



SHAPING TALENT SINCE 2009

MONTHLY CURRENT AFFAIRS

FOR UPSC CIVIL SERVICE EXAMINATION

AUGUST 2025



$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

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Kakori Train Action – 100 Years

Context: On August 9, 2025, the Prime Minister and UP Chief Minister paid tribute to the revolutionaries on the 100th anniversary of the Kakori Train Action. The UP government officially renamed “Kakori Kand” as “Kakori Train Action.”



About the Movement

- **HRA Formation (1924):** Founded by Sachindra Nath Sanyal, Ram Prasad Bismil & others to fight for independence through armed struggle.
- **Renamed as HSRA (1928):** Under Chandrashekhar Azad, the Hindustan Republican Association became Hindustan Socialist Republican Association with leaders like Bhagat Singh and Sukhdev.

The Kakori Incident (1925)

- Ten revolutionaries stopped the Saharanpur-Lucknow passenger train near Kakori and seized British government treasury funds.
- It was symbolic—challenging colonial exploitation and raising funds for the movement.

Key Participants:

- Ram Prasad Bismil – Mastermind
- Ashfaqulla Khan – Later captured and executed
- Chandrashekhar Azad – Escaped, died in 1931 at Alfred Park
- Others: Rajendra Lahiri, Roshan Singh, Sachindra Nath Bakshi, Keshab Chakravorthy, Manmathnath Gupta, and more

Trial & Outcome

- Special Sessions Court trial led by Justice Archibald Hamilton.
- Defence: Govind Ballabh Pant & Chandra Bhanu Gupta
- Prosecution: Jagat Narain Mulla

Punishments:

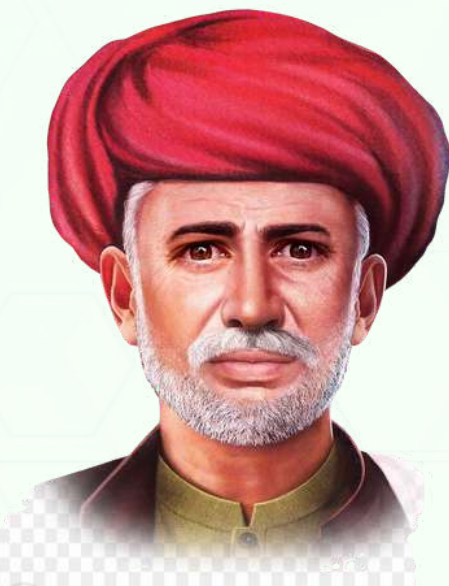
- **Death:** Bismil, Ashfaqulla, Rajendra Lahiri, Roshan Singh (1927)
- **Life/long-term imprisonment:** Several others sent to jails including Cellular Jail, Port Blair
- Azad stayed underground till 1931, choosing martyrdom over arrest.

200th Birth Anniversary of Mahatma Jyotiba Phule

Context: In his Independence Day 2025 address, the Prime Minister announced celebrations for the 200th birth anniversary of Mahatma Jyotiba Phule (1827–1890). India recently observed his 198th birth anniversary on April 11, 2025.

About Jyotiba Phule

- **Born:** 11 April 1827, Pune (Mali caste)
- **Education:** Scottish Mission High School, Pune (graduated 1847)
- **Marriage:** Married Savitribai Phule (1840), who later became India's first woman teacher and reformer.
- **Turning Point:** Faced caste discrimination at a friend's wedding (1848), which shaped his reformist vision.



Social Contributions

- **Education:**
 - Founded India's first girls' school in Pune (1848) with Savitribai.
 - Opened schools for Dalits, backward castes, and night schools for workers.
 - Advocated universal, compulsory, and practical education.
- **Women's Empowerment:**
 - Promoted widow remarriage and girls' education.
 - Established orphanages and anti-infanticide centers.
 - Supported women's social and economic independence.
- **Caste Reform:**
 - Critic of Brahmanical dominance and untouchability.
 - Founded Satyashodhak Samaj (1873) to promote equality and rationalism.
 - Trained non-Brahmin priests to break caste monopoly in rituals.
 - Critiqued the 1857 Revolt as an upper-caste attempt to restore dominance.

Literary Works

- **Gulamgiri (1873):** Compared caste oppression to slavery in America.
- **Shetkaryacha Asud (1881):** On farmers' plight.
- **Sarvajanik Satya Dharma Pustak:** Advocated universal humanism.
- **Satsar:** Defended religious freedom, supported Pandita Ramabai.
- **Manav Mahammand:** Poetic tribute to Prophet Muhammad.

Associated Efforts

- **Satyashodhak Samaj (1873):** Key platform for anti-caste struggles.
- **Din Bandhu newspaper (1877):** Gave voice to the oppressed.
- Inspired later reformers like Dr. B. R. Ambedkar; supported by Chhatrapati Shahu Maharaj.



Separate Census for PVTGs

Context: The Ministry of Tribal Affairs has urged the Registrar General & Census Commissioner to separately count Particularly Vulnerable Tribal Groups (PVTGs) in the upcoming census.



Why a Separate Census?

- **2011 Census:** Around 40 PVTGs were counted within the broader Scheduled Tribes (STs) category; others were not distinctly enumerated.
- **Targeted Schemes:** Accurate data is crucial for need-based programmes like PM-JANMAN, aimed at bridging socio-economic gaps of PVTGs across 200+ districts.

About PVTGs

- **Definition:** The most vulnerable among tribal communities.
- **Origin:**
 - 1973 - Dhebar Commission identified Primitive Tribal Groups (PTGs).
 - 2006 - Renamed as Particularly Vulnerable Tribal Groups (PVTGs).
- **Number:** 75 PVTGs out of 705 Scheduled Tribes in India.
- **Population (2011):** 2.8 million, spread across 22,544 villages in 220 districts of 18 states/UTs.

Distribution

- **Largest PVTG population:** Odisha
- **Next:** Madhya Pradesh, Andhra Pradesh & Telangana

Key Features of PVTGs

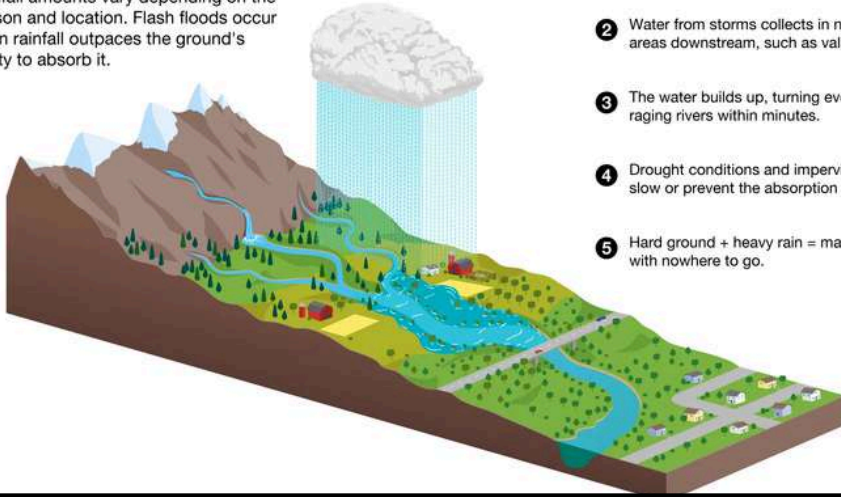
- Pre-agricultural level of technology
- Low literacy levels
- Economic backwardness
- Stagnant/declining population
- Require special funds as advanced ST groups often consume most resources

Cloudburst & Flash Floods in Uttarakhand

Context: A recent cloudburst over Uttarakhand's Kheer Ganga river triggered flash floods in Uttarkashi district.

How a flash flood develops

Rainfall amounts vary depending on the season and location. Flash floods occur when rainfall outpaces the ground's ability to absorb it.



- 1 eventually flows downhill.
- 2 Water from storms collects in narrow, low-lying areas downstream, such as valleys and canyons.
- 3 The water builds up, turning even dry channels into raging rivers within minutes.
- 4 Drought conditions and impervious surfaces can slow or prevent the absorption of water into the soil.
- 5 Hard ground + heavy rain = massive runoff with nowhere to go.



What is a Cloudburst?

- **Definition:** Rainfall of 10 cm or more in an hour over ~10 sq km area.
- **Mechanism:** Common in hills due to orographic lift—warm moist air rises, cools, and suddenly releases heavy rain.
- **Occurrence in India:** Frequent during monsoons in Himalayas, Western Ghats, and NE states.
- **Impact:** Triggers flash floods, landslides, and sudden waterlogging.

Why Increasing in Himalayas?

- **Steep terrain & valleys:** High susceptibility to cloudbursts.
- **Climate change:** Himalayan warming (+1.6°C, higher than national average) increases rainfall intensity.
- **Glacial Lake Outburst Floods (GLOFs):** Melting glaciers create fragile lakes (e.g., Lhonak Lake outburst, Sikkim 2023).
- **Deforestation & urbanisation:** Construction in flood-prone areas worsens runoff.

Monitoring & Mitigation

- **Early Warning Systems:**
 - IMD Doppler Weather Radar network
 - CWC Flood Forecasting (325+ stations)
 - Flash Flood Guidance System (6–24 hr alerts)
 - ISRO's Bhuvan portal for satellite monitoring
 - Himalayan Glacial Lake Monitoring Project
- **Special Programmes:**
 - National Mission for Sustaining Himalayan Ecosystem (NMSHE)
 - Hazard mapping by MoES & DST
 - Uttarakhand's Disaster Mitigation & Management Centre

Key Challenges

- Localised scale (1–30 sq km, <1 hr duration) → very little warning time
- Sparse radar & weather stations in Himalayas
- Difficult terrain and unpredictable cloud dynamics
- Weak ground-satellite data integration
- Alert delivery gaps in remote villages
- Cross-border river data not shared

Way Forward

- Expand Doppler radars & Automatic Weather Stations
- AI/ML-based rainfall prediction models
- Enforce no-construction zones in floodplains & hazard-prone slopes
- Community-based disaster drills & training
- Restore wetlands & drainage systems for natural absorption
- Establish a National Cloudburst & Flash Flood Mission under NDMA
- Integrate disaster planning with SDG 11 (Sustainable Cities) & SDG 13 (Climate Action)

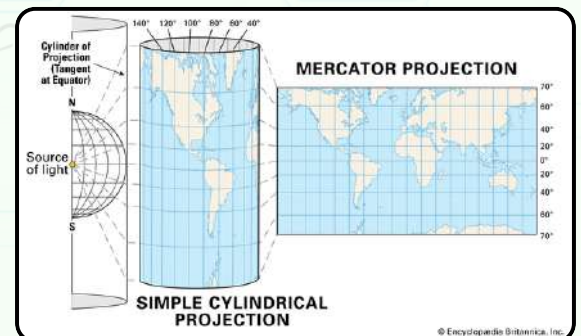
Conclusion: Rising cloudbursts and flash floods threaten lives and infrastructure in Himalayas. Tackling them needs stronger early warning, climate-resilient planning, and eco-sensitive development.

Mercator Projection Map

Context: The African Union has endorsed replacing the Mercator map with one that shows Africa's true size.

About Mercator Map

- Introduced: 1569 by Gerardus Mercator.
- Type: Cylindrical projection.
- Features:
 - Straight, right-angled latitude & longitude lines.
 - Useful for navigation (accurate directions).
- Limitations:
 - Distorts size near poles.
 - Example: Greenland looks as big as Africa, though it's actually smaller than the DRC.



Alternatives

- Gall-Peters Projection (1970s): Shows true relative size of continents. Adopted in some schools (e.g., Boston, 2017).
- Equal Earth Projection (2018): Favoured by AU; balances proportionality with less distortion.



130th Constitution Amendment Bill, 2025

Context: The Union government introduced three bills to curb criminalisation of politics —

1. 130th Constitution Amendment Bill, 2025
2. Govt. of Union Territories (Amendment) Bill, 2025
3. J&K Reorganisation (Amendment) Bill, 2025

The 130th Amendment Bill has been referred to a Joint Parliamentary Committee (JPC).

Key Provisions

- **Removal on Detention:** PM, CM, or any Minister (Union/State/UT) will be removed if detained for 30+ consecutive days on serious charges (5+ years punishment).
- **Automatic Cessation:** From the 31st day, if no removal advice is issued, the Minister automatically loses office.
- **PM/CM Clause:** Must resign if detained for 30 days; else cease office from 32nd day.
- **Reappointment Allowed:** After release, they can be reappointed by President/Governor.
- **Coverage:** Extended to all Union Territories (including Delhi & J&K).

Judicial Background

- **Lily Thomas Case (2013):** Legislators convicted of serious offences are disqualified, but no clarity on Ministers in custody.
- **ADR Case (2002):** Called for transparency; left disqualification to Parliament.
- **Constitutional Gap:** Ministers hold office at President/Governor's "pleasure," but removal usually follows aid & advice → created ambiguity.

Significance

- Strengthens constitutional morality & public trust.
- Removes ambiguity on detention of Ministers.
- Applies uniformly across Union, States, and UTs.

Concerns

- **Presumption of Innocence:** Removal without conviction.
- **Conflict with RPA, 1951:** Goes beyond disqualification provisions (which apply only after conviction).
- **Political Misuse:** Detentions may be used against opposition leaders.
- **Federalism Issues:** Governor's power to remove CMs may strain Centre-State ties.
- **Judicial Scrutiny:** May face challenge under Basic Structure Doctrine.
- **Governance Instability:** Frequent removals and reappointments could disrupt administration.

India's Electoral Integrity

Context: Allegations of over 1 lakh fake votes in Bengaluru's Mahadevapura Assembly seat raised concerns over electoral malpractices.

Key Issues in Voter Rolls

- Duplicate Votes: Same EPIC numbers across states.
- Fake/Invalid Addresses used for registrations.
- Bulk Voters at One Address without residence proof.
- Invalid Photos on Voter IDs.
- Misuse of Form 6 for fraudulent registrations.

Note:

- EPIC: Unique 10-digit voter ID number.
- Form 6: For new voter registration or shifting constituency.

Election Commission of India (ECI)

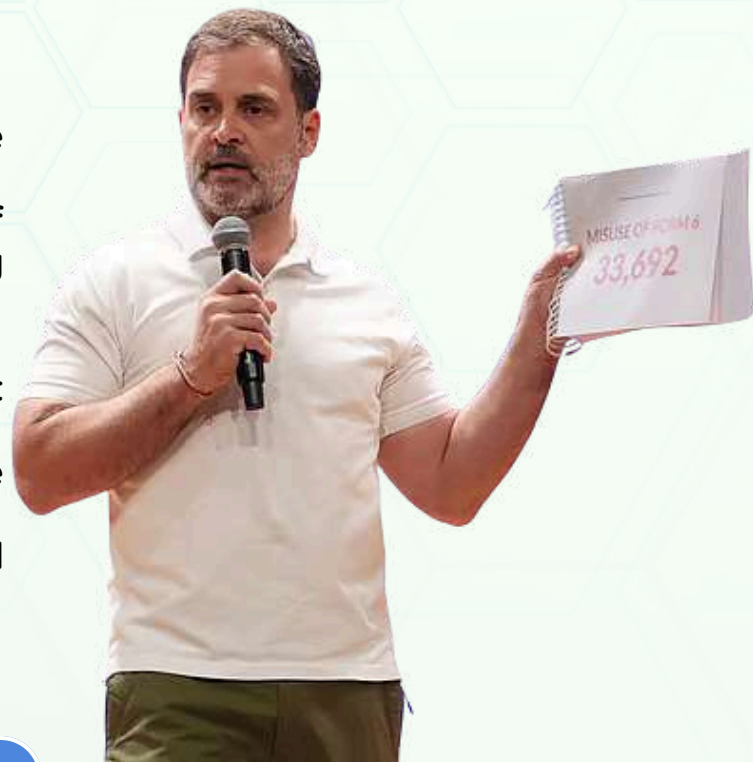
- Constitutional Basis: Part XV (Articles 324–329).
- Powers: Article 324 – Superintendence & control of elections.
- Composition: 1 CEC + 2 ECs.
- Appointments: As per Anoop Baranwal Case (2023) – by PM, LoP, and a Cabinet Minister.
- CEC Removal: Same as SC judge; ECs can be removed on CEC's recommendation.
- 2023 Act: Parliament passed law on EC appointments to align with SC ruling.

Voting Safeguard

- VVPAT (Voter Verifiable Paper Audit Trail): Prints a slip for 7 seconds to verify vote cast.

Challenges

- Fake voter entries → weakens “one person, one vote” principle.
- Weak enforcement of Model Code of Conduct (MCC) & campaign spending limits.
- VVPAT checks limited to small samples.
- EVM safeguards lack independent audits.
- Transparency gaps – CCTV footage not retained, turnout data delayed.
- Appointment concerns – govt excluded CJI from EC selection panel.
- Growing erosion of public trust.



Way Forward

- Regular audits & cleansing of voter rolls.
- Make voter roll data transparent & searchable.
- Independent EVM audits & stronger protocols.
- Expand VVPAT verification using larger samples.
- Ensure independent EC appointments (include CJI).
- Engage political parties & civil society for trust-building.

Conclusion: Allegations of fake votes highlight the urgent need for voter roll reforms, transparency, and independent oversight. Strengthening ECI's credibility is key to safeguarding India's democracy.

Online Gaming Bill, 2025

Context:

Parliament passed the Promotion and Regulation of Online Gaming Bill, 2025, banning real-money games while encouraging e-sports and online social games.



Key Provisions

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- **Segmentation of Gaming**
 - **E-Sports:** Recognised as a creative industry; govt to support tournaments & mainstreaming.
 - **Online Social Games:** Casual, safe games without money stakes (e.g., Ludo King).
 - **Online Money Games:** Banned completely (e.g., Poker, Rummy, Dream11, MPL).
- **Ban & Penalties**
 - **Platforms:**
 - 1st offence → up to 3 yrs jail + ₹1 crore fine.
 - Repeat offence → 3-5 yrs jail + ₹2 crore fine.
 - **Influencers/Advertisers:** Ban on promoting money games. Violation → up to 2 yrs jail + ₹50 lakh fine.
 - **Financial Ban:** Banks cannot support transactions for money games.
- **Online Gaming Authority**
 - **Statutory body** to regulate, supervise, and support gaming sector.
 - **Powers:** Classify games, promote e-sports, curb money laundering, fraud, and addictive algorithms.

Significance

- **Protects Citizens:** Shields youth from financial & psychological harm of money games.
- **Legitimises Safe Gaming:** Gives clarity to e-sports & social gaming start-ups.
- **Uniform Regulation:** National-level framework replacing fragmented state laws.
- **Supports Digital India & Security:** Encourages innovation while curbing fraud, money laundering & terror financing risks.

Conclusion: The Bill balances innovation with protection, promoting responsible gaming while tackling risks from real-money platforms.

Indian Ports Bill, 2025

Context: Lok Sabha passed the Indian Ports Bill, 2025, replacing the Indian Ports Act, 1908.

Key Features

- **State Maritime Boards:** Statutory bodies to regulate non-major ports.
- **Maritime State Development Council (MSDC):**
 - Chair: Union Minister for Ports, Shipping & Waterways.
 - Members: State Ministers, Navy/Coast Guard officials, Union Secretary.
- **Dispute Resolution Committee (DRC):** Set up by states for disputes among non-major ports, users, and concessionaires.
- **Tariffs:**
 - Major Ports → Fixed by Board of Major Port Authority/Company Board.
 - Non-Major Ports → Fixed by State Maritime Board or concessionaire.
 - Stress on transparent tariff policy to boost competitiveness.
- **Offences & Penalties:**
 - Some offences decriminalised (monetary fines instead of jail).
 - Serious offences (e.g., endangering vessel safety) → Up to 6 months jail + ₹1 lakh fine.



Significance: Brings modern governance, transparency, and efficiency to India's port sector.



Supreme Court Order on Stray Dog Crisis

Context: The Supreme Court modified its earlier order on stray dogs. As per the Animal Birth Control (ABC) Rules, 2023, sterilised and vaccinated dogs must be released back to their original areas instead of being permanently kept in shelters.



Background:

- India has 52.5 million stray dogs; Delhi alone has ~1 million.
- In 2024, 37 lakh dog bite cases were recorded.
- India accounts for 36% of global rabies deaths (18,000–20,000 annually).
- Shelters can house only ~8 million dogs, leaving most strays on streets.

ABC Rules, 2023:

- Focus on humane, scientific population control.
- Aim: reduce rabies risk, prevent shelter overcrowding, and protect stray habitats.

SC's Order:

- Authorities in Delhi-NCR must remove strays from public spaces and shift them to shelters.
- Dogs will be sterilised, vaccinated, and monitored, with a ban on returning them to colonies.
- New shelters (capacity 5,000–6,000 dogs) to be set up in 6–8 weeks.
- Public helpline for rabies/dog bites to be operational within a week.
- Strict penalties for obstructing removal drives.

Criticism:

- Contradicts ABC Rules, 2023 which allow return of dogs after sterilisation.
- Experts say relocation doesn't control population or rabies and may disturb ecological balance.
- Seen as inhumane and against community-dog coexistence.
- Animal welfare groups argue it violates animal rights and disrupts people who care for strays.

Alternatives Suggested:

- Mass sterilisation & vaccination (Bhutan model).
- Promote adoption by taxing pet shop dogs (Netherlands model).
- Community-based management with CNVR (Collect-Neuter-Vaccinate-Return).
- Pet Police to prevent abandonment and ensure responsibility.



Open-Book Exams (OBE)

Context: CBSE will introduce open-book assessments (OBE) in Class 9 from 2026-27.

What is OBE?

- Students can use approved resources (textbooks, notes, teacher-provided material) during exams.
- Types:
 - Restricted: Only specific, approved materials allowed.
 - Free-Type: Students may bring any study material.

Key Features:

- Focus on application of knowledge rather than rote learning.
- Flexible – can be adapted across subjects/grades.
- Expected to reduce exam stress.
- CBSE will provide guidelines & sample papers.

Benefits:

- Encourages conceptual clarity & critical thinking.
- Promotes analytical and problem-solving skills.
- Improves long-term retention.
- Aligns with NEP 2020 focus on competency-based learning.
- Supports SDG 4 (Quality Education) by promoting inclusive and meaningful learning.

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Russia's Recognition of the Taliban

Context: Russia became the first country to officially recognize the Taliban-led Islamic Emirate of Afghanistan.

Why Russia Recognised the Taliban?

- Security Interests:
 - Main threat = ISKP (Islamic State-Khorasan Province).
 - Taliban seen as a buffer against ISKP.
- Strategic Influence: Maintain dominance in Central Asia (esp. Tajikistan, Uzbekistan).
- Geo-economics: Afghanistan as a transit corridor (Trans-Afghan Railway to South Asia).
- Great Power Competition: Counter China's early moves (Chinese investments & ambassador acceptance).
- Foreign Policy Signal: Challenge Western policy of isolating the Taliban.

India's Engagement with the Taliban (so far):

- Backchannel Diplomacy: Informal contacts since 2021 (Doha).
- Embassy in Kabul: Technical team since 2022 – for aid & security, not formal recognition.
- Humanitarian Aid: Wheat, vaccines, medicines via UN agencies.
- Security Coordination: Counter ISKP threats via SCO & Moscow Format.
- No Recognition Policy: India supports inclusive polity & rights as per UNSC Resolution 2593.

Challenges for India:

- ISKP & other terror threats.
- Shrinking influence vs Russia/China.
- Human rights concerns (Taliban's record).
- Lack of direct access (blocked by Pakistan).

Opportunities for India:

- Leverage regional forums (SCO, BRICS).
- Strong Afghan goodwill for Indian aid.
- Quiet diplomacy through backchannels.
- Strategic balancing with Iran, CARs & Russia.



Way Forward:

- Calibrated engagement – limited presence without recognition.
- People-centric approach – scholarships, food & health aid.
- Regional partnerships – esp. Iran & Central Asia.
- Closely watch global mood – e.g., SCO Tianjin Summit (Sept 2025).

Conclusion:

Russia's recognition shows realpolitik. India must pursue a balanced strategy – pragmatic engagement for security & connectivity while upholding principles on inclusivity and human rights.

India-Philippines Strategic Partnership

Context: During the Philippine President's state visit (2025), India and the Philippines upgraded ties to a Strategic Partnership and adopted a Comprehensive Plan of Action (2025-29).



Background:

- Diplomatic ties since 1949 → upgraded in 2025.
- Relations rooted in shared democratic values, maritime security, and Indo-Pacific stability.
- Philippines = key partner in India's Act East Policy and ASEAN outreach.

Key Areas of Cooperation:

- Defence:
 - First foreign buyer of BrahMos missile (2022).
 - Joint maritime dialogue (2024), naval exercises, hydrography cooperation.
- Economic:
 - Bilateral trade = USD 3.3 bn (2024-25).
 - Talks for Preferential Trade Agreement (PTA).
- Technology & Connectivity:
 - Joint research in space, nuclear, agriculture.
 - Direct Delhi-Manila flights planned.
 - Support for Philippines' Sovereign Data Cloud project.
- Capacity Building:
 - Philippines = major beneficiary of ITEC.
- Culture & Diaspora:
 - Shared cultural ties; ~70,000 Indian diaspora.
 - Expansion of Cultural Exchange Programme & e-tourist visas.

Comprehensive Plan of Action (2025-29):

1. Political: Regular high-level visits, JCBC, Strategic Dialogue.
2. Defence/Maritime: JDCC, JDILC, naval exercises, maritime security.
3. Economic: PTA, critical minerals, renewable energy, digital tech.
4. Science/Connectivity: Joint R&D, direct flights, digital projects.
5. Cultural: Tourism, education, training, people-to-people ties.
6. Regional/Multilateral: ASEAN centrality, UNCLOS 1982, 2016 SCS arbitral award, ISA, GBA.

Significance:

- Strengthens India's Indo-Pacific footprint.
- Balances regional security amid South China Sea tensions.
- Deepens economic & technological partnerships.
- Reinforces India's role in ASEAN & multilateral forums.

Agreement Signed between India and Morocco

Context: India and Morocco signed a Mutual Legal Assistance Treaty (MLAT) and an MoU to strengthen judicial and legal cooperation.



Key Features of MLAT:

- **Objective:** Promote cooperation in civil & commercial legal matters.
- **Scope:**
 - Service of summons & judicial documents.
 - Evidence collection via Letters of Request.
 - Execution of judicial judgments (Morocco), decrees (India), settlements & arbitral awards.
- **Nodal Ministry (India):** Ministry of Home Affairs for criminal law matters.

About Morocco:

- **Location:** Maghreb region, North Africa.
- **Borders:** Western Sahara (S), Algeria (E); coastlines on Atlantic Ocean (W) & Mediterranean Sea (N).
- **Capital:** Rabat | **Largest city:** Casablanca.
- **Spanish Enclaves:** Ceuta & Melilla.
- **Geography:**
 - **Mountains:** Atlas range; Jebel Toubkal (4,167 m) = highest peak.
 - **River:** Moulouya River (Atlas → Mediterranean).
 - **Desert:** Sahara fringe in the south.
- **Climate:**
 - **Coastal:** Mediterranean (mild winters, hot summers).
 - **Interior/south:** Arid to semi-arid.

Significance:

- Boosts judicial cooperation & rule of law.
- Strengthens India's legal diplomacy in North Africa.

Trade Tensions in India-US Relations

Context:

- The US announced a 25% tariff with penalties on Indian exports, citing India's Russia ties and high trade barriers, further straining bilateral trade.

India-US Trade Snapshot (2024-25):

- **Bilateral Trade:** \$186B (US = India's largest trading partner).
- **Trade Surplus (India):** \$41B (↑ from \$35.3B in 2023-24).
- **Services Trade Surplus:** \$3.2B.
- **Major Exports (India):** Pharma, telecom equipment, petroleum products, textiles, gems, auto parts.
- **Major Imports (India):** Crude oil, coal, machinery, aircraft parts, gold.



Impact of US Tariffs:

- Indian goods become costlier & less competitive.
- Affected Sectors: Labour-intensive exports – pharma, textiles, footwear, gems, handicrafts.
- Competitors: Vietnam (20% duty), Bangladesh (35%), Thailand (36%) may gain an edge.

Reasons Behind Tariffs:

- US Trade Deficit: Seeks to reduce deficit with India.
- High Indian Tariffs: Complaints of tariff & non-tariff barriers.
- Geopolitics: India's defense & energy ties with Russia.
- Stalled Talks: Limited breakthroughs in trade negotiations.

Significance:

- Tests India's ability to balance strategic ties with the US and independent relations with Russia.
- May impact India's export competitiveness & trade diplomacy.

BIMSTEC Traditional Music Festival

Context: India hosted the 1st BIMSTEC Traditional Music Festival at Bharat Mandapam, New Delhi (Aug 4, 2025), celebrating regional cultural unity.



Key Highlights:

- Participants: Artists from all 7 BIMSTEC nations.
- Organiser: Indian Council for Cultural Relations (ICCR).
- Theme: “SaptaSur: Seven Nations, One Melody” – symbolising unity in diversity.
- Outcome: Adoption of Bangkok Vision 2030 – focus on cultural collaboration, youth exchange & regional integration.

About BIMSTEC:

- Full form: Bay of Bengal Initiative for Multi-Sectoral Technical & Economic Cooperation.
- Members (7): India, Bangladesh, Bhutan, Nepal, Sri Lanka, Myanmar, Thailand.
- Established: 1997 (Bangkok Declaration).
- Objective: Strengthen connectivity, trade, culture & cooperation in Bay of Bengal region.

UNHCR Suspends Repatriation of Sri Lankan Tamil Refugees

Context: The UNHCR has temporarily suspended voluntary repatriation of Sri Lankan Tamil refugees to Sri Lanka.

About UNHCR (United Nations High Commissioner for Refugees):

- HQ: Geneva, Switzerland.
- Established: 1950 (UNGA resolution, post-WWII); permanent mandate since 1951.
- Chief: Filippo Grandi (Italy, since 2016).
- Funding: Entirely voluntary - governments, private donors, organisations.
- Presence: Operations in 137+ countries.
- Awards: Nobel Peace Prize - 1954 & 1981.

Functions:

- Protection: Safeguards refugees' rights, incl. non-refoulement (no forced return to unsafe places).
- Humanitarian Aid: Shelter, food, healthcare, education.
- Durable Solutions: Voluntary repatriation, local integration, or resettlement in 3rd countries.
- Advocacy: Works with states to strengthen refugee rights & asylum laws.



Azerbaijan-Armenia Peace Deal

Context: Azerbaijan and Armenia signed a US-brokered peace deal at the White House, ending decades of conflict over Nagorno-Karabakh and reopening diplomatic ties.

About Nagorno-Karabakh:

- Location: Mountainous region inside Azerbaijan's recognised borders.
- Demographics: Armenian-majority; controlled for ~30 years by pro-Armenia separatists.
- Strategic Value: Near oil & gas pipelines connecting Azerbaijan → Turkey → Europe.



Background of the Conflict:

- Soviet Era: Ethnic tensions over Nagorno-Karabakh began in the late 1980s.
- First War (1988–94): Armenia-backed forces took Nagorno-Karabakh & nearby Azerbaijani lands → tens of thousands killed, large displacement.
- 1994 Ceasefire: Russia brokered a truce, but clashes continued (incl. recent large-scale fighting).
- Geopolitical Stakes: The Caucasus is a strategic corridor between Europe & Asia, attracting Russia, Turkey, Iran, and the US.

NITI Aayog Report – “Unlocking a \$200 Billion Opportunity: EV in India”

Context: NITI Aayog released a report on accelerating EV adoption in India.

Key Highlights

- Target: 30% EV sales by 2030 (from 2.08M units in 2024, ~7.6% of total sales).
- Potential: \$200B opportunity via fuel savings, job creation, reduced imports, emission cuts.
- Global Standing: Growing adoption, but behind US, EU, China.
- Segment Growth:
 - High: 2W, 3W
 - Moderate: buses
 - Slow: cars, negligible: long-haul trucks.
- Need: +22% adoption growth in next 5 years.



Challenges

- Financing: Heavy EVs (buses, trucks) cost 2–3× ICE vehicles; small operators lack credit.
- Infrastructure: Poor public charging utilisation, land/power hurdles, 18% GST, weak coordination.
- Awareness: Range anxiety, fire safety concerns, low campaigns.
- Data Issues: VAHAN misclassification, no battery IDs → weak recycling & tracking.
- Market Complexity: 75% 2W, mostly small/public vehicles, short trip lengths.

Recommendations

- Mandates over Incentives: Zero-Emission Vehicle (ZEV) timelines, stricter CAFÉ norms, ICE phase-out.
 - CAFÉ Norms: Fleet-wide CO₂ efficiency (climate change).
 - BS Norms: Model-specific pollutant limits (local air quality).
- Saturation Strategy: 100% EV deployment in select cities → scale up (learning from China's 2009 “10 Cities, 1000 Vehicles”).
- Affordable Financing: Blended fund, low-interest loans for e-buses/trucks.
- Infra & Tech Push: Battery leasing, EV apps, EV power lines, 20 charging corridors, new battery chemistries.
- Awareness & Data: Nationwide campaigns + robust EV database.

Energy Sovereignty

Context: Israel-Iran tensions (June 2025) highlighted global energy fragility; Brent crude spiked above \$103/barrel.

Meaning

- Energy Sovereignty = Nation's ability to secure, control, and govern its energy resources, supply chains & infra without external vulnerability.

India's Energy Vulnerabilities

- Import Dependence: 85% crude oil, >50% natural gas; oil & gas = \$170B (~25% imports) in 2023-24.
- Russian Oil: 35-40% share (2024-25) → risk of overdependence.
- Geopolitical Risks: West Asia disruptions impact global flows.
- Reality: Fossil fuels = 80% of global energy demand; renewables <10%.

Five Pillars of India's Energy Sovereignty

1. Coal Gasification: Use 150B tonnes reserves with new tech (syngas, H₂, fertilisers).
2. Biofuels: Ethanol blending (E20), SATAT scheme → rural income, reduced crude imports.
3. Nuclear Energy: Scale thorium, uranium deals, Small Modular Reactors.
4. Green Hydrogen: Target 5 MMT by 2030; focus on domestic tech & storage.
5. Pumped Hydro: Ensure grid stability for renewables.

Key Policy Initiatives

- National Hydrogen Mission (2021).
- Solar push: PM-KUSUM, Rooftop Solar.
- Biofuels: Ethanol Blending Roadmap (E20 by 2025-26), SATAT.
- Energy Efficiency: PAT scheme.
- Diversification: West Asia dependence down (<45%); imports from Russia, Africa, Latin America.
- Renewables: 180 GW installed; 500 GW target by 2030.

India's Global Role

- ISA (2015), CDRI (2019), Mission LiFE (2021), Global Biofuels Alliance (2023).
- Critical minerals tie-ups: Quad, Australia, Africa.
- IEF: Energy diplomacy platform.

Way Forward

- Broaden suppliers (L. America, Africa, US LNG).
- Secure critical minerals.
- Strengthen resilient grids & green finance.
- Promote decentralised renewable models.



Brown Revolution 2.0

Context: Proposed nationwide cooperative model (like Amul) to convert agro-waste into compost, vermicompost & biochar → improve soil health, farm productivity & rural livelihoods.



Key Features

- **Aim:** Restore soil organic carbon (SOC), enhance climate resilience, reduce pollution.
- **Approach:** Decentralised cooperatives → village clusters process waste into organic inputs; federated model ensures logistics, finance & quality control.
- **Tech Integration:** AI & IoT for soil health tracking, biomass optimisation.
- **Carbon Credits:** Link soil carbon gains to global markets for income.
- **Support:** ICAR, SAUs, KVKs & extension services for training.

Why Needed?

- India generates 350–500 MT agro-waste annually; much is burnt (e.g., stubble in Punjab–Haryana).
- Soil fertility declining due to monocropping & chemical inputs.
- Burning releases PM2.5, CO₂ → pollution & climate risks.
- Economic loss: potential value addition ignored.

Benefits

- **Agriculture:** Restores SOC, boosts yields, water retention.
- **Economic:** Rural jobs, reduced fertiliser costs, cooperative incomes.
- **Environment:** Cuts GHGs, improves biodiversity.
- **Social:** Women & marginal farmers included.
- **Technological:** Data-driven sustainable farming.

Global Practices

- **Japan:** Zero-Burn Policy.
- **China:** Straw-to-Fertiliser Program.
- **EU:** CAP incentives for soil & residue management.

Brown Revolution 1.0

- **Initiator:** Hiralal Chaudhary.
- **Focus:** Leather & coffee production in tribal Visakhapatnam.

Conclusion: Brown Revolution 2.0 is a core strategy for sustainable farming, climate action & rural prosperity by turning waste into wealth through cooperatives and technology.



Next-Generation GST Reforms

Context: In its 56th meeting, the GST Council approved a major overhaul effective 22 Sept 2025, introducing a simpler two-slab structure.

About GST Council

- Constitutional body under Art. 279A (101st CAA).
- Composition: Union FM (Chair), MoS Finance, state finance ministers.
- Decision-making: $\frac{3}{4}$ th majority; Centre has $\frac{1}{3}$ rd votes, states $\frac{2}{3}$ rd.
- Permanent Invitee: CBIC Chairperson.

Key Outcomes

1. New Slabs

- 18% Standard Rate → Most goods & services.
- 5% Merit Rate → Essentials (food, soaps, medicines, toothpaste, milk products).
- 40% De-Merit Rate → Sin & luxury goods (pan masala, tobacco, high-end cars).
- 0% Exempt → Fresh food, basic essentials.
- 12% & 28% slabs scrapped.

2. Structural Reforms

- Inverted Duty Correction:
 - Manmade fibre/yarn: 18%/12% → 5%.
 - Fertiliser inputs (Sulphuric acid, Nitric acid, Ammonia): 18% → 5%.
- Sin Goods: GST on retail sale price (RSP) to curb evasion.
- Life & Health Insurance: Now GST-exempt.

3. Process Reforms

- Auto-registration in 3 days.
- System-based risk evaluation for provisional refunds.

4. Institutional Strengthening

- GST Appellate Tribunal (GSTAT): Appeals by Sept 2025, hearings from Dec 2025.
- Principal Bench to act as National Appellate Authority for Advance Ruling.

Positive Impacts

- Consumption Boost: Lower rates on FMCG & essentials.
- Inflation Control: CPI may drop by 10-15 bps (food) & 5-10 bps (other goods).
- MSME Relief: Cheaper inputs & compliance ease.
- Competitiveness: Lower tax burden on Indian products.
- Household Relief: Insurance premiums GST-exempt.

Challenges

- Revenue Loss: Weighted GST rate may fall from 11.6% → 9.5% (₹85,000 cr annual shortfall).
- Fiscal Pressure: States may demand compensation.
- Pass-through Uncertainty: Actual benefit depends on businesses reducing prices.
- Delayed Spending: Consumers may wait for new rates.

AU Small Finance Bank Gets Universal Bank Licence

Context: In 2025, the RBI granted AU Small Finance Bank (AU SFB) a Universal Bank Licence, making it the first SFB in a decade to upgrade into a full-fledged commercial bank.

Universal Bank Licence

- **Meaning:** Authorises a bank to function as a full-service commercial bank.
- **Scope:**
 - Accepts all types of deposits (savings, current, FD, RD).
 - Lends to all segments — retail, corporate, MSME, agriculture.
 - Can engage in forex, derivatives, investment banking (as per RBI norms).
- **Eligibility:** Granted only to entities fulfilling RBI's requirements on capital adequacy, governance, and financial health.

About AU Small Finance Bank

- **Founded:** 1996 as AU Financiers (India) Ltd (NBFC).
- **SFB Licence:** 2015, began operations in 2017.
- **2025 Milestone:** Upgraded to Universal Bank.

About Small Finance Banks (SFBs)

- **Introduced:** Union Budget 2014-15.
- **Objective:** Enhance financial inclusion by serving unbanked/underserved sections.
- **Registration:** As public limited companies (Companies Act, 2013).
- **Regulation:** By RBI under the Banking Regulation Act, 1949.
- **Capital Requirement:** Minimum ₹200 crore (with some exceptions).

Significance: The upgrade reflects RBI's confidence in SFBs' performance and signals a pathway for other SFBs aiming to scale up.

India's Per Capita Income

Context: As per MoSPI, India's per capita Net National Income (NNI) rose to ₹1,14,710 in 2024-25, up from ₹72,805 in 2014-15 — a ₹41,905 gain in a decade.

What is Per Capita NNI?

- **Definition:** Average income of a country's residents = $NNI \div \text{Population}$.
- **Net National Income (NNI):** Gross National Income (GNI) minus depreciation (consumption of fixed capital).
- **Significance:** Indicator of living standards and income distribution.

National Trend

- Growth: 57% increase (FY14–FY24, real terms).
- Drivers: Expansion in services, manufacturing, and public investment.
- State Divergence: Linked to industrialisation, governance, infrastructure, and urbanisation.

State-Level Per Capita NSDP

- Leaders:
 - South: Karnataka, Tamil Nadu, Telangana → IT, manufacturing, exports.
 - West: Maharashtra → industry & financial services.
- Emerging Performers: Odisha, Andhra Pradesh → industrial projects, agri reforms.
- Laggards: Bihar, Uttar Pradesh, Assam → low industrialisation, high population, weak infrastructure.

What is Per Capita NSDP?

- Definition: Net State Domestic Product (NSDP) per person, at constant prices (inflation-adjusted).
- Represents: Average economic output per person within a state.
- Base Year: 2011–12.

Ethanol-Blended Fuel in India

Context: India has achieved E20 (20% ethanol-blended petrol) adoption by 2025—five years ahead of target. But concerns exist over vehicle compatibility and insurance claim denials.

About Ethanol (C_2H_5OH):

- A renewable biofuel made from crops (sugarcane, maize, rice) and residues (rice straw, corn cobs).
- Types:
 - 1G: Sugar & food crops
 - 2G: Agricultural residues
 - 3G: Algae & advanced biofuels
- Produced by fermentation → distillation → dehydration.

Ethanol Blending Journey in India:

- 2003: Ethanol Blended Petrol (EBP) Programme, 5% blending.
- 2018: Target of 20% blending by 2030 (later advanced to 2025–26).
- 2025: Achieved 20% blending ahead of schedule.

Challenges:

- Food security: Shift to maize reduced oilseed acreage.
- Water stress: Sugarcane cultivation consumes ~2,500L water/kg sugar.
- Vehicle issues: Older vehicles face efficiency loss (1–2%) on E20.
- Insurance concerns: Claims denied for engine damage due to “wrong fuel usage.”
- Low awareness & infrastructure gaps.



Way Forward:

- Use non-food feedstocks to protect food security.
- Invest in biofuel R&D and vehicle-compatible technologies.
- Expand production & distribution infrastructure.
- Ensure policy clarity and insurance coverage.
- Conduct awareness campaigns for safe fuel use.

Conclusion: Ethanol blending strengthens energy security, reduces oil imports, cuts emissions, and supports farmers. Success depends on addressing feedstock, infrastructure, and consumer awareness challenges.

Privileges and Immunities to IBCA

Context: The Government of India has extended privileges and immunities to the International Big Cat Alliance (IBCA) under the UN (Privileges and Immunities) Act, 1947.



About IBCA:

- A treaty-based intergovernmental body for big cat conservation.
- Launched: April 2023 by PM Narendra Modi.
- Members: 95 countries, conservation groups, corporates, and scientists.
- HQ: India (Host Country Agreement signed).
- Focus: Conservation of 7 big cats – tiger, lion, leopard, snow leopard, cheetah, jaguar, and puma.

First Assembly (June 2025, New Delhi):

- Chaired by Environment Minister Bhupender Yadav.
- Attended by delegations from 9 countries.
- Ratified: HQ Agreement, Workplan, Rules, and Financial Regulations.

Significance of Privileges & Immunities:

- Gives IBCA operational independence like other international bodies.
- Strengthens India's leadership in wildlife diplomacy.
- Enables smooth cooperation, knowledge exchange, and capacity building for conservation.

About UN (Privileges and Immunities) Act, 1947:

- Brings UN Convention into Indian law.
- Grants bodies like UN agencies & intergovernmental organisations immunity from taxation, legal proceedings, and interference.
- Ensures they function freely with diplomatic protection.

National Designated Authority (NDA) for Carbon Markets

Context: MoEFCC has set up a National Designated Authority (NDA) (Aug 2025) to implement carbon markets under the Paris Agreement (Article 6).

About Article 6 (Paris Agreement, 2015):

- Provides a framework for international carbon trading.
- Rules finalized at COP29, Baku (2024).
- Ensures transparency & integrity in carbon credits.

About NDA:

- Chaired by: Secretary, MoEFCC.
- Members: 21 (including MEA, MNRE, NITI Aayog, Ministry of Steel).
- Majority representation: MoEFCC.
- Functions:
 - Recommend emission reduction projects.
 - Approve & authorise Emission Reduction Units (ERUs).
 - Ensure projects align with SDGs & India's NDCs.
 - Modify project eligibility norms.
 - Approve carbon credits for India's NDC targets.

Carbon Market Basics:

- A platform where entities buy/sell carbon credits.
- 1 carbon credit = 1 tonne CO₂ (or equivalent GHG) reduced/removed.
- Helps companies offset emissions by funding green projects.

India's NDC Targets (by 2030):

- Cut emission intensity of GDP by 45% (from 2005 levels).
- Achieve 50% power capacity from non-fossil sources.
- Create carbon sink of 2.5–3 billion tonnes CO₂ via afforestation.

ICJ's Landmark Climate Change Ruling

Context: The International Court of Justice (ICJ) has issued a landmark advisory opinion mandating urgent global climate action, including a phaseout of fossil fuels.

Key Highlights of the Ruling:

- **Climate Action = Legal Duty:** States are legally obligated to act on climate change under international treaties, customary law, and human rights obligations.
- **Fossil Fuels as Wrongful Acts:** Production, licensing, and subsidies for fossil fuels may be considered “internationally wrongful acts,” making states accountable.
- **Global Cooperation Needed:** The Court emphasized collective international efforts and highlighted mechanisms like the Fossil Fuel Non-Proliferation Treaty.

About the ICJ:

- Role: UN's principal judicial organ that gives advisory opinions and settles disputes between states.
- Composition: 15 judges, elected by the UN General Assembly & Security Council.
- Established: 1945 (functioning since 1946).
- Headquarters: The Hague, Netherlands.

Ramsar CoP15: India's Resolution on Sustainable Lifestyles

Context: At Ramsar CoP15 in Zimbabwe, India's resolution on "Promoting Sustainable Lifestyles for the Wise Use of Wetlands" was adopted.

Key Points:

- Received support from 172 Contracting Parties, 6 international partners, and observers.
- Stresses individual and societal choices in wetland conservation.
- Builds on UN Environment Assembly's 2024 resolution on sustainable lifestyles.

Whole-of-Society Approach: Involves government, private sector, civil society, academia, media, faith groups, and citizens working together for wetland conservation.

What are Sustainable Lifestyles?

- Daily choices that reduce resource use and waste.
- Promote equitable socio-economic development.
- Enhance quality of life through health, security, and social well-being.
- Aligned with Mission LiFE (Lifestyle for Environment) launched by PM Modi at UNFCCC CoP26.

About the Ramsar Convention:

- International treaty for wetland conservation and wise use.
- Adopted in 1971 (Iran), in force since 1975.
- Nearly 90% of UN states are members.
- India joined in 1982; currently has 91 Ramsar sites.

IUCN-TRAFFIC Report 2025

Context: The latest IUCN-TRAFFIC report praises India and Nepal for strong monitoring and surveillance, which has reduced rhino poaching and helped population growth.

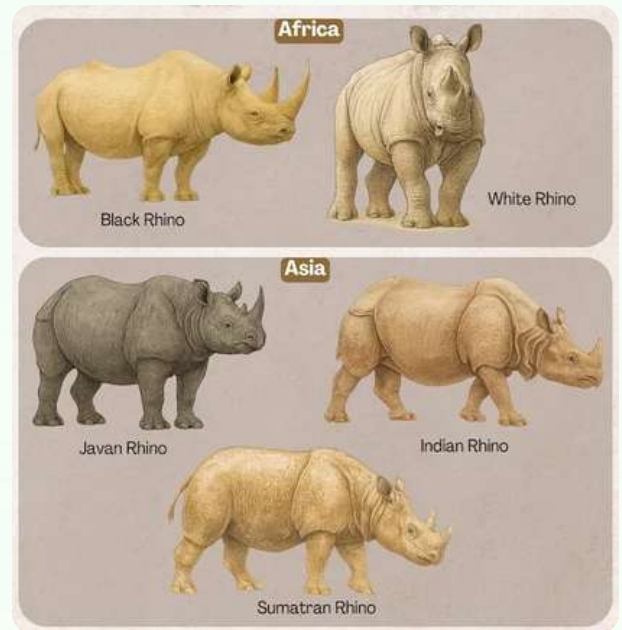


About TRAFFIC:

- Global NGO ensuring wildlife trade does not harm biodiversity.
- Set up in 1976 by WWF and IUCN.
- HQ: Cambridge, UK.

About the Report:

- Title: African and Asian Rhinoceroses - Status, Conservation and Trade.
- Commissioned by: CITES Secretariat.
- Prepared by: IUCN Rhino Specialist Groups + TRAFFIC.
- Coverage: Till April 2025.
- Focus: Rhino population trends, poaching, and illegal trade.



Rhino Species & Status:

- Greater One-Horned Rhino (India, Nepal): Vulnerable.
- Javan Rhino (Indonesia): Critically Endangered.
- Sumatran Rhino (Indonesia): Critically Endangered.
- White Rhino (Southern Africa): Near Threatened.
- Black Rhino (Eastern & Southern Africa): Critically Endangered.

Artificial Intelligence (AI) Sovereignty

Context: In his Independence Day address, the PM stressed sovereignty in technology, defence, economy, and agriculture — highlighting AI, cybersecurity, deep tech, and indigenous systems.

What is AI Sovereignty?

- Refers to a nation's ability to design, control, and deploy AI systems independently, without depending on foreign corporations or states.

Why India Needs Indigenous AI Capabilities?

- National Security: Reduces risks in defence, surveillance, cyber-security, and governance.
- Eg: US export controls on AI chips show the danger of foreign dependency.
- Economic Growth: AI may add trillions to global GDP by 2030; sovereign AI lets India capture domestic value.
- Localized Solutions: Can address India's linguistic & cultural diversity (22+ official languages).
- Eg: AI4Bharat's IndicTrans2 project for Indian languages.
- Talent & Innovation: Builds research ecosystem, nurtures AI talent.
- Eg: IIT Madras + AI4Bharat collaborations.
- Strategic Advantage: Positions India as a global tech leader.
- Eg: Alibaba's localized AI success.



Challenges for India

- **Hardware Deficit:** Lack of chip fabrication, dependence on imported GPUs.
- **High Costs:** Training large AI models is extremely expensive.
- **Dependence on Open Models:** No fully sovereign Indian alternative yet.
- **Weak R&D Ecosystem:** Underfunding and bureaucratic inefficiencies.
- **Data Gaps:** Lack of large annotated datasets across languages & sectors.
- **Regulatory Vacuum:** No comprehensive AI law; ethical/accountability issues.
- **Energy Demands:** Large AI models need huge power and cooling infrastructure.

Global Approaches

- **EU:** Risk-based AI Act (2023).
- **US:** Sectoral regulation, innovation focus.
- **China:** State-led AI push, heavy infra investment.
- **UNESCO:** Global ethics framework (2021).
- **Global AI Compact (proposed):** For equitable AI benefits.

Way Forward for India

- **Strategic Priority:** Treat AI as critical infrastructure like defence/energy.
- **Hardware Push:** Invest in semiconductors & sovereign cloud infra.
- **Legal Framework:** Draft a comprehensive AI Act (on EU lines).
- **R&D Boost:** Public-private partnerships for high-risk, high-reward projects.
- **Talent Strategy:** AI centres of excellence to retain and attract talent.
- **Domain-Specific AI:** Agriculture, healthcare, education, governance.
- **Selective Collaboration:** Partnerships with global tech firms for tech transfer.

Conclusion: AI sovereignty is vital for Aatmanirbhar Bharat — ensuring security, economic growth, and cultural identity. With indigenous development and global collaboration, India can build secure, ethical, and inclusive AI.

Rare Blood Group: CRIB

Context: A 38-year-old woman from Kolar was found with a never-before-seen blood group, named CRIB, marking a global first in transfusion medicine.

International Society of Blood Transfusion (ISBT)

- **Founded:** 1935; HQ – Amsterdam, Netherlands.
- **Role:** Improves blood transfusion safety & quality.
- **Status:** Non-State Actor with WHO.
- **Activities:** Code of Ethics, webinars, workshops, and congresses.
- **ISBT Congress 2025 (Milan):** Focus on “Innovations in Rare Blood and Transfusion Safety.”

Cromer Blood Group System (Extra Edge)

- Based on DAF/CD55 protein on red blood cells.
- Contains 20+ antigens; most common = Cromer (Cr^a).

About CRIB (Cromer, India, Bengaluru)

- **Discovery:** Rotary Bangalore TTK Blood Centre – showed panreactive behavior (incompatible with all samples).
- **Validation:** Confirmed by IBGRL, UK, after 10 months of testing.
- **Nomenclature:** CR (Cromer blood group system) + IB (India, Bengaluru).
- **Unique Feature:** A new antigen in the Cromer system → first such case globally.

Rare Blood Groups – Key Facts

- **Definition:** Missing “high-frequency” antigens → hard to find compatible blood.
- **Prevalence:**
 - Less Rare → 1–2% of population.
 - Very Rare → <1%, often missing 3–4 antigens.

Examples:

- **Rh null (Golden Blood):** No Rh antigens.
- **D- Blood Type:** Extremely rare Rh variant.
- **In^b Negative:** Absence of Indian system antigen.
- **Gwada Negative:** Recently identified in Guadeloupe.
- **Bombay Blood Group (hh Phenotype):** Lacks h antigens across A, B, O.
- **CRIB:** New Cromer antigen (India, 2025).

Bio-Fortified Potatoes

Context: India is set to introduce iron-rich bio-fortified potatoes to improve nutrition and provide better-quality seeds for farmers.

What are Bio-Fortified Potatoes?

- Staple food enriched with micronutrients (iron, zinc).
- Developed through conventional breeding (not GM).
- Developed by: International Potato Center (CIP), Peru, with Indian support.

Benefits

- Helps fight iron deficiency anemia.
- Provides better seeds → fewer chemicals needed.
- Can support nutrition schemes like Mid-Day Meals.

International Potato Center (CIP)

- **Founded:** 1971; HQ – Lima, Peru.
- **Focus:** Potato, sweet potato, Andean crops.
- **Role:** Improves food security, climate resilience & nutrition.
- **Presence:** 20+ countries in Africa, Asia, Latin America.
- **India:** CIP-South Asia Regional Centre (CSARC) at Agra, UP.

Significance: Bio-fortified potatoes can address hidden hunger and boost India's nutritional security while supporting farmers.

India's First Hydrogen-Powered Coach

Context: Indian Railways has successfully tested its first hydrogen-powered coach at the Integral Coach Factory (ICF), Chennai.

About the Project

- Conversion: Two 1600 HP diesel power cars → hydrogen fuel cell-based traction.
- Hydrogen Fuel Station: 3,000-kg facility at Jind, Haryana (operated as per PESO safety norms).
- Developed by: Research Designs & Standards Organisation (RDSO) + ICF, Chennai.
- Cost: ₹136 crore.
- Operations: 10-coach train (capacity 2,600 passengers), running 356 km/day (Jind ↔ Sonapat).

Safety Features

- Pressure relief valves.
- Leak & flame detection sensors.
- Temperature monitoring.
- Structured ventilation.



How It Works - Hydrogen Fuel Cell Traction

- Hydrogen (H_2) + Oxygen (O_2) → Electricity + Water + Heat.
- Electricity powers traction motors.
- Battery backup stores energy & supports peak load/regenerative braking.

Significance

- Boosts India's green railway mission.
- Reduces greenhouse gas emissions.
- Increases use of renewable energy in transport.

Quadruple Star System Discovered

Context: Astronomers have discovered UPM J1040–3551 AabBab, the first-ever quadruple star system in the Milky Way.

What is a Quadruple Star System?

- Four stars bound by gravity, orbiting a common center.
- This system includes:
 - Two young red dwarf stars.
 - Two cold T-type brown dwarfs orbiting them.



Red Dwarfs vs. Brown Dwarfs

- Red Dwarfs: Small, low-mass stars that can sustain hydrogen fusion.
- Brown Dwarfs:
 - Too small for continuous fusion → called “failed stars.”
 - Size: between planets and stars (up to 70× Jupiter’s mass).
 - Atmosphere resembles gas giants like Jupiter and Saturn.
 - Hard to detect → faint, emit almost no visible light.
- T-type Brown Dwarfs: Very cool, faint, with methane absorption in spectra.

Why It Matters

- First known system with two stars + two brown dwarfs.
- Extremely rare: <5% chance of brown dwarfs having companions.
- Helps scientists study:
 - Star & planet formation processes.
 - Atmospheric chemistry of gas giants & exoplanets.
 - The role of brown dwarfs in the galaxy’s baryonic matter (vs. dark matter).

Takeaway: A rare celestial find giving new insights into how stars and planets form in our universe.

Indigenous Integrated Air Defence Weapon System (IADWS)

Context: DRDO successfully conducted the maiden tests of the Indigenous Integrated Air Defence Weapon System (IADWS) off the Odisha coast.

Mission Sudarshan Chakra

- Goal: Indigenous air defence shield by 2035.
- Coverage: Both strategic and civilian infrastructure (hospitals, railways, faith centres, etc.).
- Symbolism: Named after Lord Krishna’s Sudarshan Chakra.
- Timeline: Full operational capability in 10 years.



What is IADWS?

A multi-layered defence system integrating:

- QRSAM → Quick Reaction Surface-to-Air Missiles (range: 3–30 km).
- VSHORADS → Very Short-Range Air Defence (range: 300 m–6 km).
- Directed Energy Weapon (DEW): Laser-based, vehicle-mounted, destroys UAVs & drones (range < 3 km).
- Controlled by Centralised Command Centre (developed by DRDL, Hyderabad).

Key Components

- QRSAM:
 - Protects mobile armoured columns.
 - Equipped with surveillance & multifunction radars.
- VSHORADS:
 - Fourth-gen MANPAD.
 - Neutralises drones and low-altitude threats.
- Laser DEW (CHESS, Hyderabad):
 - Can disable/destroy UAVs & swarm drones.
 - Makes India one of the few nations with DEW capability.

Significance: Major step towards self-reliant defence, enhancing India's air shield and retaliation capabilities.

Pralay Missile

Context: DRDO's short-range ballistic missile Pralay has completed successful user trials from Dr. APJ Abdul Kalam Island, Odisha.

About the Missile:

- Approved in 2015, developed by Research Centre Imarat with DRDO labs and industry partners like BDL and BEL.
- Range: 150-500 km | Payload: 500-1,000 kg.
- Solid-propellant, indigenously developed missile with advanced guidance & navigation.
- Can carry multiple conventional warheads to strike radars, command centres, forward airfields, etc.
- Uses quasi-ballistic trajectory → flies at lower altitude, performs mid-air manoeuvres, evades interception.
- Designed to beat Ballistic Missile Defence (BMD) systems.

Significance:

- Strengthens India's Integrated Rocket Force under the Strategic Forces Command.
- Fully conventional weapon, outside the scope of India's No First Use (NFU) nuclear doctrine.

PRALAY: Surface-to-Surface Missile

Pralay is a canisterised tactical, surface-to-surface, and short-range ballistic missile for battlefield use developed by the Defence Research and Development Organisation of India

ENGINE: Two stage rocket motor with third stage MaRV

SPEED: Mach 1 to 1.6

RANGE: 150-500 km

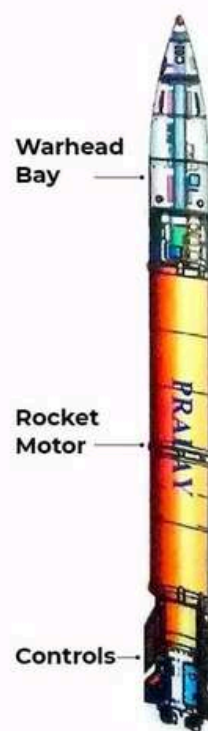
TRAJECTORY: low

GUIDANCE SYSTEM: Inertial navigation system

LAUNCH PLATFORM: 8x8 BEML-Tatra transporter erector launcher

MASS: 5 tonnes (4.9 long tons; 5.5 short tons)

OPERATIONAL RANGE: 150-500 km (93-311 mi)



Can change its path after covering certain range mid-air and is difficult to be tracked

It is capable of being launched from a mobile launcher and has latest navigation system and integrated avionics

It has the capability to defeat interceptor missiles

Piprahwa Relics

Context: After 127 years, the sacred Piprahwa relics of Lord Buddha were repatriated to India. They were set for auction at Sotheby's, Hong Kong (May 2025), but the Government of India intervened successfully.

About the Relics:

- Found in 1898 by William Claxton Peppé at Piprahwa, Siddharthnagar (UP) — believed to be ancient Kapilavastu, capital of the Shakya republic.
- Collection includes: bone fragments, crystal & soapstone caskets, sandstone coffer, gold ornaments, 1,800 pearls, rubies, topaz & sapphires.
- Part of the original eight stupas containing Buddha's cremation relics.
- Likely built by Buddha's Shakya clan to honour him.
- Gems date back to the Mauryan era (240–200 BCE).

Significance: Strengthens India's claim over Buddhist cultural heritage and its role as the custodian of Buddha's legacy.



Adi Karmayogi Abhiyan

Context: The Ministry of Tribal Affairs launched the Adi Karmayogi Abhiyan under Janjatiya Gaurav Varsh to strengthen tribal empowerment and governance.

About the Abhiyan:

- A national movement to create decentralized tribal leadership.
- Guided by Sewa (Service), Sankalp (Resolve), Samarpan (Dedication) — aligned with Sabka Saath, Sabka Vikas, Sabka Prayas, Sabka Vishwas.

Three Pillars of Leadership:

1. Adi Karmayogi - Govt. officers (State to Panchayat level) ensuring scheme delivery & governance.
2. Adi Sahyogi - Tribal youth, teachers, doctors, service providers bridging education, health & awareness.
3. Adi Saathi - SHG members, elders, villagers mobilizing communities & preserving traditions.

Outreach:

- Covers 1 lakh tribal villages across 550 districts in 30 States/UTs.
- Aims to mobilize 20 lakh change leaders.

District Flood Severity Index (DFSI)

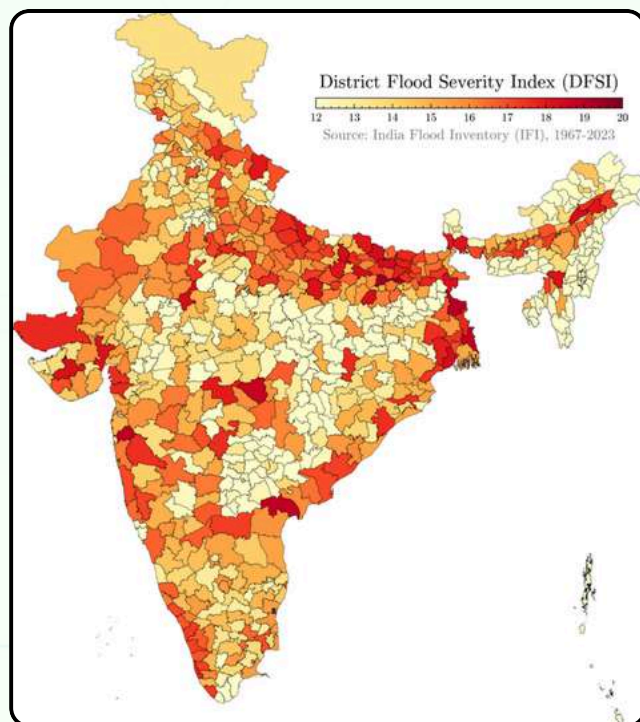
Context: IIT Delhi and IIT Gandhinagar researchers developed the District Flood Severity Index (DFSI) to measure both the scale and human impact of floods.

Parameters Considered:

- Duration of floods (days)
- % of district area flooded
- Flood-related deaths & injuries
- District population (to assess impact)

Key Findings:

- Thiruvananthapuram: Most flooding events (231) but not among the worst-affected.
- Patna: Ranked highest in severity, proving that flood impact depends on intensity + human impact, not just frequency.



Klyuchevskoy Volcano Eruption

Context: Russia's Klyuchevskoy volcano, the tallest active volcano in Europe & Asia, recently erupted in the Kamchatka Peninsula.

About the Volcano:

SHAPING TALENT SINCE 2009

- Type: Active stratovolcano, part of the Pacific Ring of Fire.
- Height: 4,754 m (15,597 ft).
- Activity: Among the world's most active - 60+ eruptions in last 100 years, 18 since 2000.
- Latest eruption: Red-hot lava flowing down western slopes.

Typhoon Kajiki

Context: Typhoon Kajiki recently struck Vietnam's coastal provinces, causing severe flooding, crop losses, and multiple fatalities.

About the Typhoon:

- Origin: A powerful tropical cyclone formed in the West Pacific Ocean.
- Landfall: Central Vietnam (between Thanh Hoa and Nghe An provinces) in August 2025.
- Impact: Heavy rainfall, flooding, and damage to agriculture.



APAAR ID

Context: CBSE has made APAAR ID mandatory for student registration and List of Candidates (LOC) submission for the 2026 board exams.

About APAAR ID:

- Full form: Automated Permanent Academic Account Registry.
- A 12-digit unique ID for every student in India.
- Launched by the Ministry of Education (2024-25 session).
- Aim: Implements NEP 2020's vision of "One Nation, One Student ID", storing all academic achievements in a single digital profile.
- Coverage: Students of Classes 1-12 nationwide.
- Progress: Over 2.36 crore IDs generated by July 2025.

Asia-Pacific Institute for Broadcasting Development (AIBD)

Context: India was elected Chairman of the Executive Board of AIBD at its 23rd General Conference in Thailand. India earlier chaired it in 2016.

About AIBD:

- An intergovernmental organization promoting cooperation in electronic media.
- Established: 1977 under UNESCO.
- Headquarters: Kuala Lumpur, Malaysia.
- Membership: 92 organizations from 45 countries.
- Aim: Media development, training, and collaboration in the Asia-Pacific region.

India's Role:

- Founding member of AIBD.
- Represented by Prasar Bharati on behalf of the Ministry of Information & Broadcasting.

The Elders Group

Context: The Elders recently termed the Gaza crisis an "unfolding genocide", blaming Israel's obstruction of humanitarian aid for famine and mass civilian suffering.



About The Elders:

- Independent group of respected global leaders, including ex-heads of state and senior UN officials.
- Founded: 2007 by Nelson Mandela.
- Headquarters: London, UK.
- Mission: Promote peace, human rights, and sustainable development through advocacy and mediation.
- Members: 12 active (10 full members + 2 Deputy Chairs).

Geelong Treaty

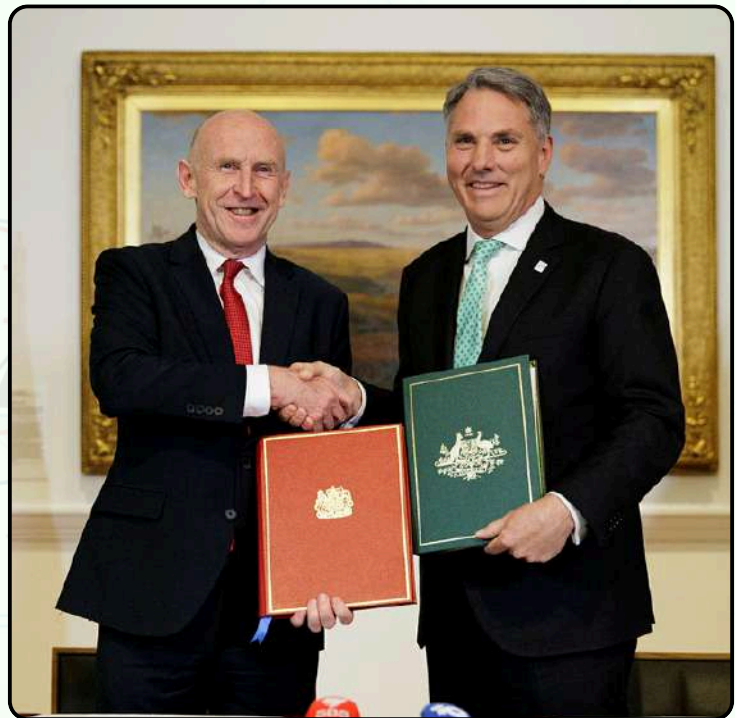
Context: Australia and the UK have signed the Geelong Treaty, a 50-year defence agreement under AUKUS.

About the Treaty:

- Bilateral deal on nuclear-powered, conventionally armed submarines (SSN-AUKUS).
- Covers design, construction, operation, sustainment, and disposal of submarines.
- Duration: 50 years of defence cooperation.

About AUKUS:

- Formed in 2021 by Australia, UK, and US.
- Aims to strengthen defence, tech integration, and industrial capacity.
- Broader goal: Stability in the Indo-Pacific region.



Asian Giant Tortoises

Context: 10 Asian giant tortoises were reintroduced into Zeliang Community Reserve, Nagaland.

Conservation Status:

- IUCN: Critically Endangered
- CITES: Appendix II
- Wildlife Protection Act, 1972: Schedule IV



About the Species:

- Largest land tortoise in mainland Asia; called the “small elephant of the forest”.
- Found in India (NE states), Bangladesh, Myanmar, Thailand, Malaysia, Indonesia.
- Herbivorous; lives up to 80–100 years.
- Ecological Role: Seed dispersal, soil turnover, forest regeneration (keystone species).

National Deep Water Exploration Mission

Context: The Prime Minister launched the National Deep Water Exploration Mission to tap oil and gas reserves beneath India's seabed and cut import dependence.



About the Mission:

- Nodal Ministry: Ministry of Petroleum & Natural Gas (with DGH and research partners).
- Aim: Explore untapped deep-water oil and gas reserves.

Objectives:

- Reduce import dependence (currently 88% for oil and 50% for gas).
- Boost domestic hydrocarbon production.
- Strengthen energy security and promote Aatmanirbhar Bharat in the energy sector.

Significance:

- Economic: Cuts import bills, frees funds for welfare and infrastructure.
- Strategic: Ensures stable energy supply amid global volatility.
- Climate Link: Complements India's net-zero 2070 goals by balancing fossil fuels with clean energy transition.
- Enhances India's role in global energy geopolitics.



LEAP-1 Satellite Mission

Context: Hyderabad-based Dhruva Space will launch its first commercial satellite mission LEAP-1 aboard SpaceX's Falcon-9.



About LEAP-1:

- Stands for Launching Expeditions for Aspiring Payloads.
- Built on P-30 platform, earlier tested during ISRO's LEAP-TD mission (PSLV-C58, Jan 2024).
- Marks Dhruva Space's shift from demos to operational, customer-driven missions in the global satellite market.

Payloads Onboard:

- Nexus-01 (Akula Tech): AI/ML-enabled module for real-time data processing and model re-training.
- OTR-2 (Esper Satellites): Advanced hyperspectral imager providing high-res Earth data via EarthTones API.

Human Outer Planet Exploration (HOPE) Research Station

Context: Bengaluru-based Protoplanet launched the HOPE research station at Tso Kar, Ladakh, simulating extraterrestrial conditions.

About HOPE:

- Aims to study human adaptability and resilience for future Moon and Mars missions.
- Focuses on physiological, psychological, and epigenetic research under isolation and space-like conditions.
- ISRO collaboration: Provided funding and supported crew selection.

Global Context: Similar stations exist internationally:

- Mars Desert Research Station (USA)
- Flashline Mars Arctic Station (Canada)
- BIOS-3 (Russia)

Significance: Helps develop protocols and technologies for sustained human presence beyond Earth.



Tribute to Tulsidas on 500th Birth Anniversary

Context: UP Chief Minister Yogi Adityanath paid homage to Tulsidas in Chitrakoot, Uttar Pradesh, marking his 500th birth anniversary.

About Tulsidas (1532–1623):

- Born Rambola Dubey in Rajapur, UP; a Vaishnav saint and poet during Akbar's reign.
- Revived Bhakti traditions, making devotion to Lord Ram accessible through vernacular literature.

Notable Works:

- Ramcharitmanas: Awadhi retelling of Ramayana.
- Vinay Patrika: Hymns of devotion to Lord Ram.
- Hanuman Chalisa: Hymn praising Lord Hanuman.
- KavitaVali & Gitavali: Philosophical and devotional poems.
- Dohavali: 573 dohas and 85 sorathas teaching morality and spirituality.

Legacy: Symbol of spiritual resilience and cultural unity, inspiring Bhakti literature in India and abroad.

M.S. Swaminathan Centenary International Conference

Context: The Prime Minister inaugurated the M.S. Swaminathan Centenary International Conference in New Delhi, commemorating his 100th birth anniversary on August 7, 1925. The theme: "Evergreen Revolution: The Pathway to Biohappiness", highlighting his lifelong focus on food security and sustainable agriculture.

About M.S. Swaminathan:

- Born in Kumbakonam, Tamil Nadu, he is celebrated as the Father of India's Green Revolution.
- Introduced high-yielding seeds, modern irrigation, and optimized fertilizer use in the 1960s, transforming India into a food-secure nation.
- Invited Dr. Norman Borlaug to India to introduce Mexican dwarf wheat, catalyzing wheat productivity.
- Advocated for farmer welfare, sustainable practices, and Minimum Support Prices (MSP) at least 50% above production costs.
- Played a key role in recognizing Gulf of Mannar Marine Biosphere and Kuttanad (Kerala) as globally important agricultural heritage sites.

Legacy: A visionary who modernized Indian agriculture while promoting ecologically sustainable growth, posthumously honored with the Bharat Ratna, embodying the spirit of an Evergreen Revolution.

Pradhan Mantri Viksit Bharat Rozgar Yojana (PM-VBRY)

Context: Launched on 15th August 2025, PM-VBRY is a flagship employment generation scheme under the Viksit Bharat Vision, focusing on inclusive and sustainable growth through formal sector jobs, especially in manufacturing.

Key Features:

- Nodal Ministry: Ministry of Labour & Employment.
- Duration & Outlay: 1 Aug 2025 – 31 Jul 2027; ₹99,446 crore.
- Targets: 3.5+ crore jobs; 1.92 crore first-time workers; 2.6 crore jobs incentivized via employers.

Part A – Incentive for First-Time Employees:

- Eligibility: EPFO-registered, first-time employees with salary $\leq$ ₹1 lakh/month.
- Benefit: One month EPF wage (max ₹15,000) in two installments; part credited to a savings instrument after completing 6 & 12 months of service and a financial literacy program.
- Disbursal: Direct Benefit Transfer via Aadhaar.

Part B – Incentive for Employers:

- Eligibility: EPFO-registered firms hiring additional employees (salary $\leq$ ₹1 lakh), with minimum hiring thresholds (2 for <50 employees, 5 for ≥ 50).
- Incentives (per employee/month):
 - $\leq$ ₹10,000 $\rightarrow$ ₹1,000
 - ₹10,001–₹20,000 $\rightarrow$ ₹2,000
 - ₹20,001–₹1,00,000 $\rightarrow$ ₹3,000
- Special Provision: Manufacturing firms receive incentives up to 4th year.
- Disbursal: PAN-linked accounts.

Rabies

Context: The Supreme Court has directed the Delhi government to capture and confine stray dogs permanently due to rising rabies deaths from dog bites.

About Rabies:

- Disease Type: Fatal zoonotic viral infection caused by the rabies virus (RABV).
- Transmission: Primarily through animal bites or scratches; dogs cause 99% of human cases. Virus enters via saliva into wounds or mucous membranes.
- Fatality: Almost always fatal once symptoms appear; no pre-symptom diagnostic exists.



Prevention & Vaccination:

- Pre-Exposure Prophylaxis (PrEP): For high-risk individuals.
- Post-Exposure Prophylaxis (PEP): Immediate treatment after exposure to prevent virus entry into the nervous system.
- WHO-approved Vaccines in India: RABIVAX-S (Serum Institute), VaxiRab N (Zydus Lifesciences), VERORAB (Sanofi Pasteur).
- First Aid: Immediate wound washing with soap and water + timely vaccination.

Status in India:

- Rabies-Endemic: Accounts for 36% of global rabies deaths.
- High-Risk Group: Children aged 5-14.
- Recent Data: 2024 - over 37 lakh dog bite cases and 54 suspected deaths reported; 2025 study estimates 5,726 annual deaths.

Significance: Highlights the need for stray dog management, awareness, and timely vaccination to prevent human fatalities.

Glyphosate

Context: Unauthorized glyphosate-tolerant cotton seeds are being used in Dhar district, Madhya Pradesh, despite not being approved for commercial cultivation in India.

About Glyphosate:

- Type: Broad-spectrum herbicide; chemically N-(phosphonomethyl) glycine.
- Origin: Developed in 1970.
- Mode of Action: Blocks the EPSPS enzyme in plants, inhibiting growth.
- Uses in India: Approved only for tea plantations and associated non-plantation areas.
- Applications:
 - GM Crops: Glyphosate-resistant varieties (e.g., Roundup Ready) allow weed control without harming crops.
 - Non-Agricultural: Roadsides, industrial sites, and lawns for vegetation management.

Significance: Unauthorized use in cotton risks environmental safety, regulatory compliance, and farmer awareness, highlighting the need for strict monitoring of GM seeds.

Nepal Eliminates Rubella

Context: Nepal has been declared free of rubella as a public health problem by the WHO, becoming the first country in Southeast Asia to achieve this milestone.



About Rubella:

- **Disease:** Contagious viral infection, also called German measles or three-day measles, characterized by a red rash.
- **Risk:** Particularly dangerous during pregnancy, causing Congenital Rubella Syndrome (CRS), which can result in birth defects or fetal death.
- **Prevention:** MMR vaccine provides safe and lifelong protection.
- **Global Burden:** Around 100,000 infants are born with CRS worldwide annually.

Significance: Nepal's achievement demonstrates effective immunization programs and public health interventions in reducing congenital infections.

Selenium in Groundwater

Context: The Minister of State for Jal Shakti informed the Rajya Sabha about high selenium levels detected in groundwater in Haryana and Punjab.

About Selenium:

- **Nature:** Essential trace mineral required in very small amounts.
- **Functions:** Supports metabolism, thyroid function, and immune health.
- **Sources:** Brazil nuts, seafood, meat, poultry, and organ meats.
- **Toxicity:** Excess can cause nausea, hair/nail brittleness, fatigue, irritability, and foul breath.
- **Permissible Limit in Water:** 10 ppb (parts per billion).

Significance: Monitoring selenium is crucial as groundwater contamination can lead to health hazards if levels exceed safe limits.

Agni-5 Intermediate Range Ballistic Missile (IRBM)

Context: India successfully test-fired the Agni-5 IRBM from APJ Abdul Kalam Island, Odisha.

Key Features:

- **Range:** >5,000 km (covers entire Asia, parts of Europe & Africa)
- **Stages & Propulsion:** Three-stage, solid-fuel missile
- **Guidance:** High-precision navigation using Ring Laser Gyro-based Inertial Navigation System (RINS) and Micro Inertial Navigation System (MINS)
- **Launch Platform:** Road- and rail-mobile, improving survivability
- **Warhead:** Nuclear or conventional (~1.5 tonnes)
- **Technology:** Composite material airframes, canisterised launch system for rapid deployment and mobility

Note: A canisterised launch system allows the missile to be stored, transported, and fired from a sealed canister, enhancing operational readiness and safety.



INS Himgiri

Context: The Indian Navy is set to commission INS Himgiri at Visakhapatnam.

Key Facts:

- **Class & Project:** Third ship of Nilgiri-class (Project 17A); first P17A built by Garden Reach Shipbuilders & Engineers (GRSE), Kolkata
- **Design & Oversight:** Designed by Warship Design Bureau (WDB) and supervised by Warship Overseeing Team (Kolkata)

Features:

- **Multi-Mission Capability:** Equipped for anti-air, anti-surface, and anti-submarine warfare
- **Strike & Defense:** Armed with BrahMos cruise missiles (anti-ship & land-attack) and Barak 8 surface-to-air missiles
- **Propulsion:** Combined diesel and gas turbine system for enhanced operational flexibility



INS Udaygiri

Context: The Indian Navy will commission INS Udaygiri at Visakhapatnam.

Key Facts:

- **Class & Project:** Second ship of Project 17A stealth frigates, built by Mazagon Dock Shipbuilders Limited (MDL), Mumbai
- **Legacy:** Modern version of the original INS Udaygiri (decommissioned 2007)
- **Milestone:** 100th ship designed by the Navy's Warship Design Bureau

Features:

- **Stealth & Multi-Mission Capability:** Advanced stealth technology, modern weapons, sensors, and ability to tackle diverse maritime threats

About Project 17A:

- **Upgrade over Shivalik-class:** Enhanced stealth, upgraded sensors, modern weapons, and integrated platform management system
- **Key Ships:** INS Nilgiri, INS Udayagiri, INS Taragiri



SASCI Initiative

Context: The Ministry of Tourism launched the SASCI scheme to develop iconic and emerging tourist destinations in India.

About SASCI:

- **Full Form:** Special Assistance to States for Capital Investment
- **Objective:** Enhance infrastructure and visitor experiences, promote lesser-known destinations, and provide cultural, economic, and environmental value
- **Focus:** Reduce congestion at popular tourist sites and boost regional tourism

Key Features:

- **Selection:** Projects chosen via a challenge method evaluating connectivity, sustainability, utilities, impact, and private investment potential
- **Funding:** Fully central-funded; operations managed by State Governments
- **Timeline:** Completion targeted by March 2026
- **Holistic Development:** Comprehensive focus on infrastructure, branding, sustainability, and tourism diversification.

India Electric Mobility Index (IEMI)

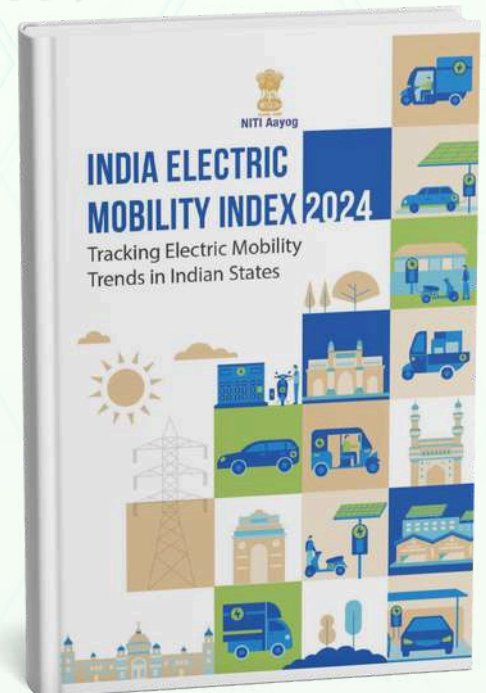
Context: NITI Aayog launched the India Electric Mobility Index (IEMI) to track States/UTs' progress in the EV transition.

About IEMI:

- **Developed by:** NITI Aayog
- **Purpose:** First tool to evaluate and rank States/UTs on EV adoption, charging readiness, and innovation
- **Aim:** Promote transparency, healthy competition, and knowledge sharing
- **Top Performers (2024):** Delhi, Maharashtra, Chandigarh

Key Features:

- **Indicators:** 16 parameters, scored out of 100
- **Themes:**
 - a. **Transport Electrification:** EV registrations and adoption across segments
 - b. **Charging Infrastructure:** Availability and expansion of charging stations
 - c. **R&D & Innovation:** EV manufacturing, research, and policy incentives



SHRESTH – State Health Regulatory Excellence Index

Context: The Ministry of Health & Family Welfare launched SHRESTH, a tool to assess and improve State Drug Regulatory Authorities.

About SHRESTH:

- Full form: State Health Regulatory Excellence Index
- Implemented by: CDSCO (Central Drugs Standard Control Organization)
- Purpose: Ensure safety, quality, and efficacy of medicines through transparent, data-driven rankings.
- Aim: Strengthen India's regulatory framework in line with the "Pharmacy of the World" vision.

Objectives:

- Benchmark and rank states' drug regulators.
- Identify gaps via virtual gap assessment → guide states towards maturity certification.
- Ensure uniform standards across manufacturing & distribution states.
- Build global trust in Indian medicines (on lines of WHO ML3 status for vaccines).

WHO ML3 Status:

- Indicates a stable and effective regulatory system.
- India already has ML3 for vaccines; SHRESTH aims to extend this standard to medicines.

Index Structure:

- Manufacturing States: 27 indicators under 5 themes → HR, infrastructure, licensing, surveillance, responsiveness.
- Distribution States/UTs: 23 indicators.
- Data Submission: States share monthly metrics with CDSCO.

2025 State of Food Security and Nutrition in the World (SOFI) Report

Context: Released by the UN in 2025.

Prepared by: FAO, IFAD, UNICEF, WFP, and WHO.

Mandate: Tracks progress on SDG 2.1 (end hunger) and SDG 2.2 (end malnutrition).

Focus: Hunger, food insecurity, malnutrition, agricultural productivity, and related socio-economic factors.



Apna Ghar Initiative



Context: Launched by the Ministry of Petroleum and Natural Gas to support truck drivers on long-haul journeys.

Objective: Provide safe, hygienic, and comfortable resting spaces for truck drivers.

Implementation:

- Built & managed by Public Sector Oil Marketing Companies (OMCs) at retail fuel stations.

Key Features:

- Current Coverage: 368 units with 4,611 beds operational on major highways.
- Target: 1,000 units at large-format fuel stations on national highways by March 2027.

India's First AI-Powered Anganwadi

Location: Waddhamna village, Nagpur district, Maharashtra.

Key Highlights:

- Tech Integration:
 - Equipped with VR headsets, AI-enabled smart boards, tablets, and interactive digital content.
 - Wi-Fi-enabled CCTV ensures transparency.
 - Tech partner: Qolaba under the IndiaAI programme.
- Smart Learning:
 - 1-hour daily digital learning via VR and smart boards.
 - AI tools (like Gemini & Perplexity models) track accuracy, response time, and adjust difficulty as per child's pace.
- Health & Nutrition Monitoring:
 - Linked with Poshan Tracker for nutrition, physical & cognitive growth tracking.
 - Real-time feedback on meals via uploaded images.
 - Future plans: Pregnancy tracking, converting govt. orders into audio.

Kartavya Bhavan

Context: Recently inaugurated by the Prime Minister in Delhi.

About:

- First of 10 planned Common Central Secretariat (CCS) buildings under the Central Vista redevelopment project.
- Modern, green HQ designed to house key central ministries.



Key Features:

- Size: 1.5 lakh sq. m | 7 floors + 2 basements.
- Green Tech: Rooftop solar (5.3 lakh units/year), rainwater harvesting, zero-discharge waste, energy-efficient HVAC, noise-insulated glass, sensor-based lighting.
- Digital & Security: Smart ID access, CCTV, digital workspaces, central command centre.
- Sustainability: Targeted GRIHA-4 rating.

Significance:

- Efficiency: Brings ministries under one hub, improving governance.
- Economy: Will save ~₹1,500 crore annually in rent & maintenance once all 10 CCS buildings are ready (by 2027).

India-China: Geo-Economic Strategy

Context: In 2025, China withdrew 300+ engineers from Foxconn's India plants and imposed export curbs, highlighting its strategy to weaken India's high-tech manufacturing ambitions.

India's Geo-Economic Policy

- Economic Diplomacy: Uses trade, tech & finance to absorb shocks and advance national goals.
- Strategic Autonomy: Maintains ties with US, EU, Russia, China—avoiding bloc politics.
- Global Role: Active in G20, BRICS, Quad—pushing for debt relief, digital goods.
- Diversified Partnerships: Expanding ties with US, EU, Japan, ASEAN, Africa, Latin America.
- Digital Diplomacy: Promotes UPI & India Stack to shape global digital norms.



India's Manufacturing Weaknesses

- **Weak Infrastructure:** Costs 20–30% higher than Vietnam due to poor logistics, unreliable power.
- **Regulatory Hurdles:** Cumbersome rules & frequent policy changes.
- **Import Dependence:** Reliant on semiconductors, chips, engines.
- **Skill Gaps:** Industry-labour mismatch limits productivity.
- **Weak Innovation:** Shallow supply chains in electronics & machinery.

China's Geo-Economic Strategy

- **Human Capital Control:** Withdrew engineers to block tech transfer.
- **Minerals Monopoly:** Curbs on gallium, germanium, graphite, rare earths—vital for EVs/electronics.
- **Export Restrictions:** Informal bans on heavy machinery & assembly tools.
- **Supply Chain Disruptions:** Creates uncertainty & cost escalation.
- **Overcapacity Tactics:** Dumps cheap goods to kill competition.

India-China Relations

- **Dual Approach:** Confrontation on security (Galwan 2020, app bans) but trade continues.
- **Border Issues:** Despite Oct 2024 pact, 2020 LAC clash still drives distrust.
- **Economic Dependence:** China = 15% of India's imports (electronics, solar, pharma).
- **Trade Imbalance:** 2024 - India's exports \$14.9 bn vs imports \$100+ bn.
- **Two-Front Threat:** Chinese support to Pakistan in 2025 Kashmir crisis.
- **De-risking Strategy:** Diversifying supply chains via US, Japan & partners.

Way Forward for India

- **Build strategic autonomy** - reduce dependence, strengthen internal capacity.
- **Fix infra, bureaucracy & logistics** to lower costs.
- **Cut import reliance** in semiconductors & critical tech.
- **Move beyond "screwdriver assembly"** to high-value manufacturing.
- **Craft disciplined industrial policy & boost indigenous R&D.**
- **Nationalise lessons** from China's strategy & respond with calibrated execution.

Conclusion

China uses technology, trade & human capital as power tools. India must counter by investing in infrastructure, innovation & self-reliance, transforming from an assembly hub to a high-tech manufacturing powerhouse.

NAVYA Initiative

Context: Govt highlighted progress under NAVYA (Nurturing Aspirations through Vocational training for Young Adolescent Girls).



About NAVYA

- Launch: June 2025
- Joint Initiative: Ministry of Skill Development & Entrepreneurship (MSDE) + Ministry of Women & Child Development (MWCD)
- Beneficiaries: Girls aged 16-18 years in aspirational districts
- Goal: Build socio-economic independence through skill development

Objectives

- Vocational Training: Demand-driven, covering traditional & non-traditional sectors
- Holistic Development: Health, nutrition, hygiene, financial literacy, life skills, legal awareness
- Employability & Self-Employment: Internships, apprenticeships, job linkages
- Gender-Inclusive Skilling: Safe, supportive training spaces
- Bridging Gaps: Connect education with livelihood, esp. in underserved areas

Significance: Empowers young girls with skills, awareness, and opportunities → enhances gender equity & rural socio-economic development.

Inflation Targeting in India

Context: RBI cautioned against raising the current 4% inflation target, warning it could harm policy credibility and undo past gains. (Discussion Paper, Aug 2025).

Key Points from RBI Paper

- Target Adjustment: Raising above 4% may reduce investor confidence.
- Evidence: Since 2014, headline inflation = 1.5-8.6%, mostly food-driven. Core inflation relatively stable.
- Global Practice: Almost all central banks target headline CPI (not core).
- Credibility: Keeping inflation in the 2-6% band strengthened investor trust, growth, and currency stability.
- Recognition: S&P upgraded India's rating to BBB for RBI's record in inflation control.

Key Issues

- Target Variable: Headline vs. Core Inflation
 - RBI → Headline CPI must remain target (food inflation spills into core).
 - Economic Survey 2023-24 → Suggested core inflation focus.
- Optimal Target:
 - 4% balances price stability & growth.
 - Above 4% → weakens credibility; below 4% → unsuitable for India's stage.
- Tolerance Band: 2-6% ensures policy flexibility amid global uncertainty.
- Range vs. Point: Current model → 4% point target with 2-6% band.

About Inflation Targeting

- Definition: Central bank aims at a specific inflation rate using monetary tools.
- Global Context: First adopted by New Zealand (1990).
- India: Adopted Flexible Inflation Targeting (FIT) in 2016; backed by RBI Act, 1934.
 - Current Target → 4% $\pm$ 2% (till March 2026).

Inflation Measures in India

- CPI (Consumer Price Index): Includes goods & services; published by CSO; Base Year 2012.
- WPI (Wholesale Price Index): Wholesale goods only; published by OEA, DPIIT; Base Year 2011-12.

Limitations of Inflation Targeting

- Growth slowdown due to high interest rates.
- External shocks (pandemics, wars) limit effectiveness.
- Heavy dependence on govt supply-side action (esp. food & fuel).
- Doesn't ensure financial stability (e.g., 2008 GFC).
- Supply-side inflation less responsive to monetary policy.

Way Forward

- Continue with headline CPI @ 4% $\pm$ 2%.
- Govt to manage food & fuel shocks.
- Update CPI basket (due 2026) to reflect consumption.
- Better RBI communication to anchor expectations.
- Balance inflation-growth trade-off via fiscal-monetary coordination.

Sundarbans Tiger Reserve Becomes India's 2nd Largest

Context: The Sundarbans Tiger Reserve (STR) in West Bengal is now India's second-largest tiger reserve, after Nagarjunasagar-Srisailem TR in Andhra Pradesh.

Key Updates:

- The National Board for Wildlife approved an expansion of 1,044.68 sq km, taking STR's area to 3,629.57 sq km.
- New additions include Matla, Raidighi, and Ramganga ranges in South 24 Parganas district.



About STR:

- Location: Coastal areas of South & North 24 Parganas, West Bengal; part of the world's largest delta (Ganga-Brahmaputra).
- Status: Tiger Reserve, National Park, Biosphere Reserve, UNESCO World Heritage Site, and Ramsar site.
- Landscape: Network of estuaries, river channels, and 105 islands.
- Unique Feature: World's only mangrove forest (shared with Bangladesh) that supports tigers (~101, as per 2022 census).
- Biodiversity:
 - Flora: Mangroves, halophytes, epiphytes.
 - Fauna: Royal Bengal Tiger, Fishing cat, Estuarine crocodile, Gangetic & Irrawaddy dolphins, King cobra, migratory birds.

Significance: Expansion strengthens tiger conservation and enhances India's mangrove ecosystem protection.

Ending Leprosy Stigma

Context: The Supreme Court, in the case Federation of Leprosy Organisations vs. Union of India, urged States and the Centre to amend or repeal laws that still discriminate against people affected by leprosy.

Key Issues:

- Over 145 outdated laws still treat leprosy patients unfairly.
- Such provisions:
 - Bar them from contesting elections or holding public office.
 - Allow divorce on grounds of leprosy (before 2019 amendment).

Supreme Court Directions:

- States should hold special Assembly sessions or issue ordinances to repeal discriminatory laws.
- States must submit status reports by October 2025; NHRC may also present its findings.
- Court stressed: Removing stigma is the responsibility of State governments.

About Leprosy (Hansen's Disease):

- Caused by *Mycobacterium leprae*.
- Affects skin, nerves, eyes, and respiratory tract.
- Spreads mainly through prolonged close contact via droplets.
- Completely curable with WHO-recommended Multi-Drug Therapy (MDT).

Why Stigma Persists:

- Myths & Fear: Seen as impure or contagious.
- Visible disabilities in advanced cases lead to rejection.
- Outdated legal provisions reinforce discrimination.

Significance: Ending discriminatory laws is key to restoring dignity, equality, and social acceptance for people affected by leprosy.