ASSESSMENT (GFRA) 2025

India has recorded major progress in forest conservation and climate action, advancing to the 9th position worldwide in total forest area and maintaining its 3rd rank in annual net forest area gain, according to the Global Forest Resources Assessment (GFRA) 2025 released by the Food and Agriculture Organization (FAO).

The report also places India 5th among the world's top carbon sink nations, with its forests removing 150 million tonnes of carbon dioxide (CO_2) annually during 2021–2025.

India's Rise in Global Forest Rankings

The FAO report highlights India's achievement in expanding forest and tree cover through systematic afforestation and conservation initiatives. India's total forest area stands at approximately 72.7 million hectares, accounting for about 2% of the global total of 4.14 billion hectares, which covers 32% of the Earth's land area.

Europe holds the largest forest share globally, while South America has the highest proportion of land under forest cover. Notably, more than half of the world's forest area is concentrated in just five countries — Russia, Brazil, Canada, the United States, and China.

Carbon Sink Performance and Global Context

India's forests have sequestered an estimated 150 million tonnes of CO_2 per year between 2021 and 2025, ranking fifth among global carbon sinks. During this period, global forests acted as a net sink, removing about 3.6 billion tonnes of CO_2 annually from the atmosphere.

Asia, led by India and China, saw its forest carbon removals reach 0.9 billion tonnes of CO_2 annually, with a marked decline in deforestation-related emissions. The world's total forest loss rate has also reduced significantly — from 10.7 million hectares per year in the 1990s to just over 4 million hectares between 2015 and 2025.

Expansion in Planted and Agroforestry Areas

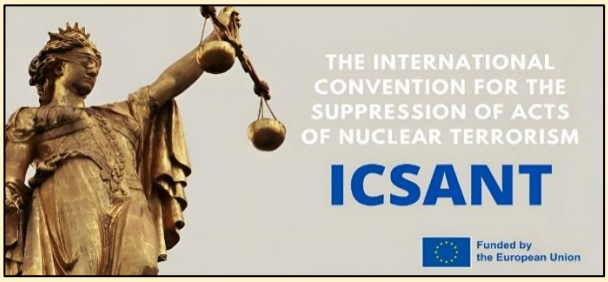
India's efforts in expanding planted forests have been particularly notable. The country accounts for 11.8 million hectares of bamboo forests — nearly 40% of the global bamboo area — and ranks fifth in the world for rubber plantations with 831,000 hectares.

Agroforestry has also grown steadily; India and Indonesia together contribute nearly 70% of the global agroforestry area, amounting to about 55.4 million hectares. These expansions have supported rural livelihoods, improved biodiversity, and strengthened carbon sequestration potential.

CONVENTION FOR THE SUPPRESSION OF THE FINANCING OF TERRORISM

Iran has ratified the International Convention for the Suppression of the Financing of Terrorism (CFT Treaty) in a move seen as a bid to ease international isolation and gain access to the global banking system.

The decision comes as President Masoud Pezeshkian's administration seeks to align with the Financial Action Task Force (FATF) requirements and improve relations with the West.



Effort to Ease Economic Isolation

Iran's economy has long struggled under the weight of international sanctions, particularly from the United States. Its placement on the FATF blacklist in 2020 — alongside countries such as North Korea and Myanmar — further restricted its access to international finance.

President Pezeshkian, elected on a reformist platform, is seeking to rebuild Iran's global credibility by adhering to anti-terror financing standards and promoting greater economic transparency.

CFT Treaty

The CFT Treaty, or International Convention for the Suppression of the Financing of Terrorism, is a 1999 United Nations treaty that requires signatory nations to criminalize the financing of terrorism and cooperate with each other to prevent and punish it.

It establishes a legal framework for international cooperation, including sharing evidence and extraditing suspects, and mandates that parties outlaw financing terrorist acts and freeze terrorist funds.

Key aspects of the CFT Treaty

- Criminalization: Parties to the treaty are required to define and criminalize the financing of terrorism in a way that aligns with the convention.
- International Cooperation: The treaty commits states to provide each other with the greatest measure of assistance in criminal investigations and proceedings related to terrorism financing.
- Mutual Legal Assistance: It mandates that countries can't refuse a request for mutual legal assistance on the grounds of bank secrecy.
- Evidence Sharing: Parties are required to assist each other in obtaining evidence and can share information to establish criminal, civil, or administrative liability.
- Entry into force: The treaty was adopted in 1999 and entered into force in 2002.

Domestic Debate and Political Divide

The ratification has triggered strong opposition from Iran's ultra-conservative factions. Critics argue that joining the convention could expose sensitive economic and military information to foreign powers, potentially undermining Iran's regional alliances with groups such as Hamas, Hezbollah, and the Houthis.

Reformists, however, see it as essential for restoring trade links with allies including Russia and China, and for mitigating the impact of sanctions on the economy.

Reports suggest an Iranian representative attended an FATF meeting in Paris for the first time in six years, hinting at renewed diplomatic engagement. Nonetheless, Iran's removal from the FATF blacklist remains uncertain, as broader international sanctions — recently reinforced by the United Nations in September — continue to restrict its financial and trade activities.

CARBIDE GUNS

A dangerous new Diwali trend in Madhya Pradesh has left more than 300 children injured, with several losing their eyesight, after playing with devices known as "carbide guns."

These makeshift "toys," resembling harmless firecrackers, are in fact hazardous chemical explosives now banned across the state.

The Rise of a Deadly Diwali Trend

Hospitals across Bhopal, Gwalior, Indore, and Vidisha reported a surge in cases of severe eye injuries among children during Diwali celebrations. Investigations revealed that the cause was the use of "carbide guns" — cheap, locally made devices marketed as "desi firecracker guns."

Despite their toy-like appearance, they are capable of producing violent explosions, leading to corneal burns, ruptured pupils, and permanent vision loss. By the time authorities intervened, over 300 injuries had been recorded, with at least 10 children blinded.

How Carbide Guns Work

A carbide gun is typically constructed from a PVC or metal pipe fitted with a small chamber for calcium carbide. When water is added, it reacts to release acetylene gas, which, upon ignition, explodes with significant force.

The resulting blast mimics the sound of a firecracker but also propels shrapnel-like fragments of plastic or metal that can cause devastating injuries to nearby users. Despite their crude design, these devices are extremely dangerous due to the uncontrolled chemical reaction they create.

Social Media and the Spread of the 'Firecracker Gun Challenge'

Authorities have traced the spread of the carbide gun craze to social media platforms such as Instagram and YouTube, where short videos promoting the "Firecracker Gun Challenge" encouraged young users to recreate and ignite these devices.

The trend's viral nature contributed to its widespread availability in local markets during Diwali, with units selling for as little as ₹150 to ₹200. In many cases, the users were children aged six to fifteen.

- Acetylene is highly flammable and can explode under certain pressure/temperature conditions. It is stored dissolved in acetone inside specially designed cylinders with porous packing. Never compress pure acetylene.
- Calcium carbide reacts vigorously with water to give acetylene; control water contact and vent gas outdoors or into proper collectors.
- Food/agricultural use warning: using CaC_2 to ripen fruit is unsafe and often illegal — impurities in technical carbide (arsenic, phosphorus compounds) can contaminate food and cause health hazards.
- Use proper industrial controls, gas detectors, ventilation, certified cylinders and trained personnel.
- Welding & cutting (oxy-acetylene torch) — high flame temperature (~3300°C) useful for metal cutting, brazing and welding.
- Chemical synthesis — precursor to many chemicals: vinyl compounds, chlorinated/vinyl derivatives, acetaldehyde (via hydration), synthetic rubbers and certain plastics (historically important). Industrial routes have shifted to ethylene-derived processes, but acetylene still important in specialty chemistry.
- Organic synthesis (laboratory) — building block for many organic reactions (alkynylation, coupling reactions).
- Lighting (historical) — miners' lamps, carbide lamps; largely obsolete now.
- Polymer and specialty monomers — niche production of some polymers and cross-linkers.

INS MAHE

India's defence manufacturing sector achieved a major milestone as Cochin Shipyard Limited (CSL) handed over Mahe, the first of eight indigenously built Anti-Submarine Warfare Shallow Water Crafts (ASW SWC), to the Indian Navy.

The delivery underscores India's commitment to enhancing naval strength through indigenous design, innovation, and technology under the Aatma Nirbhar Bharat initiative.

Formal Handover Ceremony in Kochi

The vessel was officially delivered during a ceremony where Dr S. Harikrishnan, Director (Operations) at CSL, signed the acceptance documents with Commander Amit Chandra Choubey, the Commanding Officer-Designate of "Mahe".

The event was graced by Rear Admiral R. Adhisrinivasan, Chief Staff Officer (Technical), Western Naval Command, along with Commodore Anup Menon and other senior naval and shipyard officials, reflecting the importance of this addition to the Navy's fleet.

Indigenous Design and Technical Excellence

Designed and built entirely by Cochin Shipyard, "Mahe" adheres to the classification standards of Det Norske Veritas (DNV). The 78-metre-long vessel is the largest Indian naval ship to operate with a diesel engine-waterjet propulsion system, enhancing speed, manoeuvrability, and performance in shallow waters.

The ship's multi-mission role includes underwater surveillance, anti-submarine operations, search and rescue missions, and mine-laying tasks.

Boost to Aatma Nirbhar Bharat Vision

Officials highlighted that "Mahe" incorporates more than 90 per cent indigenous content, with most of its materials, machinery, sensors, and systems sourced domestically. This achievement represents a key stride in India's self-reliance in defence manufacturing and reflects the growing capability of the national defence industrial base to deliver complex naval platforms.

Strengthening India's Coastal Defence Fleet

The delivery of "Mahe" marks a significant step in augmenting the Indian Navy's shallow-water combat capabilities. Equipped with advanced sensors, sonar systems, and communication suites, the vessel will play a crucial role in coastal security and anti-submarine warfare operations.

The remaining seven vessels in the ASW SWC series are currently under construction at Cochin Shipyard and are scheduled for phased delivery in the coming years, further fortifying India's maritime defence posture.

EXERCISE OCEAN SKY 2025

The Indian Air Force (IAF) has made history by becoming the first non-NATO nation to participate in Exercise Ocean Sky 2025, a high-intensity multinational air combat drill hosted by the Spanish Air Force at Gando Air Base, Spain, from October 20 to 31, 2025.

The exercise underscores India's growing global military footprint and reinforces its role as an emerging aerospace power.

IAF's Historic Participation in Ocean Sky 2025

Exercise Ocean Sky 2025 brings together air forces from NATO member nations for advanced air combat training. India's inclusion marks a landmark moment, highlighting its growing defence ties with Spain and its rising stature in international military cooperation.

The IAF's presence demonstrates its readiness to collaborate with global partners on complex joint air operations and interoperability missions.

Strategic Importance for India

The participation of the IAF reflects India's commitment to strengthening operational readiness and defence diplomacy. Engaging in such multinational drills provides Indian pilots exposure to diverse combat environments and mission planning frameworks. These exercises significantly enhance tactical proficiency and interoperability, boosting the IAF's preparedness for modern aerial warfare and coalition missions.

Boost from the Airbus C-295 Induction

Exercise Ocean Sky 2025 follows a key milestone in the IAF's modernisation drive—the induction of 16 ""Airbus C-295 tactical transport aircraft"". The final aircraft was delivered two months ahead of schedule at Airbus's Seville facility on August 3, 2025, and was received by Indian Ambassador to Spain Dinesh K Patnaik and senior IAF officials. This delivery marks a leap in India's airlift and operational versatility, enhancing its ability to undertake varied missions under challenging conditions.

India–Spain Defence Cooperation Deepens

India's procurement of 56 C-295 aircraft from Airbus Spain marks the first-ever 'Make in India' initiative in the defence aviation sector. The first aircraft was formally handed over on September 13, 2023, in Seville, in the presence of Air Chief Marshal VR Chaudhari.

The growing bilateral partnership extends beyond procurement, with the 5th Joint Working Group on Defence Cooperation held earlier this year in New Delhi to expand joint projects. From advanced joint exercises to indigenous production, India and Spain are strengthening a strategic defence relationship that underscores India's ascent as a credible aerospace power.

HYUNMOO 5 BALLISTIC MISSILE

South Korea is set to deploy its powerful Hyunmoo 5 ballistic missile by the end of this year, marking a crucial upgrade in its conventional deterrence capabilities against North Korea. Defence Minister Ahn Gyu-back announced that the country plans to possess a "considerable amount" of the missile to establish a "balance of terror" on the Korean peninsula.

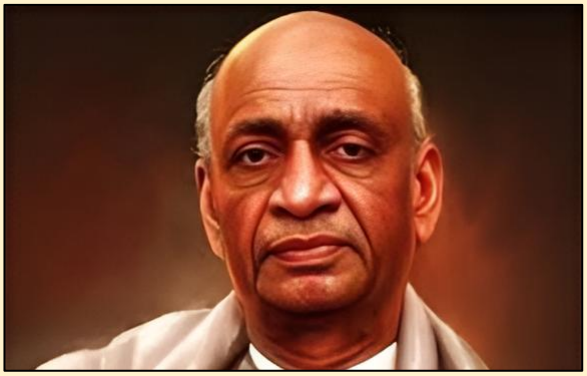
Hyunmoo 5: The 'Monster Missile'

Dubbed the "monster missile" due to its massive size and destructive power, the Hyunmoo 5 is a high-powered, ground-to-ground ballistic missile weighing approximately 36 tonnes.

It is capable of carrying an eight-tonne warhead designed to penetrate heavily fortified underground bunkers. With a length of around 16 metres, the missile's range varies between 600 km and 5,000 km, making it one of South Korea's most formidable non-nuclear weapons.

RASHTRIYA EKTA DIWAS

Prime Minister Narendra Modi will lead the Rashtriya Ekta Diwas parade near Kevadia in Gujarat on October 31 to commemorate the 150th birth anniversary of Sardar Vallabhbhai Patel.



About Sardar Vallabhbhai Patel:

- Birth: He was born on 31st October 1875, in Nadiad, Gujarat.
- Career: He completed law studies in England, earning a prize in Roman Law, and returned to India as a barrister in 1913.
- Legacy: He is popularly known as the "Iron Man of India" for his determination and firm approach. He is revered as a symbol of national unity and resilience.
- Statue of Unity: In 2018, the Statue of Unity, the world's tallest statue at 182 meters (600 feet), was inaugurated at Kevadia, Gujarat, honouring Sardar Vallabhbhai Patel. His birth anniversary is observed as National Unity Day (31st October).

- Contributions in the Indian National Movement:
  - He played a pivotal role in Kheda Satyagraha (1918) demanding tax exemptions for farmers affected by crop failure due to drought.
  - He led the resistance during the Bardoli Satyagraha (1928) against an unjust tax increase, earning him the title "Sardar" for his leadership.
  - He played crucial role during Non-Cooperation and Civil Disobedience. He embraced Gandhi's vision, leading actions like the Salt Satyagraha in 1930 and facing multiple imprisonments for his involvement.
  - He chaired the 46th session of the Congress in 1931, navigating through the Gandhi-Irwin Pact discussions.
  - He was arrested and imprisoned during Quit India Movement (1942).
- Role after independence of India:
  - He was India's first Deputy Prime Minister and Home Minister.
  - He spearheaded the integration of 562 princely states into the Indian Union, securing stability and democracy for millions. The Indian Independence Act of 1947 allowed princely states to declare independence.
  - He was instrumental in establishing the modern All India Services, strengthening the administrative framework of the country.
  - He is remembered as the "patron saint of India's civil servants" for his contribution to reinforcing the bureaucratic system.
  - National Civil Services Day (21st April) honours Sardar Patel's 1947 speech, calling civil servants "the steel frame of India" and reinforcing their dedication to public service.
  - He led the Advisory Committee on Fundamental Rights, Minorities, and Tribal and Excluded Areas in the Constituent Assembly.

ASIAN PALM CIVET

A recent scientific study has revealed that civet coffee (popularly known as Kopi Luwak), which is primarily produced from the excreta of the Asian palm civet, shows distinct when compared to naturally harvested robusta beans.

About Asian Palm Civet:

- Common names: The Asian Palm Civet, is also known as the Toddy Cat or Common Palm Civet.
- Distribution: It is a small, nocturnal mammal that is found throughout South and Southeast Asia, including India, Sri Lanka, Indonesia, and the Philippines.
- Scientific Name: It is a member of the Viverridae family, which also includes other civet and mongoose species. Its scientific name is Paradoxurus hermaphroditus.
- Physical features: It has a long, slender body, short legs, and a pointed snout. It weighs between 2 to 5 kg (4.4 to 11 lbs) and measures around 53 to 71 cm (21 to 28 inches) in length, including the tail.
- Behaviour: It is thought to lead a solitary lifestyle, except for brief periods during mating.
- Uniqueness: Its fur is brownish-grey with black spots, and it has a white mask-like marking around its eyes. Its anal scent glands emit a nauseating secretion as a chemical defence when threatened or upset.
- Nocturnal: It is a nocturnal animal and feeds on a variety of prey, including insects, small mammals, and fruits.

- Relevance in coffee industry: One of the most distinctive features of Asian palm civets is their ability to digest coffee beans, which makes them an important part of the coffee production process in some countries.
- Conservation Status: It is classified as 'Least Concern' under the IUCN Red List.

UNCTAD16 CONFERENCE

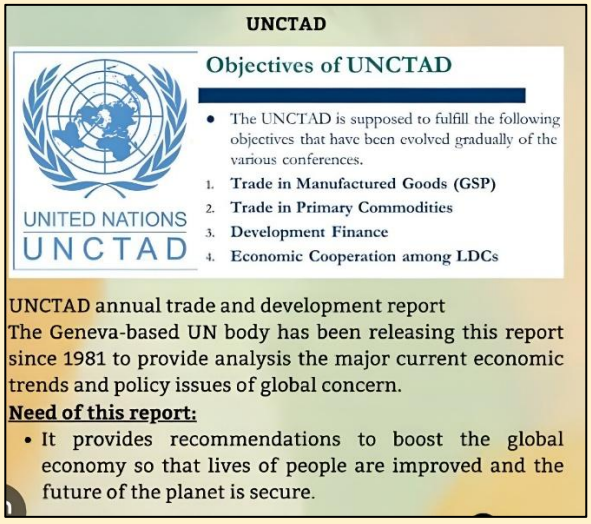
At the 16th session of the United Nations Conference on Trade and Development (UNCTAD16) in Geneva, India called on developing and least developed nations to present a united front against global trade challenges.

Commerce and Industry Minister Piyush Goyal emphasised the need for the Global South to act collectively in addressing systemic inequalities and barriers that hinder fair trade and development.

UNCTAD16: A Platform for Economic Transformation

The UNCTAD16 conference, held from 20 to 23 October 2025 at the Palais des Nations in Geneva, focuses on the theme "Shaping the Future: Driving Economic Transformation for Equitable, Inclusive and Sustainable Development".

Hosted by Switzerland and UNCTAD, the quadrennial gathering brings together ministers, experts, and representatives from 195 member states to set the organisation's priorities for the next four years and discuss the challenges shaping the global economy.



India's Call for Collective Action

Addressing delegates, Piyush Goyal urged the Global South to "speak with one voice" to defend shared interests in the face of rising trade restrictions.

He highlighted that the international trading environment has become volatile and uncertain, eroding trust in multilateral institutions and the rules-based system.

Goyal noted that developing nations continue to face tariff and non-tariff barriers, over-concentrated supply chains, and diminishing special treatment under the World Trade Organization framework.

Concerns Over Unilateral Policies and Emerging Divisions

The Indian minister criticised unilateral environmental measures such as carbon taxes and the growing technological divide that disproportionately affect developing economies.

He warned that such policies risk marginalising nations that are still pursuing development goals, poverty reduction, and industrial growth.

Goyal further stressed that restrictive services-sector policies and non-market practices are deepening global inequality and undermining fair competition.

NATIONAL DISASTER RESPONSE FORCE

Ahead of Cyclone Montha's landfall on Tuesday night, the National Disaster Response Force deployed 25 teams across Andhra Pradesh, Chhattisgarh, Odisha, Puducherry, and Tamil Nadu, while another 20 teams were on standby.

About National Disaster Response Force (NDRF):

- Establishment: NDRF was established under section 44 of the Disaster Management Act, 2005.
- Role: It is a multi-skilled and highly specialist force capable of dealing with all types of natural and man-made disasters like Floods, Cyclone, Earthquakes, Landslides, Building-collapse, Trains and road accidents etc.
- Objective: It is aimed at specialized response to natural and man-made disasters.
- Nodal ministry: It functions under the purview of the Ministry of Home Affairs (MHA) and is headed by a Director General.
- Expansion: Initially established in 2006 with 8 Battalions, the NDRF has now expanded to 16 Battalions, drawn from the CAPF, viz Border Security Force, Central Reserve Police Force, Central Industrial Security Force, Indo-Tibetan Border Police, Sashastra Seema Bal and Assam Rifles.
- Importance: The strategic deployment of NDRF resources, characterized by "proactive availability" and "pre-positioning" during imminent disaster situations, has proven instrumental in mitigating damages caused by natural calamities across the country.
- It has also been very active in responding to natural disaster under multi-lateral and bi-lateral agreement at international level.
- Notable works: The NDRF teams responded during triple disaster (Earthquake, Tsunami and Radiation Leakage) of Fukushima, Japan in 2011 and during Earthquake in Nepal in 2015.

MAHA MEDTECH MISSION

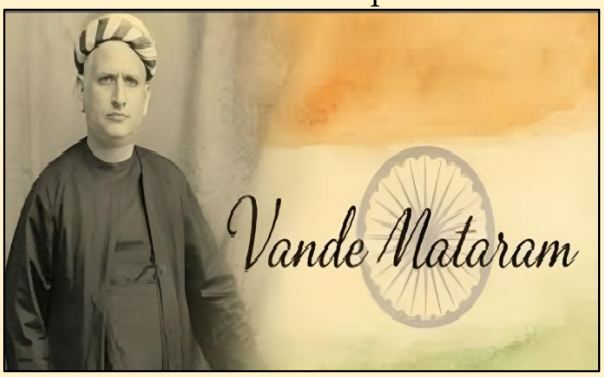
The Anusandhan National Research Foundation (ANRF), in collaboration with the ICMR and the Bill & Melinda Gates Foundation, has launched the Maha MedTech Mission to boost India's medical technology ecosystem.

About Maha MedTech Mission:

- Nature: The Mission for Advancement in High-Impact Areas (MAHA)–MedTech is a national initiative to accelerate innovation, manufacturing, and commercialization of cutting-edge medical technologies in India, enhancing access and affordability in healthcare.
- Launch: It is jointly launched by the Anusandhan National Research Foundation (ANRF), the Indian Council of Medical Research (ICMR), and the Bill & Melinda Gates Foundation.
- Objective: It aims to reduce India's dependence on high-cost medical imports, strengthen domestic capacity, and ensure equitable access to affordable and high-quality medical devices and diagnostics aligned with national health priorities such as tuberculosis, cancer, and neonatal care.
- Funding: It provides Rs. 5–25 crore per project (up to ₹50 crore for exceptional cases) for startups, MSMEs, academic, hospital, and industry collaborations.
- Coverage: It covers devices, diagnostics, implants, AI/ML-based tools, robotics, and assistive technologies.
- Enabling Frameworks: It includes Patent Mitra for IP protection, MedTech Mitra for regulatory clearances, and a Clinical Trial Network for validation.

VANDE MATARAM @150 YEARS

PM Modi acknowledged 150 years of 'Vande Mataram' in Mann ki Baat episode



About Vande Mataram:

- Meaning: Vande Mataram (meaning "I bow to thee, Mother") is India's national song, symbolizing reverence to the motherland and evoking patriotism and unity among citizens.
- Composition: It was composed in Sanskritised Bengali by Bankim Chandra Chattopadhyay in the 1870s and it was first published in his novel Anandamath (1882).
- First public rendition: The song's first public rendition was by Rabindranath Tagore at the 1896 Congress Session. It became the anthem of India's freedom struggle, sung in protests and revolutionary gatherings despite being banned by the British.
- Adoption as national song: The Indian National Congress in 1937 adopted its first two stanzas as the National Song, balancing inclusivity and secular appeal.
- Comparison to national anthem: On January 24, 1950, the Constituent Assembly accorded Vande Mataram equal honour to the National Anthem "Jana Gana Mana."
- Current Status: It is recognized by the Government of India as equal in stature to the National Anthem and its instrumental version is played at the closing of every Parliament session.

MISTHI SCHEME

While 19,220 hectares of land under MISTHI scheme has been taken up in Gujarat, only 10 hectares of mangrove plantation has been taken up in West Bengal which accounts for about 42% of mangrove cover in country.

About MISHTI Scheme:

- Nature: The Mangrove Initiative for Shoreline Habitats & Tangible Incomes (MISHTI) scheme is a government-led initiative aimed at increasing the mangrove cover along the coastline and on salt pan lands.
- Launch: It was launched after India joined the 'Mangrove Alliance for Climate' launched during the 27th Conference of Parties (COP27) to the UNFCCC held in November 2022.
- Objective: It aims to restore mangrove forests by undertaking mangrove reforestation/afforestation measures along the coast of India across various states.
- Nodal Ministry: It comes under the Ministry of Environment, Forest & Climate Change.
- Focus areas: It is primarily focused on the Sundarbans delta, Hooghly Estuary in West Bengal and other bay parts of the country, but also includes other wetlands in the country.
- Financial assistance: Under this scheme the government is providing financial assistance to local communities to undertake mangrove plantation activities.

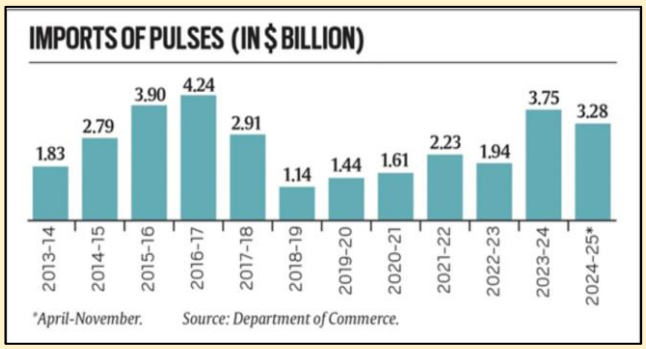
- Leverage of other schemes: It leverages the strengths and provisions of different government schemes and initiatives such as the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), the Compensatory Afforestation Fund Management and Planning Authority (CAMPA) Fund and other relevant sources.
- Participatory mechanism: The plantation activities are carried out in a participatory manner, involving local communities and NGOs, to ensure sustainability and community ownership of the initiative.

MISSION FOR AATMANIRBHARTA IN PULSES

India, the **world's largest producer and consumer of pulses,** faces a persistent demand–supply gap due to low yields and climatic risks. The **Mission for Aatmanirbharta in Pulses (2025–31)** aims to enhance productivity, reduce imports, and ensure farmer profitability.

Main Objectives and Features of the Mission

- **Launched in 2025** with a **financial outlay of ₹11,440 crore**, the mission targets **self-reliance in pulses** by 2030–31.
- **Production goal:** Increase pulses output by **45%**, from 242 lakh MT (2023–24) to **350 lakh MT** (2030–31).
- **Area expansion:** From **275 to 310 lakh ha** (+13%); **yield increase** from **881 to 1130 kg/ha** (+28%).
- **Focus crops: Tur (Arhar), Urad, and Masoor**, covering 34% of total pulses area.
- **Key interventions:**
  - **Climate-resilient seed varieties** and improved genetics.
  - **Protein enhancement** and yield improvement through R&D.
  - **Post-harvest management and storage upgrades** to reduce losses.
  - **Remunerative pricing** via assured procurement under **PM-AASHA**.
  - **Cluster-based approach:** Each cluster (≥10 ha) to serve as a model value-chain node.



Current Status and Challenges in Pulses Sector

- **Production pattern:** Rabi pulses dominate (60% of production).
  - **Top states:** Madhya Pradesh (59.74 LMT), Maharashtra (40 LMT), Rajasthan (33 LMT), Uttar Pradesh (31 LMT).
  - **Major crops:** Gram, Moong, Tur, Urad, Masoor.
- **Low productivity:** India's yield (881 kg/ha) is far below **Canada (2200 kg/ha)** and **China (1815 kg/ha)** due to rainfed cultivation, fragmented holdings, and poor technology adoption.
- **Import dependence:** Despite being the largest producer, India **imports 2–3 million tonnes annually** from Myanmar, Tanzania, Mozambique, Australia, and Canada to meet consumption needs.
- **Rising demand:** NITI Aayog projects demand at **268 LMT by 2030** and **293 LMT by 2047**, highlighting the need for sustained domestic growth.

Significance of the Mission

- **Nutritional Security:** Pulses are a **key protein source** for India's largely vegetarian population.
- **Economic Security:** Reduces import bills and improves farm incomes via assured procurement.
- **Climate Resilience:** Encourages **crop diversification** and optimises use of **rice fallow lands** in states like Bihar, West Bengal, and Chhattisgarh.
- **Regional Balance:** Focus on **aspirational, LWE, border, and NE districts**promotes inclusive agricultural growth.

- **Value Chain Development:** Integration of production, storage, and market linkages fosters agri-entrepreneurship and reduces post-harvest losses.

Criticisms and Challenges

- **Implementation hurdles:** Cluster-based approach requires strong institutional coordination across states.
- **Procurement inefficiencies:** Past experiences with **PM-AASHA** show delays and coverage gaps.
- **Market volatility:** Dependence on MSP procurement may distort prices if not matched by demand.
- **Technology adoption:** Small farmers may find it difficult to access high-yield seeds and mechanisation.
- **Climate variability:** Pulses are sensitive to erratic monsoons, drought, and pest attacks.

Reforms and Way Forward

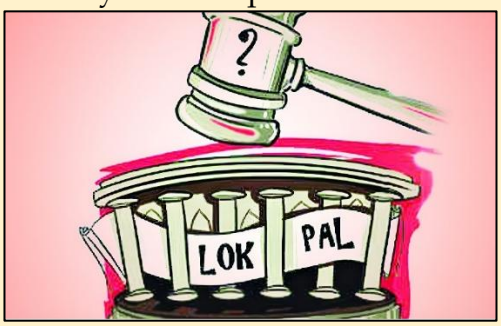
- **R&D investment:** Strengthen ICAR and IIPR-led research for high-yield, drought-tolerant, and pest-resistant varieties.
- **Digital integration:** Use **Aadhaar-enabled procurement** and **geo-tagged clusters**for transparency.
- **Private participation:** Incentivise agritech startups, FPOs, and cooperatives for storage, processing, and marketing.
- **Crop insurance and irrigation:** Expand PMFBY and micro-irrigation coverage in pulses regions.
- **Nutrition-sensitive agriculture:** Link pulses production with **Mid-Day Meal and ICDS programmes** to stabilise demand and ensure nutritional impact.

The **Mission for Aatmanirbharta in Pulses** marks a strategic step toward food and nutritional sovereignty. Its success hinges on **bridging the yield gap**, ensuring **market assurance**, and promoting **technology-driven inclusivity**.

A resilient pulses ecosystem would not only achieve self-reliance but also strengthen India's rural economy and environmental sustainability.

LOKPAL

The number of complaints, Lokpal has received since it began functioning in 2019-20 has dropped from a peak of 2,469 in 2022-23 to just 233 this year till September.



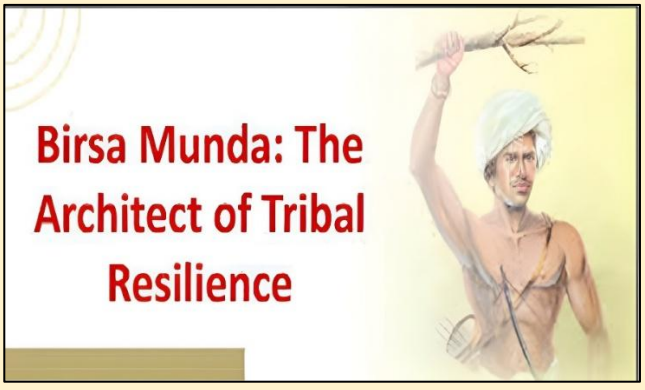
About Lokpal:

- Nature: The Lokpal and Lokayukta Act, 2013 provided for the establishment of Lokpal for the Union. It is a statutory body without any constitutional status.
- Work: They perform the function of an "ombudsman" and inquire into allegations of corruption against certain public functionaries and for related matters.
- Composition: Lokpal is a multi-member body, that consists of one chairperson and a maximum of 8 members. Out of the maximum eight members, half will be judicial members and minimum 50% of the Members will be from SC/ ST/ OBC/ Minorities and women.
- Eligibility: Chairperson of the Lokpal should be either the former Chief Justice of India or the former Judge of Supreme Court having special knowledge and expertise of minimum 25 years in the matters relating to anti-corruption policy, public administration, vigilance, etc. The judicial member of the Lokpal either a former Judge of the Supreme Court or a former Chief Justice of a High Court.
- Term: The term of office for Lokpal Chairman and Members is 5 years or till the age of 70 years.
- Appointment: The members are appointed by the president on the recommendation of a Selection Committee.

- Selection panel: The selection committee is composed of the Prime Minister who is the Chairperson, Speaker of Lok Sabha, Leader of Opposition in Lok Sabha, Chief Justice of India or a Judge nominated by him/her and One eminent jurist.
- Powers: Lokpal has powers of confiscation of assets, proceeds, receipts and benefits arisen or procured by means of corruption in special circumstances.
- It has the power to recommend transfer or suspension of public servant connected with allegation of corruption. It also has the power to give directions to prevent the destruction of records during the preliminary inquiry.
- Jurisdiction: The jurisdiction of Lokpal includes Prime Minister, Ministers, members of Parliament, Groups A, B, C and D officers and officials of Central Government.
- However, it does not have jurisdiction over Ministers and MPs in the matter of anything said in Parliament or a vote given there.
- Exception: The Lokpal does not have jurisdiction over Ministers and MPs in the matter of anything said in Parliament or a vote given there.

BIRSA MUNDA

In the run-up to the fifth Janjatiya Gaurav Divas on November 15, which will mark the end of tribal icon Birsa Munda's 150th birth anniversary, the Union government has written to the States, saying they "must organise" commemorative events at the State and district levels from November 1 to 15.



About Birsa Munda:

- Birth: He was born in Ulihatu on 15th November 1875, now in Jharkhand's Khunti district, to a poor sharecropper (sajhadar) family. He belonged to the Munda tribe, a major Adivasi community of the Chotanagpur plateau.
- Education: He attended local schools under the guidance of Jaipal Nag. He then studied at a missionary school and later at BEL school in Chaibasa for four years. He was also influenced by Christianity but later rejected it due to cultural and religious differences.
- Foundation of separate sect: He was influenced by Vaishnavism and Anand Panre (a munshi), leading him to form his own spiritual sect. He became known as Bhagwan (God) by his followers and founded the Birsait sect. He is lovingly called "Dharti Aaba" (Father of the Earth) by his followers.
- Teachings: He promoted monotheism through the worship of Singhbonga, a tribal deity. He campaigned against alcoholism, belief in black magic and superstitions, and forced labour (beth begari). He encouraged clean living, hygiene, and spiritual unity. He also taught pride in tribal culture and community land ownership.
- Fight against British exploitation: British land policies destroyed the Khuntkatti land system, where land was communally owned. Birsa Munda educated his people about these injustices and urged them to reclaim their rights.
- Launch of Ulugan: He gave the call for Ulgulan (rebellion) and urged tribals to stop paying rent. He also gave the slogan of resistance: "Abua raj ete jana, maharani raj tundu jana" (Let the queen's rule end, and our rule begin).
- Course of revolt: The revolt began in 1895 as a response to land encroachment and forced labour policies imposed by the British Raj. In 1895, Birsa Munda was arrested on charges of rioting and jailed for two years. After his release in 1897, he resumed his efforts, moving village to

village to gather support and promote the vision of a tribal-led kingdom.

- Death: Birsa Munda died of cholera in 1900, marking the end of the active phase of the revolt.
- Legacy: Since 2021, 15 November is celebrated as Janjatiya Gaurav Divas (Tribal Pride Day). Further, the only tribal leader honoured by the Parliament of India through the installation of his portrait in its museum is Birsa Munda.

HANLE DARK SKY RESERVE

With the motto 'come for the mountains, stay for the stars,' the Hanle Dark Sky Reserve is showing how the Himalayan skies are being preserved today and will be carried forward for future generations.

About Hanle Dark Sky Reserve:

- First of its kind: Located in Ladakh, Hanle is now protected as India's first dark sky reserve.
- Management: It is managed as part of a memorandum of understanding between the Indian Institute of Astrophysics (IIA) in Bengaluru, the Union Territory of Ladakh, and the Ladakh Hill Development Council in Leh.
- Located within wildlife sanctuary: The Hanle Dark Sky Reserve, a unique government-funded and science-driven sustainable development initiative, is located within the Changthang Wildlife Sanctuary, surrounding the Indian Astronomical Observatory, a research facility operated by IIA.
- Telescopes used: It has two optical telescopes, the Himalayan Chandra Telescope and the GROWTH India Telescope (with IIT Bombay), and two Cherenkov telescopes — the High Altitude Gamma-Ray Telescope Array (with the Tata Institute of Fundamental Research) and the Major Atmospheric Cherenkov Experiment (with the Bhabha Atomic Research Centre).
- Use of astro-tourism: In support of astrotourism, IIA scientists have trained 25 local youth, 18 of whom are women, as "Astronomy Ambassadors." These ambassadors are equipped with telescopes and taught basic astronomy concepts. The night-sky tours they lead for visitors help them with a part-time income.

GSAT 7R

ISRO will launch military communications satellite CMS-03 on November 2 from the Satish Dhawan Space Centre in Sriharikota. The CMS-03 communication satellite, also known as GSAT-7R, will be launched by the Launch Vehicle Mark 3 (LVM3).

About GSAT-7R:

- Nature: It is an upcoming Indian military communication satellite for the Indian Navy, designed to replace the GSAT-7 (Rukmini) satellite.
- Launch: Originally slated for a 2024 launch, the launch is now scheduled for November 2, 2025, using the LVM-3 rocket.
- Objective: It will provide secure, multi-band communication services for naval assets like ships, submarines, and aircraft, enhancing secure, multi-band communication for the Navy's blue-water operations.

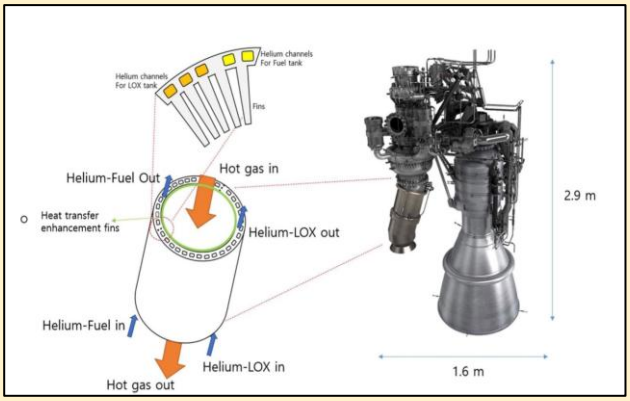
- Multi-band satellite: It is a multi-band communication satellite that will provide services over a wide oceanic region including the Indian landmass.
- Heaviest communication satellite: It weighs about 4400 kg and it will be the heaviest communication satellite to be launched to Geosynchronous Transfer Orbit (GTO) from Indian soil.

About LVM-3 Rocket:

- Nature: It is India's most powerful launcher built entirely with domestic technology.
- Stages:
  - The first (or bottom most stage) is in the form of 2 S200 boosters straps to the sides of the rocket body. They combust a solid fuel called hydroxyl-terminated polybutadiene,
  - The second stage is powered by Vikas Engines, which combust a liquid fuel, either nitrogen tetroxide or unsymmetrical dimethylhydrazine.
  - The Uppermost final stage is Powered by a cryogenic engine. It combusts liquified hydrogen with liquified oxygen.
- Payload capacity: It can lift up to 8 tonnes in low earth orbit.
- Evolution: Since its first flight in 2014, it has enabled India to pursue heavy-lift geosynchronous missions with complete strategic autonomy. Future variants of LVM3 now under development are aimed at reducing costs and improving performance through new technologies like electric propulsion and recoverable first stages.
- Major missions launched:
  - Chandrayaan-2 Mission
  - GSAT-29 Mission
  - GSAT-19 Mission
  - CARE Mission

HELIUM

When cooled to just a few degrees above absolute zero, helium becomes a superfluid and can move freely without getting stuck, something impossible for any normal fluid.



- Nature: It is an inert gas and does not react with other substances or combust.
- Atomic number: Its atomic number is 2, making it the second lightest element after hydrogen.
- Uniqueness: Helium has a very low boiling point (-268.9° C), allowing it to remain a gas even in super-cold environments.
- Non-toxic: The gas is non-toxic, but cannot be breathed on its own, because it displaces the oxygen humans need for respiration.
- Space technology: Helium is used to pressurize fuel tanks, ensuring fuel flows to the rocket's engines without interruption; and for cooling systems. As fuel and oxidiser are burned in the rocket's engines, helium fills the resulting empty space in the tanks, maintaining the overall pressure inside.
- Easy detection of leaks: Its small atomic size and low molecular weight mean its atoms can escape through small gaps or seals in storage tanks and fuel systems. But because there is very little helium in the Earth's atmosphere, leaks can be easily detected – making the gas important for spotting potential faults in a rocket or spacecraft's fuel systems.

SJ-100

The Hindustan Aeronautics Limited (HAL) and Russia's United Aircraft Corporation (UAC) have signed a Memorandum of Understanding for production of civil commuter aircraft SJ-100.

- Nature: It is a new generation short-haul jet aircraft of Russian origin. It is a twin-engine, narrow-body aircraft.
- Design: Earlier called the Sukhoi Superjet 100, it originally was designed by the now-merged Russian aircraft company Sukhoi Civil Aircraft.
- Operation: The aircrafts are being operated by more than 16 airlines across the world, nine of them being from Russia.
- Uses: The aircraft is primarily used for commercial purposes. It can operate at extreme weather conditions, from -55 degrees Celsius to +45 degrees Celsius.
- Seating capacity: It is capable of accommodating 103 seats and has a flight range of 3,530 kilometres. The aircraft has been touted as having low operating costs for airlines.
- Significance for India: The SJ-100 can be a game changer for short-haul connectivity under the UDAN Scheme and marks a major stride towards achieving 'Aatmanirbharta' in civil aviation.

MEGREAP

Rooted in its natural wealth and community-driven governance, Meghalaya has launched an ambitious initiative — the Regenerative Economies through Accelerated & Inclusive Enterprises in Meghalaya (MegREAP) — as part of its vision to build a $10 billion green economy by 2028.

- MegREAP stands for Regenerative Economies through Accelerated & Inclusive Enterprises in Meghalaya.
- The initiative was launched in August 2025 under the Meghalaya Basin Development Authority (MBDA).
- Meghalaya aims to become a $10 billion green economy by 2028.
- Over 78% of Meghalaya's area is under forest cover, among the highest in India.

The MegREAP cell, notified in August 2025 under the Meghalaya Basin Development Authority (MBDA), aims to accelerate inclusive, climate-resilient growth through coordinated efforts across sectors.

Integrating Climate, Livelihoods and Markets

MegREAP functions as a collaborative platform bringing together departments, missions and partners to work at the intersection of climate, livelihood, finance and markets. It seeks to foster a regenerative model of development that values natural and cultural capital while improving livelihoods.

Development Commissioner and MBDA CEO Sampath Kumar said that the initiative would "cultivate a mindset shift" among citizens, empowering communities to build resilient, self-sustaining economies aligned with the State's environmental priorities.

Building on Meghalaya's Green Legacy

Meghalaya's environmental initiatives already include India's first statewide Payment for Ecosystem Services programme and the formulation of forest management plans for over one lakh hectares of forests.

The State has also established a Climate Change Council chaired by the Chief Minister to coordinate and oversee developmental and climate-related programmes. MegREAP builds upon these efforts to align local development with global climate and biodiversity goals.

Harnessing Community Ownership and Natural Capital

With 78 per cent of its area under forest cover, Meghalaya is among India's greenest States.

The MegREAP initiative seeks to transform this natural abundance into sustainable economic value by strengthening community ownership and linking local resources to broader markets. Wankit Swer, General Manager at MBDA, noted that MegREAP would leverage sectors such as eco-tourism, clean energy, forest-based enterprises, and sustainable agriculture to advance inclusive growth.

Bamboo Villages: A Sustainable Enterprise Model

As part of MegREAP, MBDA is partnering with Common Ground — comprising Vrutti, Living Landscapes, and the Bamboo Village Trust — to develop Bamboo Villages across the State.

The initiative aims to transform bamboo into a sustainable economic driver, supporting livelihoods while maintaining ecological balance. By integrating innovation with traditional practices, Meghalaya envisions a regenerative economy that ensures prosperity without compromising its ecological integrity.

AMAZONFACE PROJECT

Scientists in Brazil have launched the AmazonFACE "climate time machine" experiment near Manaus to study how the Amazon rainforest will respond to future levels of atmospheric carbon dioxide.

- AmazonFACE (Free-Air CO_2 Enrichment) is a **large-scale climate simulation project**designed to assess how **tropical rainforests**—especially the Amazon—will react to elevated CO_2 levels expected by **2050–2060**. It is the **first experiment of its kind in tropical forests**.

How It Works?

- Six **steels tower rings** are installed around groups of **50–70 mature trees**.
- In three rings, trees are **fumigated with CO_2** concentrations matching **future climate forecasts**, while the remaining serve as control plots.
- Continuous sensors record data on **photosynthesis, oxygen release, and water vapor exchange** every 10 minutes.
- The goal is to recreate the **"atmosphere of the future"** and observe ecosystem-level responses.

Key Features:

- **Location:** Conducted near Manaus, Brazil, supported by INPA (National Institute for Amazon Research) and Universidade Estadual de Campinas, with collaboration from the UK government.
- **Scientific Innovation:** First large-scale FACE experiment in a **natural tropical forest**, extending earlier FACE trials in temperate regions like the U.S.
- **Continuous Monitoring:** Real-time environmental data tracking rain, storms, CO_2 absorption, and respiration.

- **Climate Modelling Application:** Helps predict changes in forest carbon storage, biodiversity, and resilience under future atmospheric conditions.
- **Policy Linkage:** Provides crucial input for climate policy deliberations at COP30, especially regarding rainforest conservation and carbon budgeting.

Significance:

- **Climate Adaptation Insight:** Helps predict how the Amazon rainforest will respond to rising CO_2 levels, guiding global climate adaptation strategies.
- **Scientific Breakthrough:** Marks the world's first large-scale CO_2 enrichment experiment in a tropical rainforest ecosystem, expanding the scope of climate modeling.
- **Policy Relevance:** Provides critical data for COP30 negotiations and strengthens Brazil's leadership in global climate science and carbon sequestration research.

REHABILITATION COUNCIL OF INDIA (RCI)

In a decisive move, the Rehabilitation Council of India (RCI) has announced a sweeping set of reforms designed to bring transparency, efficiency and inclusivity to the rehabilitation ecosystem across the country.

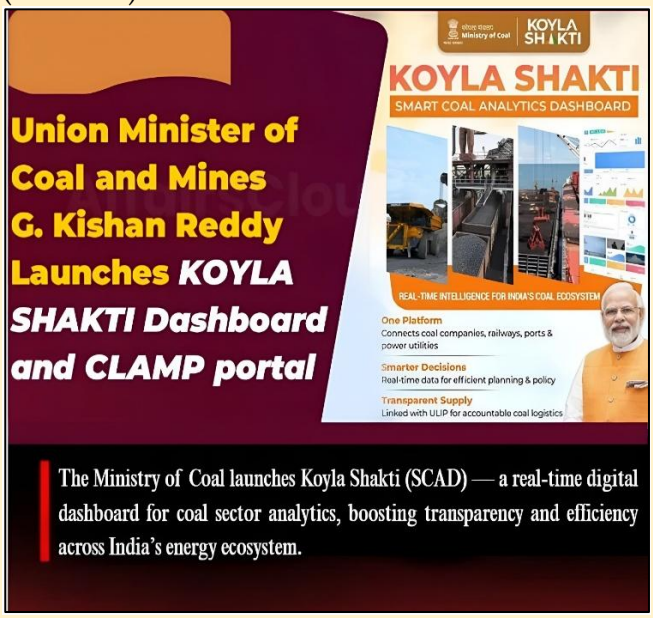
भारतीय पुनर्वास परिषद्
सत्यमेव जयते
Rehabilitation Council of India

About Rehabilitation Council of India (RCI):

- Nature: It is a statutory body established by an Act of Parliament.
- Establishment: It was set up as a registered society in 1986. In 1992 the RCI Act was enacted by Parliament and it became a Statutory Body in 1993. The Act was amended by Parliament in 2000 to make it more broad-based.
- Objective: It aims to regulate and monitor services given to persons with disabilities, to standardise syllabi and to maintain a Central Rehabilitation Register of all qualified professionals and personnel working in the field of Rehabilitation and Special Education.
- Nodal Ministry: It comes under the Ministry of Social Justice & Empowerment.
- Functions: It regulates the training policies and programmes in the field of rehabilitation of persons with disabilities. It brings about standardization of training courses for professionals dealing with persons with disabilities.
- Recognition to associated institutions: It recognizes the national institutes and apex institutions on disability as manpower development centres. The Council also prescribes minimum standards of education and training for 16 categories of professionals and personnel allocated to RCI.
- Important laws in India to deal with disabilities:
    - Indian Lunacy Act, 1912
    - Mental Health Act, 1987
    - Rehabilitation Council of India Act, 1992
    - Persons With Disability Act, 1995
    - National Trust Act, 1999
    - Right To Education Act, 2010

KOYLA SHAKTI AND CLAMP PORTAL

The Union Minister of Coal and Mines, launched two major digital platforms — the KOYLA SHAKTI Dashboard and the Coal Land Acquisition, Management, and Payment (CLAMP) Portal.



What it is?

- A Smart Coal Analytics Dashboard (SCAD) developed by the Ministry of Coal as a unified digital platform integrating the entire coal value chain — from mine to market.

Organisation: Developed and maintained by the Ministry of Coal.

Aim: To act as the digital backbone of India's coal ecosystem by enabling real-time monitoring, data integration, and evidence-based policy formulation for improved operational efficiency.

Key Features:

- Unified Visibility: Integrates data from coal production, logistics, and consumption into a single interface.
- Real-Time Monitoring: Tracks coal movement through rail, road, and multimodal systems with live analytics.
- Data-Driven Governance: Enables predictive analytics for demand forecasting and resource allocation.
- Incident Response System: Provides alerts for operational disruptions and supports rapid redressal.
- Transparency & Accountability: Displays KPIs for all stakeholders to ensure open and fair monitoring.

About CLAMP Portal:

What it is?

- The Coal Land Acquisition, Management, and Payment (CLAMP) Portal is a centralized digital solution for managing land acquisition, compensation, and R&R processes in coal-bearing areas.

Aim: To ensure time-bound, transparent, and equitable land management by digitizing records, payments, and inter-agency coordination.

Key Features:

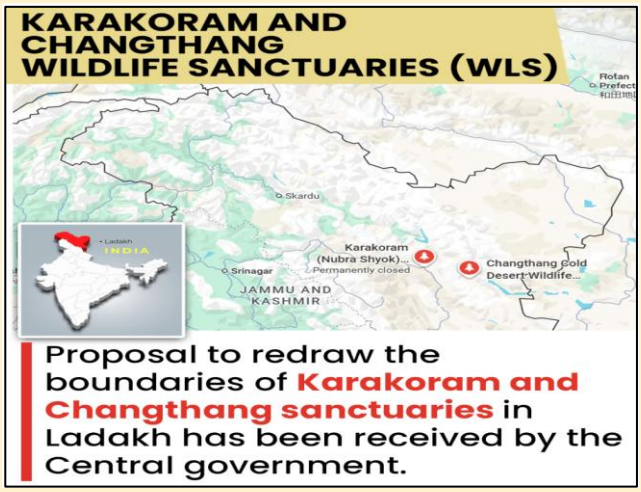
- End-to-End Digital Workflow: From uploading land records to final compensation payment.
- Central Repository: Maintains updated land ownership and compensation details.
- Transparency & Accountability: Reduces human discretion and procedural delays.
- Integration Across PSUs: Links coal PSUs, State departments, and district authorities.
- Citizen-Centric Governance: Ensures fair and prompt rehabilitation and resettlement.

CHANGTHANG AND KARAKORAM WILDLIFE SANCTUARIES

A comprehensive proposal to redefine the boundaries of the Changthang and Karakoram wildlife sanctuaries in Ladakh has been submitted for final approval by the Central government. The move aims to reconcile ecological protection with strategic, developmental, and local livelihood priorities in one of India's most sensitive border regions.

Revised Boundaries and Expanded Coverage

The Ladakh State Wildlife Board, in its meeting on September 19, proposed revising the Karakoram Wildlife Sanctuary to 16,550 sq km and the Changthang Wildlife Sanctuary to 9,695 sq km. These figures represent a significant increase from the 1987 notifications, which recorded the sanctuaries at about 5,000 sq km and 4,000 sq km respectively.



However, the rationalisation also includes the exclusion of 1,742 sq km from the Karakoram (Nubra–Shyok) area and 164 sq km from the Changthang region to better align with actual human habitation patterns.

Need for Rationalisation and Accurate Mapping

Officials noted that the original 1987 notifications lacked clear demarcation and boundary accuracy, with actual protected areas estimated to be nearly three to four times larger than notified. To address this, the Wildlife Institute of India (WII) undertook a detailed study and consultation with local stakeholders, identifying High Conservation Value Areas (HCVAs) requiring the highest level of protection.

Ten HCVAs were marked within Karakoram and seventeen within Changthang, along with identified wildlife corridors to ensure ecological connectivity.

Balancing Conservation with Local Livelihoods

The redefined sanctuaries seek to balance conservation with the needs of residents living within these high-altitude regions. Around 67 villages in the Karakoram and 45 in the Changthang sanctuary are proposed to be excluded, allowing limited development and tourism-related activities. Local authorities emphasised that the intention is not to enable large-scale commercial ventures but to support sustainable livelihoods through eco-tourism and small-scale infrastructure like homestays and guest houses.

- Karakoram and Changthang sanctuaries were originally notified in 1987.
- Revised areas: Karakoram – 16,550 sq km; Changthang – 9,695 sq km.
- Study conducted by the Wildlife Institute of India (WII) identified 27 High Conservation Value Areas (HCVAs) in total.
- 67 villages in Karakoram and 45 in Changthang proposed for exclusion to enable livelihood activities.

The sanctuaries lie in zones of immense ecological and geopolitical value near India's international borders. Officials, including Chief Executive Councillor Tashi Gyalson, stressed that sustaining habitation in these remote areas is essential for national security and border vigilance.

The proposal thus seeks to integrate conservation goals with defence imperatives and the socio-economic stability of local communities, marking a pivotal step in Ladakh's environmental and strategic planning framework.

INDI LIME

India has achieved a new milestone in its agricultural export journey with the first-ever air shipment of GI-tagged Indi Lime from Karnataka and Puliyankudi Lime from Tamil Nadu to the United Kingdom.

The initiative, facilitated by the Agricultural and Processed Food Products Export Development Authority(APEDA), marks a significant step in promoting region-specific produce in international markets.

Milestone in Indian Agri Exports

The export of these Geographical Indication (GI) certified limes highlights India's expanding agricultural footprint. The Indi Lime from Karnataka and the Puliyankudi Lime from Tamil Nadu are known for their unique aroma, high juice content, and superior quality. The export aligns with the government's ongoing efforts to showcase India's distinct agri products globally and enhance rural income through value-added trade.

More About Indi Lime from Karnataka

The Indi Lime, native to Vijayapura district in Karnataka, is known for its rich aroma, thin rind, and high juice yield, making it one of India's most sought-after citrus varieties.

Its distinct tangy-sweet flavour and superior oil content set it apart from ordinary lemons. Traditionally cultivated using organic and region-specific practices, Indi Lime thrives in the semi-arid climate and black cotton soils of northern Karnataka. The lime's high citric acid concentration and longer shelf life make it ideal for both fresh consumption and industrial processing in beverages, pickles, and essential oils. Its GI certification not only safeguards its regional identity but also boosts farmers' market value and recognition worldwide.

More About Puliyankudi Lime from Tamil Nadu

Puliyankudi Lime, grown in the fertile tracts of Tenkasi district in Tamil Nadu, is prized for its intense fragrance, smooth green peel, and balanced acidity. Locally known as "Puliyankudi Elumichai," this lime has long been a household staple in southern India, valued for its medicinal, culinary, and preservative properties. The region's red loamy soil and tropical climate contribute to its vibrant flavour and high nutritional quality. Farmers in Puliyankudi have preserved traditional cultivation methods that maintain the fruit's purity and consistency, leading to its GI-tag recognition. With international exports now underway, the Puliyankudi Lime stands poised to become a global ambassador of Tamil Nadu's agricultural heritage.

Role of GI Tag and Farmer Empowerment

A GI tag links a product to its region of origin, guaranteeing authenticity and quality. This recognition helps farmers gain better prices and protects traditional cultivation practices.

The Swadeshi Indi Lime, previously exported to the United Arab Emirates earlier this year, has already established a strong presence in international markets. These initiatives reflect India's commitment to promoting traceable and sustainable agricultural trade.

Expanding India's Global Market Reach

Beyond lime exports, India has widened its agri export base with Gharwali apples and apricots from Kargil entering new markets in Saudi Arabia, Kuwait, and Qatar. Such achievements not only showcase the diversity of Indian produce but also strengthen trade relations with partner nations. The expansion of India's agri exports forms part of a larger strategy to integrate farmers into global value chains and elevate the country's agricultural brand internationally.

- APEDA facilitated the first export of GI-tagged Indi Lime and Puliyankudi Lime to the United Kingdom.
- Geographical Indication (GI) tags certify authenticity linked to a product's place of origin.
- Swadeshi Indi Lime from Karnataka was earlier exported to the UAE.
- India is also expanding exports of apples and apricots from Kargil to Gulf countries.

Trade Diplomacy and Future Outlook

The export milestone coincides with India's ongoing discussions on the India-EU Free Trade Agreement. The talks, held between Commerce Minister Piyush Goyal and EU Commissioner Maros Sefcovic in Brussels, aim to strengthen bilateral trade and open new agricultural opportunities. With initiatives like the export of GI-tagged produce, India continues to position itself as a key player in sustainable global agriculture, blending traditional excellence with modern trade practices.

SARANDA SANCTUARY

The Supreme Court reserved its verdict on the Jharkhand government's plea to reduce the expanse of to be notified Saranda sanctuary from its earlier 310 sq km to 250 sq km to exclude 60 sq km of forest inhabited by tribals to protect their forest rights.

About Saranda Sanctuary:

- Location: It is a proposed wildlife sanctuary in West Singhbhum district of Jharkhand, located within the Saranda Forest Division, known as one of Asia's largest Sal (Shorea robusta) forests and a key biodiversity hotspot at the Jharkhand–Odisha border.
- Nomenclature: Situated in southern Jharkhand, the Saranda region—means "land of seven hundred hills."
- Area: It covers about 856 sq km, of which 816 sq km is reserved forest.
- Ecological corridor between several states: It lies within the Singhbhum Elephant Reserve, forming a vital ecological corridor between Jharkhand, Odisha, and Chhattisgarh.
- Evolution: It was declared a game reserve in 1968 under the Bihar Forest Act. The National Green Tribunal (2022) directed Jharkhand to notify it as a sanctuary under the Wildlife Protection Act, 1972.
- Flora: Dense cover of Sal, Kusum, Mahua, and rare orchids are found here.
- Fauna: It forms an important habitat for Asian elephants, four-horned antelope, sloth bears, flying lizards, and migratory birds.
- Important Communities: It is home to Ho, Munda, Oraon, and several PVTGs, reliant on forest produce like mahua and resin.
- Mineral resources: It contains nearly 26% of India's iron ore reserves, making it a major mining zone for SAIL and private operators.

ETHICS IN JOURNALISM

The devastating **North Bengal floods (2025)**, which claimed over **30 lives** and caused **110 major landslides**, highlight not only the tragedy of natural disasters but also the **ethical dilemmas and moral responsibilities** faced by journalists covering human suffering in crisis situations.

Core Ethical Principles in Disaster Journalism

- **Empathy Over Exploitation:** Reporting on trauma demands **sensitivity**. Journalists must avoid **intrusive questioning** or **emotional exploitation** of survivors for "scoops." The **dignity of victims** should remain central, ensuring that storytelling does not become voyeuristic.
- **Humanity and Compassion:** Despite losing everything, many survivors displayed **kindness and solidarity**. Ethical journalism reciprocates that humanity — acknowledging resilience rather than only amplifying grief.
- **Informed Consent:** Victims are not obligated to share their pain. Ethical conduct requires seeking **informed consent** before interviews or photographs, especially when individuals are in **psychological distress**.
- **Sensitivity to Visual Representation:** Ethical journalists must be cautious with **graphic imagery** — ensuring that visuals evoke empathy and awareness, not **sensationalism**. Visuals should preserve **privacy, cultural values, and emotional limits** of affected communities.

- **Objectivity with Compassion:** Balancing **truth-telling** with **emotional restraint** is vital. Facts must be accurate, but the tone should remain **compassionate**, avoiding **blame narratives** or **politicization** during humanitarian crises.

- **Cultural and Contextual Respect:** Disaster zones often overlap with **tribal, border, or minority communities**. Ethical reporting means understanding **local sensitivities**, avoiding **stereotypes**, and ensuring representation of **marginalized voices**.

- **Avoiding Harm and Re-traumatization:** Journalists must recognize **psychological limits** — identifying **visual cues and body language** to know when to stop questioning. Ethical restraint protects both **reporter and survivor** from further trauma.

Ethical Challenges in the Field

- **Access and Safety vs. Duty to Inform:** Reporters often risk personal safety in unstable terrain to bring stories from **remote, high-risk zones**. Balancing **public interest** with **personal responsibility** is a recurring ethical dilemma.

- **Media Absence in Marginal Areas:** Many **border or high-altitude communities go** unreported due to **bureaucratic hurdles or fear of reprisal**. This reflects a failure in **media justice**, where certain lives remain **invisible** in national narratives.

- **Economic and Institutional Pressures:** The demand for "impactful stories" may tempt sensationalism. Ethical journalism must resist **commercial pressure** and focus on **truthful, human-centered reporting**.

- **Reporter's Emotional Trauma:** Covering destruction and death leads to **vicarious trauma**. Ethical frameworks should extend to **journalist well-being**, promoting **mental health support** and **peer debriefing mechanisms** post coverage.

Reforms and Best Practices

- **Adopt Ethical Codes:** Implement the **Press Council of India's Guidelines** on **Disaster Coverage**, emphasizing accuracy, restraint, and empathy.
- **Capacity Building:** Train journalists in **psychological first aid**, **trauma-informed reporting**, and **ethical interviewing techniques**.
- **Community-Centric Reporting:** Shift focus from **event-driven** to **people-centric journalism** — highlighting **resilience, recovery, and lessons learned**.
- **Collaborative Reporting:** Encourage partnerships with **local reporters, NGOs, and disaster authorities** to ensure **authentic, safe, and holistic coverage**.
- **Institutional Support Systems:** Establish **media ethics cells** within news organizations for **ethical review** of sensitive reports and visuals.
- **Ethical Tech Use:** Use **AI verification tools** to combat **misinformation**, but ensure **data privacy** and **contextual accuracy** in disaster-related visuals or stories.

Ethical disaster journalism is not just about **telling stories of pain**, but about **restoring dignity to those who suffer**. By upholding **empathy, truth, and responsibility**, journalists transform from mere observers to **agents of human solidarity and accountability**. Amid ruins, it is not just infrastructure that needs rebuilding — it is **trust and humanity**.

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