



25th Summit of the SCO: Outcomes, India's Role and Geopolitical Implications

» SPECIAL FEATURES

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NEW BATCH UPSC (IAS)

GENERAL STUDIES



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Message



An officer with a right mindset is an officer that a nation aspires for. A right mindset doesn't necessarily comprise unlimited jargon of knowledge rather a right amount of knowledge and its appropriate execution. Especially, when it comes to UPSC and State PSCs preparation, the crux is not to accumulate the knowledge but its effective implementation and utilization in tackling any situation. The situation here can be anything from UPSC CSE Prelims to the major issues that need to be addressed. The journey is hard but it is worth.

Perfect 7 has been part of many UPSC and State PSCs aspirants in their journey of becoming well reputed officers serving nationally and internationally. The magazine itself had gone through constant ebb and flows of change and improvements. Now, that the magazine is in its monthly era, I hope it becomes your perfect preparation partner and guides you through this ever learning endeavor of Civil Services Preparation.

With Best wishes.

Vinay Singh
Founder
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Indian Society & Art and Culture



The Continuing Crisis of Sanitation Work in India: A Social Audit Perspective

Introduction:

Despite several policy efforts and official declarations about the end of manual scavenging in India, hazardous sewer and septic tank cleaning continues to claim lives. A recent social audit commissioned by the Union Government has brought to light glaring gaps in safety, accountability, and rehabilitation for sanitation workers. The findings, made public in the Lok Sabha in July 2025, offer a sobering account of the persistent risks faced by these workers and the limited effectiveness of existing policies.

According to government data, 150 workers died due to hazardous cleaning of sewers and septic tanks in 2022 and 2023. A broader figure reveals that 1,035 people have died since 1993 due to such activities. A total of 377 deaths occurred between 2019 and 2023 alone, indicating that the problem remains widespread and unresolved.

Findings from the Social Audit:

- ❖ In September 2023, the Ministry of Social Justice commissioned a study to examine hazardous cleaning deaths. The audit investigated 54 deaths across 17 districts in eight States and Union Territories. Its findings highlighted alarming lapses in safety and oversight:
 - » **Lack of Safety Equipment:** In 49 of the 54 deaths, workers were not wearing any safety gear. In five cases, only gloves were used, and in one case, gloves and gumboots.
 - » **Limited Equipment and Training:** Mechanized equipment and proper gear were absent in 47 cases. Only two instances had such equipment, and only one had training provided.
 - » **Inadequate Institutional Preparedness:** In 45 out of 54 cases, the agencies involved lacked the required equipment and readiness.
 - » **Lack of Awareness Drives:** Such drives were conducted only in seven cases, and even then, they were incomplete.

Notable locations included Chennai, Kancheepuram (Tamil Nadu), and Satara (Maharashtra).

» **Consent and Risk Counselling:**

In 27 cases, no consent was taken. Where written consent was taken (18 cases), workers were not counselled about the associated risks.

- » **Hiring Patterns:** In 38 cases, workers were contracted personally or individually. Only five were employed directly by government agencies, and three by public sector undertakings but hired through private contractors.

Social and Economic Profile of the Workers:

- ❖ The social audit and data from 3,000+ urban local bodies paint a clear picture of the demographics involved in hazardous cleaning work:

- » **Caste Composition:** Of the 38,000 workers profiled, 91.9% belong to marginalised communities—68.9% from Scheduled Castes (SC), 14.7% from Other Backward Classes (OBC), and 8.3% from Scheduled Tribes (ST).

- » **Employment Nature:** Most of the workers are engaged in low-status, high-risk jobs and earn low incomes, reflecting entrenched caste-based economic disparities.

Government Response and the NAMASTE Scheme:

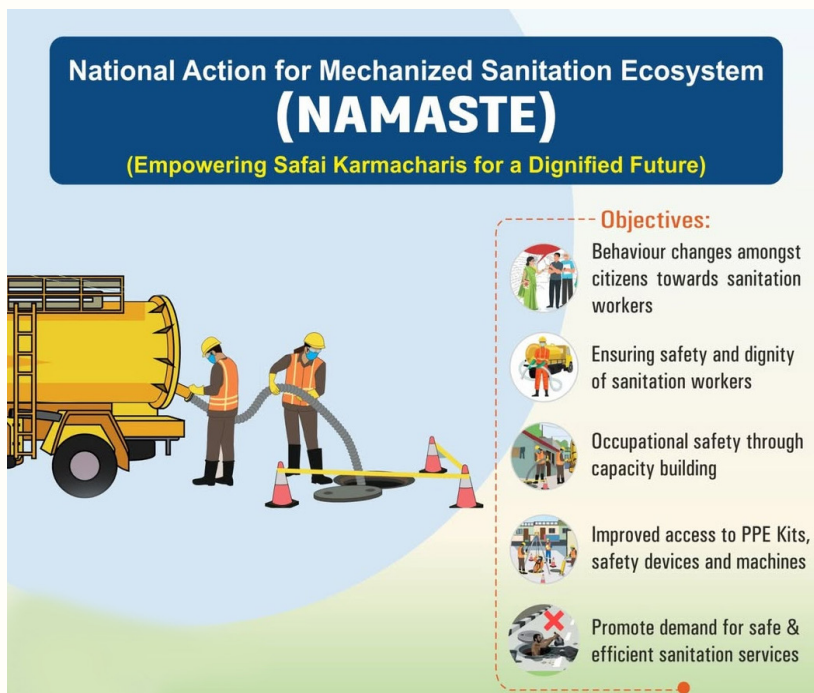
- ❖ The Ministry of Social Justice and Empowerment has launched the NAMASTE (National Action for Mechanised Sanitation Ecosystem) scheme in July 2023 to address the

According to government data, 150 workers died due to hazardous cleaning of sewers and septic tanks in 2022 and 2023. A broader figure reveals that 1,035 people have died since 1993 due to such activities. A total of 377 deaths occurred between 2019 and 2023 alone, indicating that the problem remains widespread and unresolved.

hazardous nature of sewer and septic tank cleaning. The scheme is intended to replace the Self-Employment Scheme for Rehabilitation of Manual Scavengers (SRMS).

❖ **Key features of NAMASTE include:**

- » **Worker Enumeration:** So far, 84,902 workers have been identified in 36 States and UTs. However, 283 urban local bodies (ULBs) reported zero workers, indicating possible under-reporting.
- » **Provision of PPE Kits:** Just over half of the identified workers have received PPE kits. Odisha stands out as the only state where all 1,295 workers received complete safety gear, supported by the state's Garima scheme.
- » **Capital Subsidies:** Rs. 20 crore in subsidies have been given to 707 workers for transitioning into safer livelihoods.
- » **Workshops and Awareness:** Around 1,000 workshops on hazardous cleaning prevention have been organised under



National Action for Mechanized Sanitation Ecosystem (NAMASTE)
 (Empowering Safai Karmacharis for a Dignified Future)

Objectives:

- Behaviour changes amongst citizens towards sanitation workers
- Ensuring safety and dignity of sanitation workers
- Occupational safety through capacity building
- Improved access to PPE Kits, safety devices and machines
- Promote demand for safe & efficient sanitation services

the scheme.

- » **Support to Waste Pickers:** Approximately 37,800 waste pickers have been identified for inclusion in the scheme's benefits.

Performance of States:

- ❖ **Odisha:** Notable for complete PPE coverage and access to mechanised desludging vehicles.
- ❖ **Tamil Nadu:** Has piloted sewer-cleaning robots in Chennai, cleaning over 5,000 manholes.

Effectiveness of Rehabilitation Efforts:

- ❖ While the NAMASTE scheme aims to shift sanitation work from manual to mechanised methods, the historical data from the previous SRMS program shows mixed results:
 - » **SRMS Outcomes:** Of 58,098 identified manual scavengers under SRMS, 97.2% were SCs. Although one-time cash assistance of Rs.40,000 was provided, only a small fraction pursued skill training or availed loans for alternative livelihoods.
 - » **Rehabilitation Gaps:** Many workers remain unrecognised and thus excluded from financial aid or training initiatives. The enumeration process needs strengthening to ensure no worker is left behind.

Major Challenges:

- ❖ **Social Stigma:** Workers often face deep-rooted caste discrimination, hindering their access to education, jobs, and dignity.
- ❖ **Health Hazards:** Exposure to toxic gases, sludge, and unsafe conditions causes severe health issues and fatalities. Protective measures are either inadequate or absent.
- ❖ **Lack of Enforcement:** Existing laws banning manual scavenging and mandating safe working conditions are poorly enforced. Institutional apathy and lack of accountability remain persistent issues.
- ❖ **Incomplete Coverage:** Many workers, especially those employed informally or

through contractors, fall outside the net of government support schemes.

Way Forward:

- ❖ To address the crisis of hazardous cleaning and improve the lives of sanitation workers, the following steps are necessary:
 - » **Strengthen Training and Outreach:** Expand the NAMASTE program to ensure comprehensive safety training and risk awareness. Include all workers, especially those currently unlisted or informally employed.
 - » **Promote Full Mechanization:** Accelerate the adoption of sewer-cleaning machines and robots across all urban areas. Manual cleaning should be phased out entirely, except in extreme emergencies and under strict supervision.
 - » **Ensure PPE and Safety Standards:** Distribute PPE kits universally and monitor their actual use. Agencies employing workers must be held accountable for providing equipment and training.
 - » **Rehabilitate with Dignity:** Beyond one-time cash transfers, provide long-term support like skill-building, education for children, and community integration programs.
 - » **Combat Social Discrimination:** Policies must be accompanied by awareness campaigns to dismantle the caste-based prejudice that underpins these hazardous jobs.

Conclusion:

Despite official claims, manual scavenging and hazardous cleaning remain ongoing problems in India. The recent audit exposes systemic failures in protecting the lives and rights of sanitation workers. While schemes like NAMASTE show promise, their success depends on inclusive implementation, strict enforcement, and a shift towards complete mechanisation. Without these reforms, sanitation workers will continue to face fatal risks and societal neglect.

Short Issues

Tamil Nadu Government Launches State Policy for Transgender People

Context:

Tamil Nadu government recently launched transgender policy for welfare of transgender people in the state. This policy aims to address the various challenges faced by transgender individuals in education, employment, healthcare, housing, and safety.

Key Features of the Policy:

- **Right to Self-Identification:** The policy allows transgender and intersex people to choose their gender — male, female, or transgender — without needing medical procedures or certificates.
- **Amendment of Laws:** The state will take steps to amend the Hindu Succession Act and Indian Succession Act to ensure the right of inheritance for transgender people.
- **Protection of Rights:** The policy seeks to protect the rights of transgender people in various areas, including education, employment, healthcare, housing, and safety.

About transgender person:

- A transgender person is someone whose gender identity differs from the sex they were assigned at birth. In India, the Transgender Persons (Protection of Rights) Act, 2019 defines a transgender person based on the mismatch between assigned sex and gender identity, and includes those with intersex variations and gender-queer identities.
- The NALSA judgment in 2014 recognized transgender individuals as a "third gender" and affirmed their fundamental rights.
- In India, the estimated transgender population is around 4.8 Lakh (based on the 2011 census).

Challenges Faced by Transgender People:

- **Legal Hurdles in Self-Identification:** The Transgender Persons (Protection of Rights) Act, 2019 requires a District Magistrate's

certification for gender identity. This undermines the right to self-identify and creates bureaucratic barriers to accessing official documents, services, and legal rights.

- **Social Discrimination and Violence:** Transgender individuals often face rejection, ostracism, and violence. Gender non-conformity is seen as deviant in many cultural settings, leading to stigma, physical and sexual abuse, and widespread social exclusion.
- **Barriers in Education and Employment:** In schools, transgender students face bullying, harassment, and non-inclusive curricula. These challenges result in high dropout rates and restrict access to higher education and formal employment, limiting their socio-economic mobility.

Schemes for Welfare of Transgenders:

- The government has launched several schemes to promote the welfare of transgender people, including:
 - » **SMILE Scheme:** For comprehensive welfare of transgenders.
 - » **National Portal for Transgender Persons:** For obtaining online certificate of identity.
 - » **Gender Inclusion Fund:** Under National Education Policy for providing quality education to girls and transgenders.
 - » **Garima Grehas:** Shelter homes for transgender persons.
 - » **PM-DAKSH:** For skill training to transgenders.

Conclusion:

The Tamil Nadu government's policy for transgender people is a significant step towards promoting inclusivity and protecting their rights. By allowing transgender individuals to self-identify their gender and ensuring their right to inheritance, the policy aims to address some of the key challenges faced by this community. The policy also highlights the need for a more nuanced understanding of the issues faced by transgender people and the importance of creating a supportive and

inclusive environment.

Improving Maternal Health in India

Context:

The Indian government has launched several initiatives to improve the health and nutrition of pregnant women and lactating mothers. Two such programs that have shown significant progress are Mission Poshan 2.0 and Pradhan Mantri Matru Vandana Yojana (PMMVY). Minister of State for Women and Child Development, Smt. Savitri Thakur gave this information in response to a question in the Lok Sabha.

About Pradhan Mantri Matru Vandana Yojana (PMMVY):

- Launched in 2017, PMMVY is a maternity benefit scheme aimed at providing partial wage compensation to women for wage-loss during childbirth and childcare. The scheme has positively impacted over 4.05 crore women by providing financial assistance during pregnancy and postnatal care.
- **Under the scheme:**
 - » Eligible pregnant and lactating mothers receive a cash incentive of Rs. 5,000 in three installments.
 - » It encourages early registration of pregnancy, antenatal check-ups, and institutional deliveries.

About Mission Poshan 2.0:

- Mission Poshan 2.0, launched under the Ministry of Women and Child Development, aims to address the challenges of malnutrition in a holistic manner. It subsumes several earlier schemes such as Anganwadi Services, Poshan Abhiyaan, and the Scheme for Adolescent Girls into one consolidated framework.
- **As of July 2025:**
 - » 72.22 lakh pregnant women are actively registered as beneficiaries on the Poshan Tracker.
 - » Supplementary nutrition, including 600

calories and 18–20 grams of protein, is provided through Take-Home Ration (THR) for up to 300 days per year.

- » Services extend to children (6 months to 6 years), lactating mothers, and adolescent girls (14–18 years) in Aspirational Districts and North-Eastern states.

Key Interventions for Maternal Health In India

1

Institutional Deliveries on the Rise

- ✓ 88.6% of all births now take place in health institutions (NFHS-5, 2019–21), including among tribal women – a major win under the National Health Mission.

2

Janani Suraksha Yojana (JSY)

- ✓ Conditional cash transfer scheme (since 2005) to boost institutional deliveries.
- ✓ 36.77 Lakh women benefited (April–Sept 2024).

3

Janani Shishu Suraksha Karyakaram (JSSK)

- ✓ Ensures **completely free care** for pregnant women and sick infants – covering delivery (including C-section), transport, diagnostics in public hospitals.

4

Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)

- ✓ Free, quality antenatal care on the 9th of every month since 2016.
- ✓ Over 6 crore women examined as of April 2025.

5

Extended PMSMA Strategy

- ✓ Focus on **high-risk pregnancies** with financial incentives for extra 3 visits + ASHA support till safe delivery.

6

SUMAN (2019)

- ✓ Assures **zero-cost, respectful and quality care** for all women and new births in public health facilities.
- ✓ 41,519 facilities onboarded as of Dec 2024.

7

LaQshya (2017)

- ✓ Aims to improve labour room and maternity OT quality in public hospitals.
- ✓ 1,106 Labour Rooms and 809 Maternity OTs certified by Dec 2024.

Other initiatives:

- **National Health Mission (NHM):**
 - » To enhance maternal outcomes, the National Health Mission (NHM) has implemented comprehensive schemes:
 - » SUMAN ensures dignified, zero-cost, quality maternal care for every woman.
 - » Janani Shishu Suraksha Karyakaram (JSSK) offers free delivery (including C-section), diagnostics, medicines, blood, and transport.

- » PMSMA provides free antenatal check-ups on the 9th of every month.
- » High-risk pregnancies are tracked with financial incentives for ASHA workers under extended PMSMA.
- » Iron and Folic Acid (IFA) supplementation and deworming reduce anemia and birth complications.
- **Poshan Tracker:**
 - » Launched in March 2021, the Poshan Tracker is a digital governance tool for monitoring Anganwadi services. It collects real-time data on nutrition, growth monitoring, THR delivery, and attendance.
 - » Since July 2025, the Facial Recognition System (FRS) has been made mandatory for Take-Home Ration (THR) delivery.

Conclusion:

Mission Poshan 2.0, in convergence with PMMVY and NHM initiatives, reflects India's commitment to improving maternal and child health. It strengthens grassroots service delivery, ensures nutritional security, and adopts technology for accountability—crucial pillars in India's socio-economic development.

Piprahwa Relics of Lord Buddha

Context:

Recently, the sacred Piprahwa relics of Lord Buddha were repatriated to India after over a century.

Piprahwa Relics of Buddha: Discovery and Return to India

- The Piprahwa relics are believed to be linked to the mortal remains of Lord Buddha and were enshrined by his followers in the 3rd century BCE. An inscription in Brahmi script on one of the caskets confirms these as relics of the Buddha, deposited by the Sakya clan.
- They include bone fragments, soapstone and crystal caskets, a sandstone coffer, and offerings such as gold ornaments and

gemstones.

- These relics were discovered in 1898 by British engineer William Claxton Peppé in Piprahwa (just south of Lumbini), Uttar Pradesh. The British crown claimed Peppé's find under the 1878 Indian Treasure Trove Act, and the bone and ash fragments were gifted by the British to King Chulalongkorn of Siam, now Thailand.
- They hold deep spiritual value in Buddhism and are revered across the world. Their return to India is not just the recovery of a cultural treasure, but also a renewal of the spiritual bond between Buddha's teachings and his birthplace.
- The majorities of these relics were transferred to the Indian Museum, Kolkata, in 1899. These are classified as 'AA' antiquities under Indian law, prohibiting their removal or sale.

A Model of Cultural Diplomacy:

- The successful repatriation of the Piprahwa relics sets an important precedent for international cultural cooperation. It showcases how public and private institutions can come together to protect and preserve global heritage.
- This act of cultural diplomacy is aligned with Government of India vision of reclaiming India's ancient cultural treasures and reinforcing India's position as a global guardian of peace and heritage.

Conclusion:

The return of the Piprahwa relics to India marks a significant chapter in the country's efforts to reclaim and protect its cultural heritage. It highlights the importance of cultural diplomacy, corporate involvement, and government intervention in preserving the legacy of ancient civilizations. This historic repatriation not only strengthens India's role as a global custodian of heritage but also reaffirms the timeless values of peace, compassion, and spiritual enlightenment that Lord Buddha's teachings continue to impart to the world.

Sarnath Nominated as India's UNESCO World Heritage Site

Context:

The Ancient Buddhist Site of Sarnath has been officially submitted as India's nomination for the UNESCO World Heritage List for the 2025–26 cycle. The nomination dossier was prepared and submitted by the Archaeological Survey of India (ASI).

About Sarnath:

- Located near Varanasi in Uttar Pradesh, Sarnath is a site of immense historical, religious, and cultural importance.
- Sarnath is where Gautama Buddha delivered his first sermon after attaining enlightenment, making it a central location in the Buddhist world. It is one of the four holiest sites of Buddhism, along with Lumbini, Bodh Gaya, and Kushinagar.
- **Key features of Sarnath include:**
 - » The Dhamek Stupa, dating back to 500 CE
 - » The Ashokan Pillar with the Lion Capital, India's national emblem
 - » Ruins of ancient monasteries and temples spanning the Mauryan to Gupta periods
 - » Sarnath's nomination reflects India's ongoing effort to protect and promote its tangible cultural heritage on the global stage.

About UNESCO World Heritage Sites (WHS):

- A UNESCO World Heritage Site (WHS) is a place recognised for its "Outstanding Universal Value", reflecting cultural, natural, or mixed significance for humanity. These sites are protected under the World Heritage Convention, adopted in 1972 and effective from 1975, with India ratifying it in 1977.
- **WHS fall into three categories:**
 - » **Cultural** – monuments, groups of buildings, archaeological sites
 - » **Natural** – natural features, geological

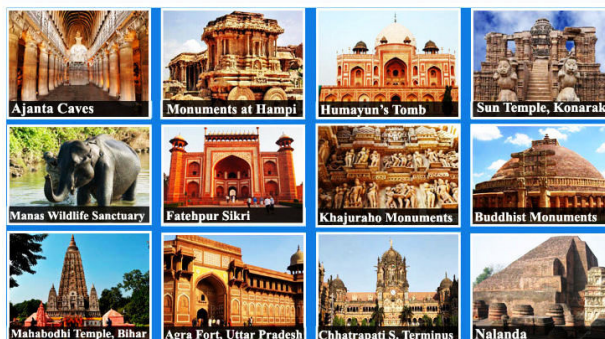
formations, ecosystems

- » **Mixed** – both cultural and natural importance

Selection Criteria:

- To qualify, a site must meet at least one criterion among ten, including:
 - » Representing human creative genius
 - » Showcasing historical or cultural importance
 - » Exhibiting ecological or geological significance
 - » Containing exceptional natural beauty or biodiversity
 - » Other factors include authenticity, protection, management, and integrity.

WORLD HERITAGE SITES IN INDIA



About World Heritage Committee (WHC):

- The World Heritage Committee (WHC), composed of members from States Parties (including India), manages the list. It meets annually to add, modify, or delist sites and can also place threatened sites on the World Heritage in Danger list.
- India hosted the 46th WHC session in New Delhi (July 2024). At this event, 'Moidams' of the Ahom Dynasty were added as India's 43rd World Heritage Site.
- The World Heritage Fund (est. 1977) supports conservation efforts via contributions from member states and private donors.

Conclusion:

Recognition as a UNESCO World Heritage Site would not only enhance Sarnath's global reputation but also promote cultural diplomacy

and tourism development. This move aligns with India's efforts to recognize and conserve sites of historical, spiritual, and architectural significance across the country

Dhirio

Context:

In a recent session of the Goa Legislative Assembly, several MLAs across party lines demanded the legalisation of dhirio — the traditional practice of bullfighting in Goa.

About Dhirio:

- Dhiri, or Dhirio, is a traditional bullfighting sport in Goa where two bulls lock horns in open grounds or paddy fields. Unlike the Spanish version, Goan bullfighting does not involve matadors or killing.
- The contest ends when one bull backs down or retreats.
- Bulls are trained and prepared specifically for these events, often given names like “Tyson” or “Rambo” and treated with celebrity-like reverence by local communities.

Cultural and Social Significance:

- Historically, Dhiri is tied to post-harvest feasts and church celebrations. It is seen not merely as sport, but a social ritual that fosters village pride and unity.
- The events are accompanied by festivities, and discussions around them continue for days.
- This tradition also engages the Goan diaspora, many of whom participate in betting on these fights from abroad, making it a socio-economic microcosm with strong cultural roots.

Legal and Ethical Concerns:

- The High Court of Bombay at Goa banned dhirio in 1996 following a fatal incident, citing violations under the Prevention of Cruelty to Animals Act, 1960.
- The Act prohibits the incitement of animals to fight. Despite the ban, the fights continue illegally, often accompanied by high-stakes betting.

- Animal rights activists strongly oppose any move to legalise the practice, arguing it involves deliberate provocation and results in injuries or death of animals.
- Organisations like PETA highlight the psychological trauma and physical harm inflicted on bulls, questioning the moral compass of a society that entertains itself through animal violence.

Arguments for Legalisation:

- Legislators and cultural proponents present several arguments:
 - » **Cultural Continuity:** Dhirio is seen as a centuries-old tradition tied to Goan identity.
 - » **Regulated Sport:** Like boxing, bullfighting could be regulated, with safety measures such as capping horns to prevent severe injuries.
 - » **Tourism and Revenue:** Legalisation could transform dhirio into a tourist attraction, promoting rural livelihoods and agri-tourism.
 - » **Precedent from Tamil Nadu:** The legal protection given to jallikattu through state-specific amendment offers a legislative model.

Conclusion:

The demand to legalise bullfighting in Goa brings to the fore a sensitive intersection of culture, legality, ethics, and public policy. It is a reminder of the importance of balancing tradition with constitutional morality, and ensuring that lawmaking is sensitive, inclusive, and forward-looking.

Humayun's Tomb

Context:

On 15 August 2025, a portion of the wall and roof of Dargah Masjid Pattawali collapsed following heavy rainfall in Delhi. The structure is located adjacent to the Humayun's Tomb complex, but it does not fall under the Archaeological Survey of India (ASI)-protected area.

About Humayun's Tomb:

- Built in 1570, Humayun's Tomb is the first major garden tomb in the Indian subcontinent and a significant precursor to the Taj Mahal.
- Commissioned by Empress Bega Begum, Humayun's first wife, it was designed by Persian architects Mirak Mirza Ghiyas and Sayyid Muhammad.
- The structure introduced the charbagh (four-quartered) garden, a marble-clad double dome, and high platforms—key features of Mughal funerary architecture. The tomb also houses over 150 Mughal royals, earning it the epithet "Dormitory of the Mughals."
- Recognized as a UNESCO World Heritage Site in 1993, it has undergone major restoration by the Archaeological Survey of India (ASI) and the Aga Khan Trust for Culture, underlining the importance of conservation efforts.



About Humayun:

- **Accession and Early Challenges**
 - » Humayun, the eldest son of Babur, ascended the Mughal throne in 1530.
 - » His reign was marked by administrative weakness and financial instability.
 - » **Early success:** Victory at the Siege of Chunar (1532) against Afghan forces.
- **Defeats and Exile**
 - » **Battle of Chausa (1539):** Defeated by Sher Shah Suri; narrowly escaped death.
 - » **Battle of Kannauj/Bilgram (1540):** Sher Shah's decisive victory forced Humayun into a 15-year exile.
 - » With Persian support, Humayun recaptured Kandahar and Kabul (1545),

and finally regained Delhi in 1555.

- **Persian Influence and Administration:**
 - » Exposure to Persian court culture influenced Mughal governance.
 - » Introduced Persian administrative practices, improved revenue systems, and promoted Persian art and architecture.
 - » Founded Dinpanah (refuge city) and built the Jamali Mosque.
- **Architectural Legacy:**
 - » Humayun's Tomb (completed in 1570 by his wife, Haji Begum) — India's first grand garden-tomb, combining Persian and Indian elements.
 - » Inspired later Mughal architecture, especially the Taj Mahal.
- **Cultural Contributions:**
 - » Patronised Persian painters Mir Sayyid Ali and Abdal Samad, laying the foundation of Mughal miniature painting.
 - » Established the Nigaar Khana (House of Painting) and initiated the Hamza Nama illustration project.
 - » His sister Gul Badan Begum's "Humayun-Nama" provides a rare female perspective on Mughal court life.

Conclusion:

Humayun's Tomb marks a watershed in Mughal architecture, blending Persian and Indian styles and paving the way for monuments like the Taj Mahal. As a UNESCO World Heritage Site, it embodies both cultural pride and global heritage value. The recent collapse nearby highlights the fragility of historic structures and reinforces the need for vigilant conservation of not only protected monuments but also adjoining heritage sites to safeguard India's architectural legacy.

**Comprehensive Modular
Survey: Education, 2025**

Context:

The Ministry of Statistics and Programme

Implementation (MoSPI) has released the Comprehensive Modular Survey: Education (CMS:E), 2025, which provides insights into household expenditure on school education in India.

Key findings:

- **Dominance of Government Schools:** Government schools account for 55.9% of total enrollments, with a higher percentage in rural areas (66%) compared to urban areas (30.1%).
- **Expenditure Patterns:** The average expenditure per student on school education in government schools is Rs.2,863, while it is significantly higher in non-government schools (Rs.25,002).
- **Private Coaching:** Nearly a third of all students (27%) take private coaching, with urban areas having a higher percentage (30.7%) compared to rural areas (25.5%).
- **Funding Sources:** 95% of students reported that the first major source of funding for school education was from other household members, while only 1.2% reported government scholarships.

Disparities in Expenditure:

- **Urban vs. Rural Expenditure:** Urban households spend significantly more on course fees (Rs.15,143) compared to rural households (Rs.3,979).
- **Private Coaching Expenses:** Urban households spend nearly double on private coaching (Rs.3,988) compared to rural households (Rs.1,793).

Implications:

- **Policy Implications:** The survey's findings have important implications for education policy, particularly in addressing disparities in access to quality education.
- **Government Initiatives:** The government may need to consider initiatives to bridge the gap in education expenditure and access to quality education, especially in rural areas

THE RURAL-URBAN DIVIDE

Comprehensive Modular Survey: Education, 2025 (April – June, 2025)
Education Spending Snapshot: CMS Survey 2025

Indicator	Rural India	Urban India	All-India (Average)
Enrolment in govt schools	66.00%	30.10%	55.90%
Enrolment in private unaided schools	24.30%	51.40%	31.90%
Average annual course fee expenditure (per student)	₹3,979	₹15,143	₹7,111
Average annual household expenditure per student in govt schools	₹2,639	₹4,128	₹2,863
Average annual household expenditure per student in non-govt schools	₹19,554	₹31,782	₹25,002
Students paying course fees	25.3% (govt schools)	98% (urban unaided school)	26.7% (govt)/95.7% (non-govt)
Students taking private coaching	25.50%	30.70%	27.00%
Average annual coaching spend	₹1,793	₹3,988	₹2,409
Coaching spend at higher secondary	₹4,548	₹9,950	₹6,384
Funding source: household members	95.30%	94.40%	95.00%
Funding source: govt scholarships	1.40%	0.90%	1.20%

Key Initiatives & Programs for school education in India:

- **National Education Policy (NEP) 2020**
 - » Foundational policy to reform school and higher education.
 - » Promotes flexibility, competency-based learning, and quality enhancement.
- **PM SHRI Schools (Schools for Rising India)**
 - » Centrally sponsored scheme.
 - » Aims to develop 14,500 exemplar schools for showcasing NEP 2020 implementation.
- **NIPUN Bharat Mission**
 - » Launched under Samagra Shiksha Abhiyan.
 - » Objective: Ensure Foundational Literacy and Numeracy (FLN) for all children by Grade 3 by 2026-27.
- **DIKSHA (Digital Infrastructure for Knowledge Sharing)**
 - » National platform for:
 - Teacher training (e.g., NISHTHA).
 - Access to e-content, especially FLN-related modules.
- **National Curriculum Framework (NCF)**
 - » Curriculum redesign to promote:
 - Experiential learning
 - Competency-based learning
 - Alignment with NEP 2020 goals.
- **PM e-Vidya**
 - » Integrates all digital/online education efforts.
 - » Multi-modal access through:

- DTH TV channels
- Radio
- ICT labs and online platforms.
- **ULLAS (Understanding of Lifelong Learning for All in Society)**
 - » Under Nav Bharat Saaksharta Karyakram (New India Literacy Programme).
 - » Promotes lifelong learning and adult literacy.

Conclusion

The CMS: Education 2025 provides a clear snapshot of the financial realities of schooling in India today. With government schools serving the majority, particularly in rural areas, and household expenditure remaining relatively low in that sector, it underscores the critical role of public education in ensuring equity and access. However, the rise of private coaching and high urban expenditures also spotlight educational inequality and a growing privatization trend.

Fortified Rice Scheme

Context:

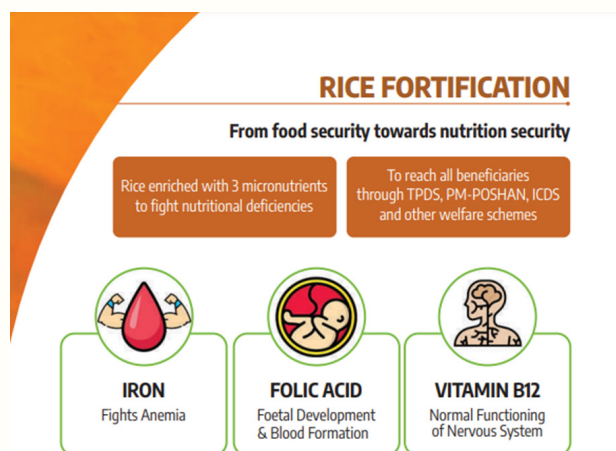
The Government of India has extended the Universal Fortified Rice Distribution Scheme until December 2028, backed by a Rs.17,082 crore allocation. This marks a major public health and nutrition initiative to fight widespread micronutrient deficiencies, especially anaemia among children, women, and vulnerable groups. The rice fortification initiative was launched in 2019, and by March 2024, all custom-milled rice under food safety net programs was replaced with fortified rice.

Objectives and Benefits:

- **Combat Malnutrition:** Reduce anaemia and micronutrient deficiencies among the population.
- **Improve Public Health:** Enhance nutritional standards and overall health of the population.
- **Support Vulnerable Populations:** Provide essential nutrients to those in need, particularly children and women.

About Fortified Rice:

- Fortified rice is regular rice that has been enhanced with micronutrients like iron, folic acid, and vitamin B12. It's a strategy to combat malnutrition by making rice, a staple food for many, a source of essential vitamins and minerals. The fortification process involves adding fortified rice kernels (FRK) to regular rice, often at a ratio of 1:100.
- The fortified rice is distributed through key welfare programs like PM POSHAN, Public Distribution System (PDS), and Integrated Child Development Services (ICDS).



Reasons for extension of scheme:

- India has one of the highest rates of anaemia, especially among women, adolescent girls, and children. As per NFHS-5 (2019–21), over 57% of women and 67% of children under five are anaemic.
- Micronutrient deficiencies, known as "hidden hunger", contribute to poor cognitive development, low immunity, and maternal complications. Fortified rice, enriched with iron, folic acid, and vitamin B12, helps tackle these deficiencies at scale.
- Two-thirds of India's population consumes rice daily, especially in PDS-dependent households. Leveraging an already widespread distribution network (PDS, Mid-Day Meals, ICDS) ensures high reach and impact.

- Supports the Right to Food, Right to Education, and Right to Health as part of Directive Principles of State Policy (Article 47).

Various schemes for address malnutrition:

- Several Government of India schemes and initiatives focus on addressing malnutrition, particularly among children, women, and adolescent girls:
 - » **Poshan Abhiyaan (National Nutrition Mission) / Mission Poshan 2.0:** This multi-ministerial mission, launched in 2018, aims to improve the nutritional status of adolescent girls, pregnant women, lactating mothers, and children aged 0-6 years by reducing stunting, underweight prevalence, anemia, and low birth weight.
 - » **Integrated Child Development Services (ICDS) Scheme:** This umbrella scheme includes Anganwadi Services (providing supplementary nutrition and health services to young children and mothers), the Scheme for Adolescent Girls (addressing their nutritional needs), and Pradhan Mantri Matru Vandana Yojana (PMMVY), which offers cash incentives to pregnant women and lactating mothers.
 - » **National Food Security Act (NFSA), 2013:** This act provides subsidized foodgrains to a large portion of the population and includes nutritional support for women and children through schemes like PM POSHAN and ICDS, as well as maternity benefits.
 - » **PM POSHAN (POshan SHAKti Nirman) Scheme:** Formerly the Mid-Day Meal Scheme, this program aims to improve the nutritional status and school attendance of children in government and government-aided schools.

Conclusion:

The extension of the Universal Fortified Rice Distribution Scheme demonstrates the government's commitment to addressing malnutrition and micronutrient deficiencies in India. With its comprehensive coverage

and nutritional benefits, this initiative has the potential to significantly improve public health outcomes and support vulnerable populations

Open Defecation in Low-Income Countries

Context:

The WHO-UNICEF Joint Monitoring Programme (JMP) released a report titled "Progress on Household Drinking Water and Sanitation 2000–2024: Special Focus on Inequalities" during World Water Week (August 24–28, 2025). The report revealed that open defecation in low-income countries remains higher than the global average, posing a serious threat to achieving Sustainable Development Goal 6 (SDG 6) by 2030.

Key Findings of the Report:

- **Open Defecation:**
 - » Still prevalent in low-income countries, with rates 4x higher than the global average.
 - » Only income group not on track to eliminate the practice by 2030.
- **Progress in Sanitation:**
 - » Global access to safely managed sanitation rose from 48% (2015) to 58% (2024).
 - » 1.2 billion people gained access to hygienic toilets during this period.
- **Drinking Water Access:**
 - » Global coverage increased from 68% to 74% between 2015 and 2024.
 - » Rural access improved from 50% to 60%, while urban access stagnated at 83%.
- **WASH Inequities:** Stark disparities persist across:
 - » Urban-rural divide
 - » Income groups
 - » Ethnic minorities and indigenous populations
 - » People with disabilities
 - » Women and girls disproportionately bear the burden of water collection.

- **Menstrual Health:**
 - » Survey across 70 countries revealed continued menstrual hygiene challenges across all income levels.
- **Scale of Action Required:** Low-income countries need:
 - » 7-fold increase in water access.
 - » 8-fold increase in sanitation and hygiene services.
 - » Lower-middle-income countries need to double current progress rates.

Implications:

- **Public Health Risks:**
 - » Open defecation contributes to water contamination, diarrheal diseases, and child mortality.
 - » Affects overall nutritional and health outcomes in vulnerable populations.
- **Violation of Human Rights:**
 - » Access to water and sanitation is recognized as a basic human right by the UN.
 - » Continued disparities reinforce structural inequality and social exclusion.
- **Gender and Educational Impact:**
 - » Lack of toilets and menstrual hygiene facilities affects school attendance among girls.
 - » Burden of water collection on women limits their education and employment opportunities.
- **SDG Setbacks:**
 - » Failure to eliminate open defecation undermines SDG 6, and affects progress on SDG 1 (No Poverty), SDG 3 (Good Health), SDG 5 (Gender Equality), and SDG 10 (Reduced Inequalities).

Conclusion:

The report underscores that while global gains in water and sanitation have been commendable, inequity remains a serious obstacle. The pace of change is insufficient, especially in low-income and marginalized regions. To achieve universal WASH coverage by 2030, nations must:

- Prioritize vulnerable populations in policy and funding.

- Strengthen local-level data collection to capture needs of excluded communities.
- Scale up investment in sanitation infrastructure, behavior change programs, and community-led total sanitation (CLTS) initiatives.

National Annual Report and Index on Women's Safety (NARI) 2025

Context:

The National Annual Report and Index on Women's Safety (NARI) 2025 was recently released by the National Commission for Women (NCW). Prepared by Pvalue Analytics and published by the Group of Intellectuals and Academicians (GIA), the report is based on the perceptions of 12,770 women across 31 cities, covering all states.

Key Highlights of the Report:

- **Safest cities:** Kohima, Visakhapatnam, Bhubaneswar, Aizawl, Gangtok, Itanagar, Mumbai
- **Least safe cities:** Patna, Jaipur, Faridabad, Delhi, Kolkata, Srinagar, Ranchi
- **National safety score:** 65 per cent
- **Overall perceptions:** 60% women felt safe, while 40% reported feeling "not-so-safe" or unsafe
- **Harassment in 2024:** 7% overall; 14% among women under 24
- **Hotspots of harassment:** Neighbourhoods (38%), public transport (29%)
- **Trust in institutions:** Only 25% confident in effective redressal
- **Reporting rates:** 1 in 3 women reported harassment; action taken in only 16% of registered cases
- **Workplace safety:** 91% considered offices safe, but nearly half were unaware of POSH mechanisms

Other highlights of the Report:

- **Time-based variations:** Women reported high levels of safety in educational institutions (86%) and workplaces (91%)

during the day, but confidence collapsed after dark due to poor street lighting and unreliable transport.

- **Workplace paradox:** While offices were broadly considered safe, awareness about the Prevention of Sexual Harassment (POSH) Act was weak. Nearly half of respondents were unaware of its existence, suggesting a gap between legislation and awareness.
- **Age-linked vulnerability:** Younger women (under 24) faced harassment at twice the national average, showing disproportionate risks in campuses, hostels, and recreational spaces.
- **Spatial hotspots:** Neighbourhoods (38%) emerged as the most unsafe zones, followed by public transport (29%). This underlines the importance of urban planning, street design, and surveillance.
- **Cycle of silence:** Two-thirds of harassment cases were never reported. Even when complaints were filed, formal registration happened in only 22% of cases, and action was taken in just 16%. This entrenches mistrust in the system.

mobility, and digital participation. Safer cities were linked with:

- » Effective policing,
- » Gender-sensitive urban infrastructure,
- » Higher civic participation, and
- » Greater institutional responsiveness.
- By contrast, weaker scores were tied to:
 - » Patriarchal norms,
 - » Poor planning of urban spaces, and
 - » Lack of faith in grievance redressal mechanisms.

Conclusion:

Women's safety is critical to achieving Sustainable Development Goal (SDG) 5: Gender Equality. Insecure environments restrict mobility, economic participation, and access to opportunities. The report highlights the need to integrate perception-based surveys with NCRB data, ensuring that policymaking reflects both lived experiences and official crime statistics.

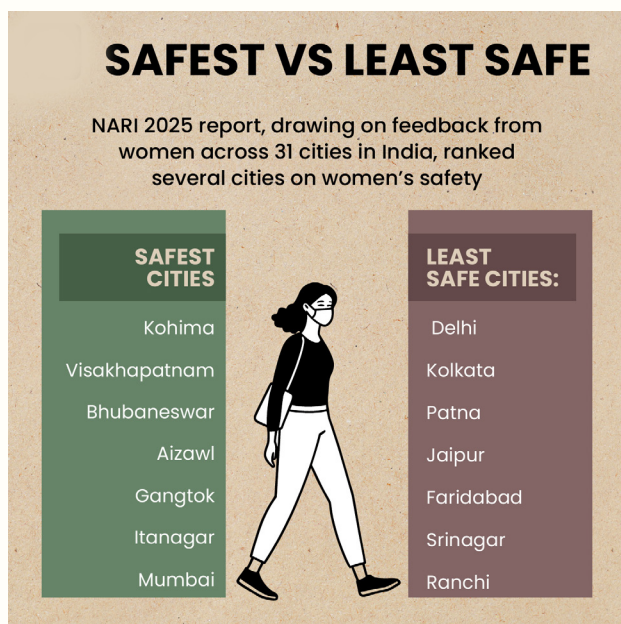
UDISE+ Report

Context:

The Ministry of Education (MoE) released its Unified District Information System for Education Plus (UDISE+) 2024-25 report on August 28, 2025. A sharp decline of 25 lakh students aged 3–11 years in early education enrolment has raised serious concerns about India's foundational learning landscape.

Key Findings:

- **Foundational drop:** Enrolment in anganwadis, pre-schools, and Classes 1–5 fell from 12.09 crore in 2023–24 to 11.84 crore in 2024–25, a dip of nearly 25 lakh.
- Overall enrolment (Classes 1–12) dropped by 11 lakh, now at 24.69 crore — the lowest since 2018–19.
- Demographic shifts, such as declining fertility rates (TFR at 1.91), are cited as major reasons.
- **Contrasting trend:** Enrolment increased in middle (6–8) and secondary (9–12) levels by 6 lakh and 8 lakh respectively.
- Gross Enrolment Ratio (GER) improved



Institutional and Structural Dimensions:

- The report stresses that safety is not just a law-and-order concern but a developmental issue shaping education, employment,

across all levels, and dropout rates decreased.

- Teacher-student ratio improved significantly since 2014–15 across all school stages.

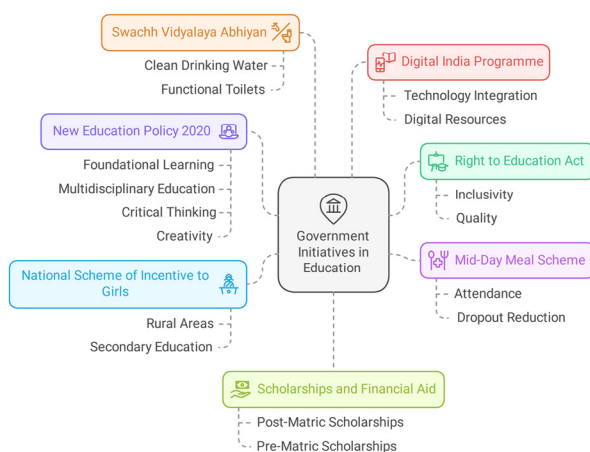
Reasons for Decline enrolment:

- Officials attribute the decline in enrolment numbers to falling birth rates, with India's total fertility rate (TFR) dropping to 1.91 per woman by 2021, below the replacement level of 2.1.
- The decline could also be explained by the presence of children in pre-primary standalone private institutions

Positive Trends:

- The teacher-student ratio has improved across all levels, with one teacher for every 10 students at the foundational stage and one teacher for every 17 students at the middle level.
- Dropout rates have reduced across all levels, with a significant decline in secondary school dropout rates from 10.9% to 8.2%

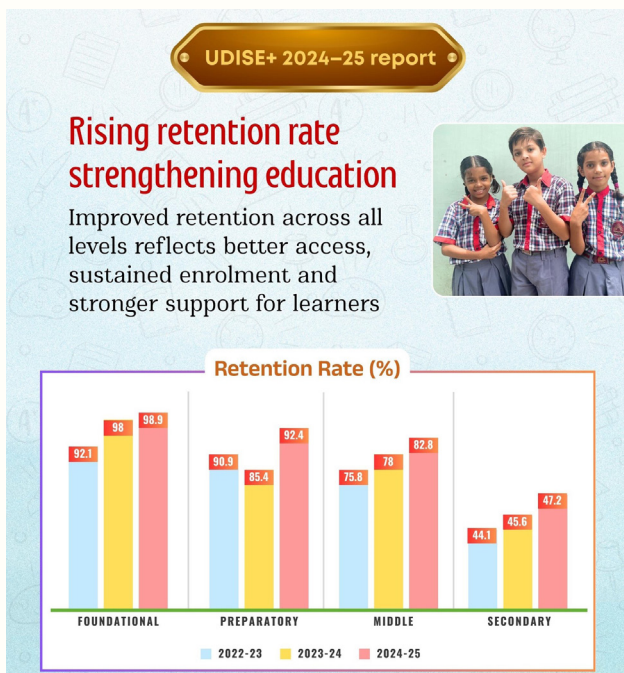
detailed, school-level data on India's education system.



- It includes statistics on enrolment, school infrastructure, teacher-student ratios, and student demographics, including gender and social categories such as SC, ST, OBC, and minorities.
- Introduced to support the National Education Policy (NEP) 2020, the report now includes metrics on digital learning, peer interaction, and internet access in schools.
- Schools across India voluntarily upload data through an online portal.

Conclusion:

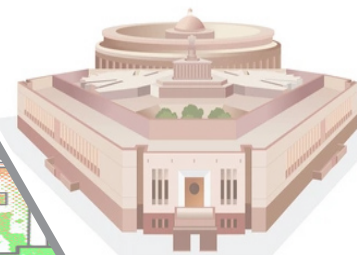
The UDISE+ 2024–25 report presents a mixed picture: while India's education system is witnessing stronger retention and improved teacher-student ratios, the decline in early-grade enrolment demands urgent attention. Policymakers must assess the long-term demographic trends, ensure inclusivity in pre-primary education, and adapt strategies to support foundational learning for all children—especially as India approaches a new census cycle in 2026.



About UDISE+ Report:

- The Unified District Information System for Education Plus (UDISE+) is the Ministry of Education's annual report providing

Polity & Governance



Introduction:

Over the years, India's legal and regulatory system has gathered a large number of rules that go beyond what criminal law is really meant for. Many of these provisions were written decades ago, in a very different socio-economic setting. Today, they often feel outdated, too harsh, or out of proportion to the actual offence. The persistence of such laws has led to a situation where individuals and businesses can be subjected to imprisonment not for acts of grave social harm, but for routine or technical lapses such as errors in compliance, minor defaults, or procedural oversights.

This "over-criminalisation" creates several problems. It makes the environment uncertain and risky for businesses, discourages entrepreneurship, and weakens trust in regulators. At the systemic level, it also burdens India's already strained judiciary, where millions of criminal cases are pending, many of them involving minor offences that could be better resolved through corrective or financial penalties.

❖ In this context, the Government of India has embarked on a reform initiative to rationalize

and modernise the legal framework. The Jan Vishwas Bills are at the heart of this change. The first Bill, passed in 2023, decriminalized 183 provisions across 42 central laws. The Jan Vishwas (Amendment of Provisions) Bill, 2025 is the next big step. It expands reforms to 16 more central Acts and brings in important measures like:

- » replacing jail terms for minor violations with warnings and improvement notices,
- » rationalising penalties, and
- » focusing on financial or corrective action instead of imprisonment.

Reason for introducing Jan Vishwas Bill:

- ❖ Research shows that India has a large and complex legal framework. A database prepared by the Vidhi Centre for Legal Policy records 882 central laws, of which 370 contain criminal provisions accounting for 7,305 crimes. Importantly, more than 75% of these crimes are defined under laws beyond core criminal justice areas, such as taxation, shipping, municipal governance, and financial institutions.
- ❖ Such over-criminalisation has long been criticised because:

- » It prescribes disproportionately high punishments for relatively routine or minor offences. For example, in India, a person can be arrested for milking a cow on the street or for not providing proper exercise to a pet dog.
- » While such provisions are rarely enforced, they give scope for arbitrary use of power by authorities.
- » They go against the principle of proportionality in crime and punishment.
- » Many such laws reflect outdated notions of morality or a paternalistic outlook of the State.

Impact on Businesses

- ❖ A 2022 Observer Research Foundation (ORF) report highlighted the impact of over-criminalisation on businesses in India. The report found:
 - » Of the 1,536 laws regulating business, more than half carry imprisonment clauses.
 - » Of the 69,233 compliances required, 37.8% involve imprisonment.
 - » More than half of the imprisonment clauses prescribe a minimum sentence of one year.
- ❖ The report argued that such provisions have created barriers to the smooth flow of capital, ideas, entrepreneurship, and job creation, ultimately slowing economic growth.

Pressure on the Judicial System:

- ❖ Excessive criminalisation also adds to the burden on the judiciary. As per the National Judicial Data Grid (NJDG), on 24 August 2025, India's district courts had:
 - » More than 3.6 crore pending criminal cases.
 - » Over 2.3 crore of these cases were pending for more than one year.
- ❖ The Commerce Ministry, during the introduction of the 2023 Bill, had noted that criminal consequences for minor defaults "clog the justice delivery system and push serious cases to the back burner." Decriminalisation, therefore, is expected to reduce pendency, ease pressure on courts,

and improve the justice delivery process.

**'Mirror' Laws that
Need to be Repealed**

 **Uttar Pradesh, Maharashtra, Assam & Sikkim** have beggary laws even as SC has held criminalising begging is violative of fundamental rights

Lepers Act  in Meghalaya when law commission has recommended full ban on the act

Opium smoking laws in UP, Delhi and Assam when subject is covered under NDPS Act, 1985

Delhi has a 'Village Patrol' law – an area covered by modern policing laws



Some north-eastern states like **Meghalaya, Mizoram, Arunachal Pradesh, Manipur, Nagaland and Sikkim** have their own essential services acts even when ESMA, 1981 exists

What does the 2025 Bill propose?

- ❖ The Jan Vishwas Bill, 2025 proposes amendments to 355 provisions across 16 laws. Among these:
 - » 288 provisions are decriminalised to promote ease of doing business.
 - » 67 provisions are amended to promote ease of living.

Key Features of the Bill:

- ❖ **Warnings and Improvement Notices:**
The Bill introduces the idea of "warnings"

and “improvement notices” for first-time offenders in 76 offences under 10 Acts, including the Motor Vehicles Act, the Apprentice Act, and the Legal Metrology Act.

» **Example:** Under the Legal Metrology Act, use of non-standard weights and measures currently carries a penalty of up to Rs.1 lakh. The Bill proposes that a first-time offender will instead receive an improvement notice directing them to rectify the mistake within a set time. If the offender fails to comply, they will face fines.

❖ **Removal of Imprisonment Clauses:** The Bill removes imprisonment clauses for minor, procedural, or technical defaults. These will be replaced with fines or warnings.

» **Example:** Under the Electricity Act, 2003, non-compliance with orders currently carries a punishment of three months’ imprisonment. The Bill proposes replacing this with a monetary fine ranging from Rs.10,000 to Rs.10 lakh.

❖ **Rationalisation of Penalties:** The Bill rationalises penalties to make them more proportionate and predictable. It introduces:

- » Automatic 10% increase in penalties every three years to strengthen deterrence without requiring fresh legislative amendments.
- » Higher fines for repeated offences, thereby discouraging habitual violators while avoiding imprisonment.

Implications of the Jan Vishwas Bill:

❖ The Jan Vishwas Bills (2023 and 2025) are part of the government’s larger effort to simplify India’s legal architecture and make it more business- and citizen-friendly.

» **Ease of Doing Business:** By decriminalising 288 provisions, the Bill will reduce compliance-related risks for businesses, encourage entrepreneurship, and promote investment.

» **Ease of Living:** Citizens will no longer face harsh punishments for minor lapses, improving trust in governance.

» **Judicial Relief:** Decriminalisation of minor offences will reduce the burden on district courts, freeing up judicial

time for serious crimes.

- » **Regulatory Simplification:** Regularisation of penalties through automatic hikes will create predictability and reduce the need for frequent amendments.

Challenges and Criticisms

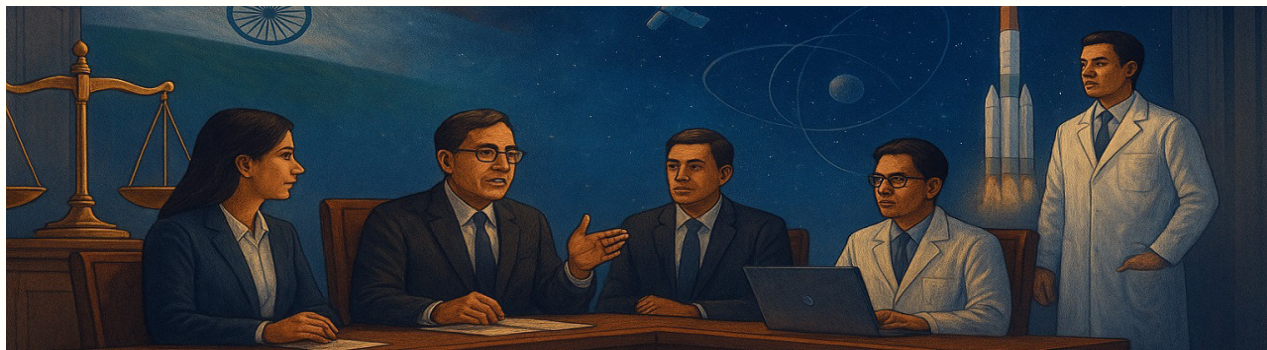
❖ **Balancing deterrence and trust:** While decriminalisation reduces harassment, critics caution that excessive leniency may encourage non-compliance.

❖ **Implementation hurdles:** Success depends on consistent application by regulatory authorities and effective awareness among businesses and citizens.

❖ **Need for further reform:** With 370 central laws still carrying criminal provisions, this is only the beginning of a longer process of legal rationalisation.

Conclusion:

The Jan Vishwas (Amendment of Provisions) Bill, 2025 is another step in India’s effort to modernise its legal system. It makes changes to 355 provisions across 16 different laws, bringing in important reforms such as introducing warnings and improvement notices, replacing jail terms with monetary fines, and rationalising penalties to make them fairer. The aim is to build a system of governance that is more trust-based and citizen-friendly, rather than overly punitive. If these changes are carried out well, the reform can increase business confidence, make everyday life easier for citizens, and reduce the burden on India’s already crowded judiciary. At the same time, its real success will depend on how well the government manages to strike a balance — between trusting citizens and still having enough deterrence to prevent violations. This will remain the key challenge for future reforms, including the possibility of Jan Vishwas 3.0 and beyond.



National Space Law: India's Scientific Progress and Strategic Imperative

Introduction

India celebrated its second National Space Day on August 23. The historic success of Chandrayaan-3 not only established India as a global space power but also added a new achievement to the collective repository of human knowledge. The upcoming Gaganyaan mission, Chandrayaan-4, and the proposed Bharat Antariksh Station are set to make this journey even more glorious. At the same time, the growing contribution of private companies is evidence that India is now moving beyond traditional space exploration toward commercial and strategic horizons. However, amid all these successes, an important question arises: India's National Space Law. To provide sustainability and credibility to India's progress in the global race for space exploration, innovation, and commercialization, the need for a strong legal framework has now become clearer than ever before.

Global Space Law: The Foundational Framework:

- ❖ At the international level, the United Nations has created five major treaties to regulate space activities. The most important among them is the Outer Space Treaty (1967), which established the principle that space is the common heritage of all humanity and cannot be claimed by any nation as its sovereign territory.
 - » This treaty also ensures that space will

be used only for peaceful purposes.

- » Alongside it, the Liability Convention (1972), Registration Convention (1976) and others made states responsible for their national space programs and private activities.
- ❖ The UN treaties provide the basic principles for space activities—from peaceful use to state responsibility and liability. But the responsibility of translating these principles into reality rests with national laws. In other words, treaties provide guidance, but their implementation is ensured by domestic legislation.

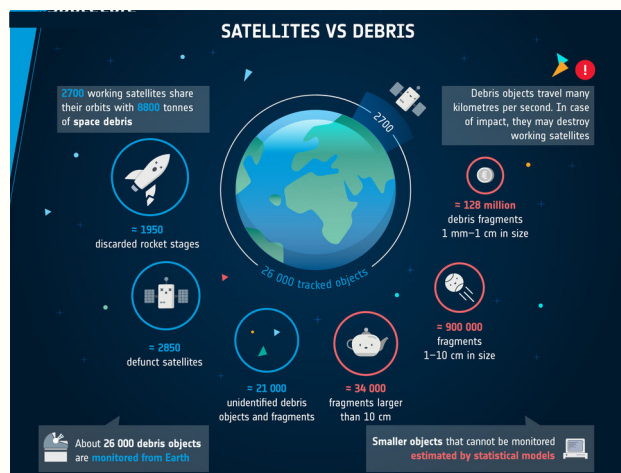


India's Position: Policy versus Law

- ❖ India has signed and ratified these treaties, but a comprehensive national space legislation has not yet been enacted.
 - » The Indian Space Policy (2023) and the IN-SPACe Norms, Guidelines and Procedures (NPG) have encouraged private sector participation.
 - » Similarly, the Bureau of Indian Standards (BIS) has prepared a list of Indian standards for the space industry, ensuring compliance with safety measures.
- ❖ Yet, so far, only the first essential component—technical regulation—has been addressed. The second component, i.e., a comprehensive legislative framework (textual law), still remains pending. This framework would constitute India's Space Act, implementing the provisions of international treaties at the national level.
- ❖ active in satellite manufacturing, launch vehicles, data services, and space-based applications.
 - » For investors, legal certainty, licensing processes, insurance, and risk management frameworks are crucial.
 - » A National Space Law would provide them both protection and guidance.
- ❖ The Indian Space Association (ISpA) has emphasized the need to grant statutory authority to IN-SPACe. Currently, it operates without complete legal backing.
- ❖ IN-SPACe (Indian National Space Promotion and Authorization Centre) is an autonomous nodal agency under the Department of Space (DOS), approved by the central government. It acts as a bridge between ISRO (Indian Space Research Organisation) and the private space sector. Its primary objective is to promote, enable, authorize, and supervise the participation of non-governmental entities (NGEs) in space activities.
- ❖ If clear provisions regarding licensing procedures, eligibility criteria, application timelines, fees, and grounds for rejection are codified in law, it will instill confidence among investors and companies.
- ❖ Private players are also demanding that 100% FDI through the automatic route be allowed in satellite component manufacturing. This would provide Indian startups with both capital and technology.
- ❖ Additionally, a robust insurance framework is essential. Internationally, India bears full responsibility for any damage, but for private players, mandatory third-party insurance should be made a requirement to cover losses from high-value space assets.

Industry Perspective: Demand for Clarity and Stability

- ❖ The growing role of private space companies has given India new momentum, but regulatory uncertainty remains a challenge.
- ❖ Leading private players include Skyroot Aerospace, Agnikul Cosmos, and Pixxel—



Other priorities for the industry include:

- ❖ Protection of Intellectual Property Rights (IPR),
- ❖ Clear accident investigation procedures,
- ❖ Binding provisions for space debris management,
- ❖ An integrated framework for space data and satellite communication,
- ❖ Establishment of an independent appellate body.

International Credibility and Reputation:

- ❖ Countries such as the United States, France, Japan, and Australia have already implemented their national space laws.
- ❖ Through these, they are not only encouraging their private industries but also strengthening their positions on international platforms.
- ❖ If India too acts in time, it will be able to enhance its credibility and influence as a responsible space power.

National Security and Strategic Interests:

- ❖ India's space program is significant not just scientifically but also strategically.
- ❖ Satellite-based communication, navigation, surveillance, and missile guidance are integral to modern warfare.
- ❖ The US, Russia, and China have already incorporated space forces and anti-satellite weapons into their military strategies.
- ❖ In such a scenario, India must also safeguard its interests and ensure a balance between civilian and military uses through

clear legal provisions.

Space Debris and Sustainable Development:

- ❖ One of the biggest challenges today is space debris. It is estimated that more than 30,000 large debris fragments are orbiting Earth.
- ❖ If India enacts a National Space Law soon, it can mandate satellite life-cycle management and debris disposal requirements.
- ❖ This would strengthen India's image as a responsible space power.

Opportunities and Challenges:

❖ Opportunities:

- » The global space economy is expected to exceed \$1 trillion by 2040.
- » India's cost-effective space program can make it a hub for foreign investment and partnerships.
- » A clear legal framework would promote triangular cooperation between industry, academia, and government.

❖ Challenges:

- » The law must remain flexible, keeping in mind technical complexities.
- » Balancing security concerns with private sector encouragement is difficult.
- » Jurisdictional overlaps between ministries and agencies may create hurdles.

The Way Forward:

- ❖ Passing the National Space Bill at the earliest is essential. IN-SPACe should be given full statutory status as a central regulatory authority for all space activities, ensuring a centralized and empowered system.
- ❖ Licensing, liability sharing, and insurance provisions must be clear and practical, providing a safe environment for private companies and startups.
- ❖ Protection of IPRs and encouragement of innovation should be an integral part of the law to prevent talent and technology outflow from India.
- ❖ Strict compliance with space debris management and sustainability standards must be ensured to strengthen India's image as a responsible space power.
- ❖ To attract foreign investment, a transparent FDI policy is needed, providing Indian

Short Issues

The Promotion and Regulation of Online Gaming Bill, 2025

Context:

Recently, parliament has passed the Promotion and Regulation of Online Gaming Bill, 2025. The Bill seeks to address the fast-evolving digital gaming landscape by prohibiting online money games, while promoting e-sports and social gaming through a structured regulatory framework.

Objective of the bill:

- The Bill reflects a decisive effort to curb predatory gambling practices while nurturing a responsible, innovative online gaming ecosystem. It draws a clear line between exploitative money games and legitimate gaming activities, such as e-sports and social games, positioning India to become a global leader in safe and regulated digital gaming.

Key provisions of the bill:

- **Ban on Online Money Games:**
 - » The Bill strictly prohibits online money games, defined as any game where users pay money or other stakes (e.g., coins, credits, tokens) with the expectation of monetary gain. The prohibition applies regardless of whether the game is based on skill, chance, or both.
 - » It also bans advertising, financial transactions, and facilitation of such games, and empowers the central government to block access to any related content or services.
- **Support for E-Sports and Online Social Games:**
 - » In contrast, the Bill encourages e-sports and online social games.
 - » E-sports are defined as competitive, skill-based games, part of multi-sport events, recognised under the National Sports Governance Act, 2025, and free of any betting or staking elements.
 - » Online social games are for recreation, entertainment, or skill development,

and may allow subscriptions or one-time access fees, but must not involve gambling elements.

- **Creation of a Gaming Authority:** The Bill empowers the central government to establish an Authority on Online Gaming. This body will:
 - » Determine whether a game qualifies as an online money game,
 - » Register and categorise online games,
 - » Oversee compliance with rules and safety standards.
- **Search, Seizure, and Arrest Without Warrant:**
 - » Authorised officers are allowed to enter, search, and arrest without a warrant, including in digital spaces like emails and social media.
 - » These powers extend to buildings, vehicles, and electronic records, and will follow provisions under the Bharatiya Nagarik Suraksha Sanhita, 2023.



Stringent Offences and Penalties

- Penalties under the Bill are significant:
 - » Offering online money games: Up to 3 years' imprisonment, Rs.1 crore fine, or both.

- » Advertising such games: Up to 2 years' imprisonment, Rs.50 lakh fine, or both.
- » Facilitating transactions: Up to 3 years' imprisonment, Rs.1 crore fine, or both.
- » These offences are cognisable and non-bailable.
- » Non-compliance with government or Authority directions may result in civil penalties, suspension of registration, or temporary bans from operating.

Impact on the Industry:

- **Revenue Loss:** The ban on online money games is expected to result in significant revenue losses, with estimates suggesting a loss of Rs.20,000 crore annually.
- **Job Losses:** Industry leaders warn that the ban could lead to massive job cuts and business closures, threatening over 2 lakh jobs and Rs.25,000 crore in FDI.
- **Shift to Offshore Platforms:** The ban may redirect users to offshore platforms, potentially costing the exchequer nearly Rs.20,000 crore annually.

Conclusion:

The Promotion and Regulation of Online Gaming Bill, 2025, is a landmark legislation that aims to balance innovation with social responsibility. While the bill promotes e-sports and social games, it also takes a strict stance against online money games, prioritizing public welfare and safety. The outcome of this bill will shape India's gaming ecosystem and its ambition to become a global leader in digital entertainment and technology.

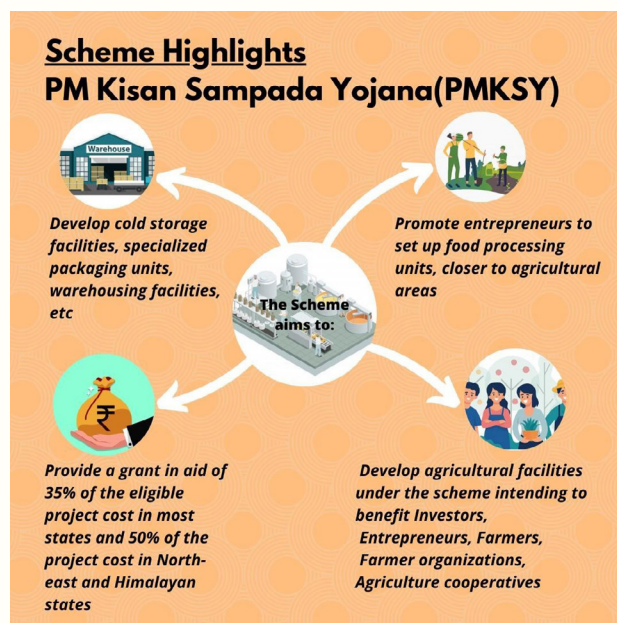
Pradhan Mantri Kisan Sampada Yojana (PMKSY)

Context:

The Union Cabinet, chaired by Prime Minister Narendra Modi, has approved a total outlay of Rs.6,520 crore for the Pradhan Mantri Kisan Sampada Yojana (PMKSY) for the 15th Finance Commission Cycle (2021–22 to 2025–26). This includes an additional outlay of Rs.1,920 crore to bolster the scheme's ongoing initiatives.

Key Components of the New Approval:

- Rs.1,000 crore for establishing:
 - » 50 Multi-Product Food Irradiation Units under the Integrated Cold Chain and Value Addition Infrastructure (ICCVAI) component.
 - » 100 NABL-accredited Food Testing Laboratories (FTLs) under the Food Safety and Quality Assurance Infrastructure (FSQAI) component.
- Rs. 920 crore for supporting additional projects across various component schemes under PMKSY.



What is Pradhan Mantri Kisan Sampada Yojana?

- Pradhan Mantri Kisan Sampada Yojana (PMKSY) is a Central Sector Scheme launched in 2017 by the Ministry of Food Processing Industries (MoFPI). The main goal of the scheme is to build modern infrastructure and ensure efficient supply chain management from the farm to the retail market.
- **Objectives of PMKSY:**
 - » Develop modern infrastructure for the food processing sector.
 - » Create an integrated supply chain

starting from the farm gate to the retail outlet.

- » Reduce agricultural wastage and post-harvest losses.
- » Increase farmers' income through value addition of their produce.
- » Generate employment and attract investment in agri-processing.
- » Improve food safety, enhance product quality, and boost global competitiveness.
- PMKSY supports the entire agri-value chain and aims to make Indian agriculture more profitable and efficient.

Major Components of Pradhan Mantri Kisan Sampada Yojana:

- **Integrated Cold Chain and Value Addition Infrastructure (ICCVAI):** Helps build cold storage, refrigerated transport, and value-addition units to reduce spoilage.
- **Creation/Expansion of Food Processing & Preservation Capacities (CEFPPC):** Supports setting up new or expanding existing food processing units to add value to farm produce.
- **Food Safety and Quality Assurance Infrastructure (FSQAI):** sets up food testing laboratories to ensure food quality and safety standards are met.
- **Operation Greens:** Started with Tomato, Onion, and Potato (TOP) crops, and now includes 22 perishable crops to stabilize prices and reduce losses.
- **Mega Food Parks:** Promotes cluster-based food processing zones with modern infrastructure for businesses and farmers.
- **Backward and Forward Linkages:** Strengthens supply chain connections between farmers and food processors for better efficiency and farmer income.
- **Human Resources and Institutions:** Focuses on skill development, training, and research in the food processing sector.

How is India's Food Processing Sector Growing?

- India's food processing sector has seen strong growth in recent years. The Gross

Value Added (GVA) of the sector increased from Rs.1.34 lakh crore in 2014–15 to Rs.2.08 lakh crore in 2021–22, showing significant progress.

- It has also become a key area for foreign direct investment (FDI), attracting USD 6.185 billion in FDI equity inflows between April 2014 and March 2023. This reflects growing investor confidence in the sector.
- On the trade front, the share of processed food exports in India's total agricultural exports rose from 13.7% in 2014–15 to 25.6% in 2022–23. This sharp rise indicates better value addition and global competitiveness of Indian food products.
- The sector is also a major source of employment. It contributes to 12.22% of total jobs in the registered/organized manufacturing sector, making it an important pillar for India's economic and job growth.

Conclusion:

The Cabinet's Rs. 6,520 crore push to revitalise PMKSY during the 15th Finance Commission cycle reflects a sustained commitment to transforming India's agricultural economy through infrastructure, technology, and food safety.

Banking Laws (Amendment) Act, 2025

Context:

The Banking Laws (Amendment) Act, 2025 was recently notified on 15th April 2025, containing a total of 19 amendments across five legislations—the Reserve Bank of India Act, 1934, Banking Regulation Act, 1949, State Bank of India Act, 1955 and Banking Companies (Acquisition and Transfer of Undertakings) Act, 1970 and 1980. The Act officially brings into effect sections 3, 4, 5, 15, 16, 17, 18, 19, and 20 from 1 August 2025.

Key Provisions and Features:

- The aim of the Act is to enhance governance, strengthen depositor and investor

protection, ensure higher audit quality in public sector banks (PSBs), and bring cooperative bank regulations in line with constitutional standards.

- **Redefining ‘Substantial Interest’:** The threshold for determining a person’s substantial interest in a bank has been increased from Rs.5 lakh to Rs.2 crore. The older limit, unchanged since 1968, did not reflect inflation or changes in the scale of banking operations. The revised limit ensures more realistic governance standards and prevents minor stakeholders from exerting disproportionate influence.
- **Director Tenures in Cooperative Banks:** In line with the 97th Constitutional Amendment, the Act increases the maximum tenure of directors in cooperative banks from 8 years to 10 years, excluding the chairperson and whole-time directors. This brings cooperative banks closer to democratic and accountable governance structures.
- **Transfer of Unclaimed Assets to IEPF:** Public Sector Banks will now be permitted to transfer unclaimed shares, interest, and bond redemption amounts to the Investor Education and Protection Fund (IEPF). This aligns PSBs with practices already followed by companies under the Companies Act, enabling efficient recycling of idle financial resources.
- **Audit Reforms for PSBs:** The amendments empower PSBs to offer remuneration to statutory auditors, enabling them to attract top-quality audit professionals. This step is expected to significantly improve the transparency, independence, and quality of financial audits in public sector banks.
- **Statutory Reporting Reforms:** Banks will no longer be required to report data to the RBI every Friday. Instead, reporting will follow fortnightly, monthly, or quarterly cycles, depending on the requirement. This will ease operational pressure and enhance data relevance.

About the Legislations:

- **Reserve Bank of India Act, 1934:** empowers

the RBI to regulate currency, credit, and monetary policy.

- **Banking Regulation Act, 1949:** governs banking operations, including licensing, audits, and capital norms.
- **State Bank of India Act, 1955:** established SBI and outlines its structure and functions.
- **Banking Companies (Acquisition and Transfer of Undertakings) Acts of 1970 and 1980:** nationalised 20 private banks, creating ‘corresponding new banks’ to promote financial inclusion.

Significance of the Act:

- **Modernisation of Norms:** By updating provisions that were over five decades old, the Act brings regulatory practices in sync with current financial realities.
- **Better Oversight in Cooperative Banks:** The increased tenure ensures continuity and improved accountability in governance.
- **Investor and Depositor Protection:** Secure handling of unclaimed funds and better audits boost public confidence.
- **Efficient Banking Operations:** Revised reporting timelines reduce burden and streamline workflows.

Conclusion:

The Banking Laws (Amendment) Act, 2025 is a timely and necessary legislative update that reflects India’s evolving financial ecosystem. By addressing legacy gaps and aligning with constitutional and corporate governance standards, the Act paves the way for a more robust, transparent, and accountable banking framework.

Parliament Passes Merchant Shipping Bill, 2025

Context:

Indian Parliament has passed the Merchant Shipping Bill, 2025, replacing the Merchant Shipping Act of 1958, marking a significant shift in India’s maritime governance and aligning the country’s legal framework with International Maritime Organisation (IMO) conventions and

global best practices.

Background:

- The Merchant Shipping Act, 1958, though landmark in its time, had become outdated in light of technological advancements and evolving global maritime norms. The need for a modern, efficient, and globally compliant legal framework prompted the drafting of a new bill to:
 - » Improve the ease of doing maritime business in India.
 - » Enhance India's competitiveness in the global shipping industry.
 - » Promote sustainability and safety in maritime operations.

Key Provisions of the Bill:

- **Mandatory Registration for All Vessels**
 - » All vessels, irrespective of type of propulsion or weight, must be mandatorily registered.
 - » Temporary registration introduced for vessels undergoing recycling, enhancing safety and accountability.
- **Expanded Definition of "Vessels"**
 - » The definition now includes mobile offshore drilling units, submersibles, non-displacement crafts, and more—covering emerging technologies and use cases.
- **Relaxed Ownership Criteria:** Allows ownership by:
 - » Indian citizens,
 - » Indian-registered companies and cooperative societies,
 - » Overseas Citizens of India (OCIs), etc.
 - » Facilitates broader participation in the maritime sector.
- **Institutional Mechanisms Retained and Strengthened**
 - » Continues with the National Shipping Board and National Welfare Board for Seafarers to promote safety, welfare, and policy coordination.
- **Renaming and Empowerment of Maritime Authority**
 - » The Director-General of Shipping is now renamed as Director-General of Marine

Administration.

- » Empowered to regulate maritime education, training, and institutional standards.
- **Comprehensive Seafarer Agreements**
 - » Broader coverage of parties involved in maritime operations.
 - » Ensures social security, fair working conditions, and welfare for Indian seafarers.
- **Stronger Environmental Regulations**
 - » Mandates a Pollution Certificate for all vessels, regardless of size or tonnage.
 - » Reinforces India's commitment to preventing marine pollution and protecting coastal ecosystems.



Significance and Impact:

- Marks a paradigm shift from regulatory rigidity to a facilitative policy regime.
- Aims to revive domestic shipping and promote private sector participation.
- Supports India's ambition to emerge as a leading maritime nation.
- Complements other maritime initiatives like Sagarmala, PM Gati Shakti, and Blue

Economy policies.

- Boosts India's share in global maritime trade.
- Expected to generate employment, logistics efficiency, and contribute to GDP growth.
- Enhances strategic autonomy in maritime affairs, especially in the Indo-Pacific context.
- Harmonizes Indian maritime law with IMO conventions and international standards.
- Strengthens regulations on safety, marine environment protection, and seafarer welfare.
- Facilitates easier registration and operation of Indian ships. Aims to increase the number of vessels under the Indian flag, thereby enhancing national maritime presence.
- Enhances bankability and creditworthiness of Indian shipping firms.
- Expected to attract greater global investments into the Indian maritime sector.

Conclusion:

The Merchant Shipping Bill, 2025 signifies not just legal reform but a strategic maritime repositioning of India on the global stage. By enhancing regulatory efficiency, promoting sustainability, and supporting economic growth, it is a vital component of India's journey towards a Developed Nation by 2047.

Income Tax Bill, 2025

Context:

Recently, the Income Tax Bill, 2025 was approved in the Lok Sabha and Rajya Sabha, to simplify and rationalise the existing Income Tax Act, 1961. The new law aims to make tax regulations clearer and more accessible for taxpayers.

Key Features of the Bill:

- **Simplified Framework:** The bill reduces the number of chapters from 47 to 23 and sections from 819 to 536, streamlining the legislation for easier comprehension.
- **Expanded Powers to Officials:** Income tax authorities are now empowered to forcibly access personal emails, social media

accounts, and other electronic records during search operations.

- **Access to Electronic Records:** The bill mandates individuals to provide authorized officers with access codes for electronic documents, including digital books of account, or face the possibility of officials overriding such codes.
- **Introduction of 'Tax Year':** Replacing the traditional concepts of 'assessment year' and 'previous year', the Bill introduces a single, simpler term — 'tax year'. This change helps taxpayers better grasp the period for which taxes are calculated and filed, removing confusion around different timelines.
- **Easier Refund Process for TDS:** Under the new provisions, taxpayers can claim refunds on Tax Deducted at Source (TDS) even if they file their returns after the original statutory deadline. This ensures genuine taxpayers are not penalized for delayed filing and can still receive their rightful refunds.

Overview of the New Income Tax Bill, Simplifying Taxation for All 2025

Aims to replace the
Income Tax Act, 1961

Includes terms like
"virtual digital asset"
to reflect the digital
economy

Introduces clearer terminology,
e.g., **"tax year"** instead of
"assessment year."

Clarifies rules for **global
income taxation** for residents
and non-residents



Controversy Surrounding the Bill:

- Wide powers to access private digital data could be misused, violating the constitutional right to privacy as upheld

by the Supreme Court in the Puttaswamy judgment.

Government's Stance:

- **Justification:** The government argues these powers are essential to uncover incriminating evidence hidden in electronic communications like WhatsApp and emails.
- **Select Committee's Support:** The committee's report underscores the importance of these measures in enabling effective search and seizure operations.

About The Income-tax Act, 1961:

- The Income-tax Act, 1961, is the principal law governing the levy, administration, and collection of income tax in India. It lays down the framework for taxing individuals and entities based on their income.

Objectives of the Income Tax Law

- » The Income-tax Act defines the scope of total income based on an individual's residential status, taxing residents on global income and non-residents only on income earned in India.
- » Income is classified under five heads: salary, house property, business/profession, capital gains, and other sources.
- » The Act's main objectives are revenue generation, equitable wealth distribution, economic regulation through incentives, and enforcement of compliance.

Conclusion:

The New Income Tax Bill 2025 marks a significant step towards simplifying India's tax regime. With clearer definitions, improved refund processes, and a reduced compliance load, the Bill is designed to make tax filing less complex and more taxpayer-friendly.

National Sports Governance and Anti-Doping Amendment Bills

Context:

Recently, the Parliament passed the National Sports Administration Bill, 2025 and the National Anti-Doping (Amendment) Bill, 2025, which aim to improve the sports ecosystem in India. Now these bills have been sent for the President's assent.

Key Features of the National Sport Governance Bill:

- **Establishment of National Sports Board (NSB):** The bill proposes the establishment of a National Sports Board (NSB) to oversee sports federations, including the Board of Control for Cricket in India (BCCI).
- **Recognition and Funding:** All National Sports Federations (NSFs) must secure NSB recognition to access central government funding.
- **Accountability and Governance:** The NSB will have the mandate to de-recognize a national body that fails to hold elections or commits gross irregularities in election procedures.
- **National Sports Tribunal:** The bill proposes a National Sports Tribunal with civil court powers to adjudicate disputes ranging from athlete selection to federation elections.

Key Features of the National Anti-Doping Amendment Bill:

- **Operational Independence:** The bill grants greater operational independence to the National Anti-Doping Agency (NADA) in line with World Anti-Doping Agency (WADA) guidelines.
- **Addressing WADA Concerns:** The amendment addresses WADA's concerns regarding government interference in NADA's functioning.
- **Anti-Doping Efforts:** The bill aims to strengthen anti-doping efforts in India and ensure compliance with international standards.

Impact and Significance:

- **Transforming Sports Ecosystem:** The passage of these bills is expected to transform the sports ecosystem in India, promoting transparency, accountability,

and good governance in sports.

- **2036 Olympic Bid:** The bills are seen as crucial steps in India's bid for the 2036 Olympic Games, demonstrating the country's commitment to creating a world-class sports ecosystem.
- **Addressing Long-standing Gaps:** Efforts to create a robust sports governance law date back to 1975, with multiple failed attempts due to political hurdles. This Bill finally delivers on decades of unfinished reforms.
- **Promoting Gender Inclusion:** Provisions ensure greater participation of women in sports federations and leadership roles.
- **Enhancing Performance:** By enforcing accountability and reducing political interference, the Bills aim to improve India's performance in global sports events.
- **Athlete Welfare:** The bills aim to promote athlete welfare, ensure fair play, and provide a framework for resolving sports disputes.

Conclusion:

Both Bills mark significant steps toward reforming sports governance and ensuring clean sports in India. However, given the lack of in-depth parliamentary debate, concerns over implementation, especially related to autonomy and oversight, are likely to be discussed further in the Rajya Sabha.

MHA Tightens Rules for OCI Cardholders

Context:

Ministry of Home Affairs (MHA) recently issued a notification strengthening the regulations around Overseas Citizen of India (OCI) cards. The notification was issued by MHA under the Citizenship Act, 1955.

Reasons behind strengthening the regulations:

- The tightening of OCI norms appears to be a response to growing concerns over misuse of OCI privileges and national security threats.
- Several recent cases involving OCI holders

allegedly engaging in financial fraud, anti-India activities, or criminal offences have prompted the government to act.

- These steps aim to ensure that only law-abiding persons of Indian origin enjoy the benefits of the OCI scheme.

Key Changes in OCI Regulations:

- According to the notification, the government may cancel the OCI registration of individuals:
 - » Convicted and sentenced to imprisonment for two years or more, or
 - » Charge-sheeted for offences carrying punishment of seven years or more.
- The new provision, under Section 7D clause (da) of the Citizenship Act, aims to safeguard national security and uphold India's public order.
- Section 7D, clause (da) of the Citizenship Act, 1955 allows the government to cancel an OCI card if the holder violates laws or threatens India's sovereignty, security, or public interest. Due process is ensured, and this clause was introduced via the Citizenship (Amendment) Act, 2019.

About OCI Scheme:

- The OCI scheme was introduced in August 2005 and allows Indian-origin foreign nationals to visit India without a visa.
 - » **Benefits:** OCI cards offer various privileges such as lifelong, multiple-entry visas, economic and educational benefits, and ease of residing and working in India. However, OCI holders cannot vote, contest elections, or hold constitutional posts.
 - » **Eligibility:** The scheme is open to individuals of Indian origin who were citizens of India on or after January 26, 1950, or were eligible to become citizens of India on that date, excluding citizens of Pakistan, Bangladesh, and other countries specified by the central government.

Conclusion:

With the new rules, OCI cardholders convicted

or charge-sheeted for serious crimes may lose their OCI status, impacting their long-term connection with India. This change may create uncertainty for Indian-origin individuals abroad, especially those involved in legal proceedings. It also sends a strong message that India will not tolerate criminal activities even from those with cultural or ancestral ties.

Pradhan Mantri Viksit Bharat Rozgar Yojana (PM-VBRY)

Context:

On August 15, 2025, Prime Minister Narendra Modi announced the Pradhan Mantri Viksit Bharat Rozgar Yojana (PM-VBRY) during his Independence Day address. The scheme is a strategic move to promote formal employment and aims to create 3.5 crore new jobs across India within the next two years.

Aim and Objectives of the Scheme:

- Generate over 3.5 crore jobs in two years.
- Support youth employment by incentivizing first-time formal jobs.
- Encourage employers to create sustainable employment.
- Promote formalization of the workforce through EPFO registration and social security coverage.

Key Features:

- **Part A: Support for First-Time Employees**
 - » **Eligibility:** First-time employees registered with EPFO and earning up to Rs.1 lakh/month
 - » **Incentive:** One-month EPF wage (up to Rs. 15,000), disbursed in two instalments
 - » 1st after 6 months of continuous service
 - » 2nd after 12 months and completion of a financial literacy programme
 - » **Savings Component:** A portion of the incentive will be deposited in a fixed savings account to promote saving habits
- **Part B: Incentives for Employers**
 - » **Target:** Employers hiring new employees earning up to Rs.1 lakh/month

- » **Incentive:** Up to Rs. 3,000 per employee per month for 2 years
- » Special focus on the manufacturing sector, where incentives may be extended to the 3rd and 4th years

ALL ABOUT PRADHAN MANTRI VIKSIT BHARAT ROJGAR YOJNA (PMVBRY)



Cabinet approved the Employment Linked Incentive Scheme named as Pradhan Mantri Viksit Bharat Rozgar Yojana on **August 1st, 2025**.



Scheme aims to support employment generation, enhance employability and social security, across all sectors, with special focus on the manufacturing sector. It is a Central Sector Scheme.



With an outlay of nearly **₹1 Lakh Crore**, the Scheme aims to incentivize creation of more than **3.5 Crore jobs** in the country, over a period of **2 years**.



Prime Minister Shri Narendra Modi launched the Pradhan Mantri Viksit Bharat Rozgar Yojana during his 12th Independence Day address from the **Red Fort** on **15th August 2025**.



The benefits of the Scheme would be applicable to jobs created between **01st August 2025 and 31st July, 2027**.



Pradhan Mantri Viksit Bharat Rozgar Yojna portal has become live from today, i.e., **18th August 2025**.

Incentive Payment Mechanism

- **For Employees (Part A):** Payments via Direct Benefit Transfer (DBT) using Aadhaar Bridge Payment System (ABPS)
- **For Employers (Part B):** Incentives will be deposited directly into PAN-linked bank accounts

Benefits of the scheme:

- **For Youth**
 - » Direct financial assistance for entering the formal job market
 - » Access to EPF and social security benefits
 - » Encouragement of financial literacy and savings
- **For Employers**
 - » Lower onboarding costs
 - » Long-term incentives for retaining

employees

- » Extra support for manufacturing-sector growth

Conclusion:

The Pradhan Mantri Viksit Bharat Rozgar Yojana is a game-changing initiative aimed at transforming India's employment landscape. By incentivizing both employees and employers, it seeks to create a strong, skilled, and financially secure workforce, contributing to the vision of a Viksit Bharat by 2047.

Indian Ports Bill, 2025

Context:

The Indian Ports Bill, 2025 was recently passed by Parliament, with the Rajya Sabha approving it on August 18, 2025, following Lok Sabha's clearance on August 12, 2025. This reform-oriented legislation seeks to modernize India's maritime governance by replacing the Indian Ports Act of 1908, a colonial-era law.

Objectives of the bill:

- The Bill introduces a contemporary legal framework to enhance ease of doing business, promote integrated port development, and ensure the efficient use of India's 11,098 km coastline. It aims to streamline port regulation, planning, and development, especially for non-major ports managed by states.

Key Features of the Bill:

- The Indian Ports Bill, 2025, establishes the Maritime State Development Council (MSDC) as a statutory consultative body to coordinate between the Centre and coastal States. The MSDC will prepare a National Perspective Plan to ensure integrated port development.
- Coastal States will be empowered to set up State Maritime Boards, bringing uniform and transparent governance across India's 12 major and 200+ non-major ports. The Bill also creates Dispute Resolution Committees to deliver sector-specific redressal in a timely manner.

- The legislation mandates compliance with international environmental conventions such as MARPOL and Ballast Water Management, while requiring ports to maintain emergency preparedness systems.
- Digitalisation is a central plank with measures such as a Maritime Single Window and advanced vessel traffic systems will enhance efficiency, reduce bottlenecks and cut costs.

About India's port economy:

- India's port economy is a cornerstone of its economic landscape, playing a vital role in enabling global trade and driving domestic growth.
- With a 11,098 km coastline, 13 major ports, and 200+ non-major ports, India's maritime network facilitates 95% of trade by volume and 70% by value.
- Ports serve as critical gateways that link India to global markets, making them integral to national development and international competitiveness.

Government Initiatives:

- To harness the potential of its vast coastline, the government has launched initiatives like the Sagarmala Project to boost port-led development, improve logistics, and enhance multimodal connectivity.
- There's a strong emphasis on public-private partnerships (PPPs) to attract investment, modernize infrastructure, and improve cargo handling efficiency.
- Additionally, India is embracing digital transformation through technologies like AI, IoT, and blockchain to make port operations smarter and faster.

Challenges:

- Despite advancements, India's port sector faces several challenges. Many ports suffer from inadequate depth, aging infrastructure, and logistics bottlenecks, impacting cargo movement and turnaround times.
- There's also a need for a skilled maritime workforce to manage evolving technologies.
- Enhancing port competitiveness, especially

for transshipment traffic, is essential to compete with global hubs like Singapore and Colombo.

Conclusion:

The Indian Ports Bill, 2025 is a significant step toward modernizing India's port sector. It is expected to unlock maritime potential, strengthen coastal economic development, and position India as a global maritime leader.

Removal of Chief Election Commissioner (CEC)

Context:

The INDIA bloc is contemplating a motion in Parliament to seek the removal of Chief Election Commissioner (CEC) Gyanesh Kumar. The decision follows his recent press conference where he accused the Opposition of "spreading misinformation" regarding the Special Intensive Revision (SIR) of electoral rolls in Bihar.

About Election Commissioners of India:

- The Chief Election Commissioner (CEC) is the head of the Election Commission of India (ECI), which is a constitutional body (article 324) responsible for administering elections in the country. The CEC oversees the conduct of free, fair, and impartial elections to the following:
 - » Lok Sabha (House of the People)
 - » Rajya Sabha (Council of States)
 - » State Legislative Assemblies and Councils
 - » President and Vice-President of India
- The powers and responsibilities of the Election Commission are enshrined in Article 324 of the Constitution of India, which vests the Commission with the superintendence, direction, and control of the electoral process across India.
- The CEC, along with two Election Commissioners, forms a multi-member Commission (since 1993), and all decisions are taken by majority vote among the three.

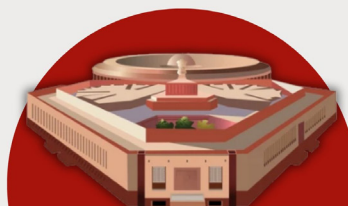
Appointment and Term:

- Under the CEC and Other ECs (Appointment, Conditions of Service and Term of Office) Act, 2023, Election Commissioners are appointed by the President on the recommendation of a three-member panel: the Prime Minister, Leader of Opposition in Lok Sabha, and a Union Cabinet Minister. Their tenure is six years or until the age of 65, whichever is earlier.



STEP-BY-STEP REMOVAL PROCESS

- **Motion introduced:** Needs backing from at least 100 Lok Sabha or 50 Rajya Sabha MPs.
- **Parliamentary Debate:** If accepted, *debated* in House.
- **Voting:** Must pass in both Lok Sabha and Rajya Sabha by a *2/3 majority* of present & voting plus over half the total strength.
- **Presidential Order:** Only then can the *President* formally remove the CEC.



About CEC and Other EC (Appointment, Conditions of Service and Term of Office) Act, 2023:

- The 2023 Act replaces the 1991 Act to regulate the appointment, tenure, and conditions of service of the Chief Election Commissioner (CEC) and Election Commissioners (ECs).
- It follows the Supreme Court's judgment in the Anoop Baranwal case (2023), which mandated a selection panel of the Prime Minister, Leader of Opposition (LoP), and Chief Justice of India (CJI) to ensure neutrality in appointments.

- The 2023 Act, however, replaces the CJI with a Union Cabinet Minister, prompting legal and constitutional challenges.

Procedure of Removal:

- » **Grounds:** Proven misbehaviour (e.g., corruption, abuse of office) or incapacity.
- » **Initiation:** A motion must be introduced in either House with support of at least 50 MPs in rajya Sabha and 100 members in Lok Sabha.
- » **Inquiry:** A judicial committee investigates and validates charges.
- » **Voting:** Requires a two-thirds majority in both Houses.
- » **Presidential Action:** The President must act once Parliament approves—no discretion allowed.
- » **Other ECs:** Can only be removed on the CEC's recommendation, ensuring autonomy.
- Notably, no CEC has ever been removed since independence, highlighting the constitutional safeguards that protect the Commission's integrity.

Conclusion:

This controversy highlights the need for transparency and public trust in constitutional institutions in a democracy. Institutions like the Election Commission must work while maintaining their impartiality so that their credibility is not questioned. Also, political parties must follow facts and procedures while criticising. Such dialogues make the democratic system more accountable and strong.

Gig Workers' Welfare Bill, 2025

Context:

Recently, Karnataka Legislative Assembly passed the Gig Workers' Welfare Bill, 2025, with aim of comprehensive welfare framework for platform-based gig workers (such as delivery agents, ride-hailing drivers, etc.). The Bill responds to the rapid growth of the gig economy, especially in urban areas, and aims to secure

basic rights and protections for gig workers.

ABOUT GIG WORKER

The Code on Social Security, 2020 defines a gig worker as someone engaged in income-generating activities outside the traditional employer-employee relationship.

Gig workers are broadly classified into:

- **Platform-based workers:** Those working through digital apps (e.g., Uber, Ola drivers, Swiggy or Zomato delivery agents).
- **Non-platform gig workers:** Casual or self-employed workers in conventional sectors (e.g., tailors, domestic helpers).



GOVERNMENT INITIATIVES FOR GIG WORKERS

1

CODE ON SOCIAL SECURITY, 2020

Enables registration of gig workers, creation of Social Security Funds, and formulation of insurance and welfare schemes by Central and State governments.

2

NATIONAL SOCIAL SECURITY BOARD

Will include gig worker and aggregator representatives to monitor welfare implementation.

3

E-SHRAM PORTAL

A centralized database to deliver targeted social security schemes to unorganized workers.

4

BUDGET 2025

Announced inclusion of gig workers under Ayushman Bharat (PMJAY) for health coverage.

Key Provisions of the Bill:

- **Welfare Fund Creation**
 - » A Gig Workers' Social Security and Welfare Fund will be created.
 - » **Fund sources:**
 - 1% to 5% welfare fee on each transaction between platform and worker.
 - Contributions from gig workers (voluntary).
 - Grants-in-aid from State and Central governments.
 - » Administrative expenses capped at 5% of the fund.
- **Gig Workers' Welfare Board:** A dedicated board will be formed to:
 - » Register gig workers and aggregator platforms.
 - » Implement welfare schemes.
 - » Ensure compliance with the Act.
- **Dispute Resolution**
 - » Mechanisms will be created to resolve

disputes between gig workers and platforms.

- **Working Conditions and Income Security**
 - » The Bill emphasizes reasonable working conditions, health protection, and income stability for gig workers, many of whom work long hours (up to 16 hours/day) in hazardous conditions.

About gig worker:

- The Code on Social Security, 2020 defines a gig worker as someone engaged in income-generating activities outside the traditional employer-employee relationship. Gig work is typically flexible, part-time, or task-based, often mediated by digital platforms. Gig workers are broadly classified into:
 - » **Platform-based workers:** Those working through digital apps (e.g., Uber, Ola drivers, Swiggy or Zomato delivery agents).
 - » **Non-platform gig workers:** Casual or self-employed workers in conventional sectors (e.g., tailors, domestic helpers).
- India's gig workforce stands at 7.7 million, expected to grow to 23.5 million by 2029–30, as per NITI Aayog.

Government Initiatives for Gig Workers:

- **Code on Social Security, 2020:** Enables registration of gig workers, creation of Social Security Funds, and formulation of insurance and welfare schemes by Central and State governments.
- **National Social Security Board:** Will include gig worker and aggregator representatives to monitor welfare implementation.
- **e-Shram Portal:** A centralized database to deliver targeted social security schemes to unorganized workers.
- **Budget 2025:** Announced inclusion of gig workers under Ayushman Bharat (PMJAY) for health coverage.

Key Challenges Faced by Gig Workers:

- **Lack of social security:** Classified as “independent contractors,” they are excluded from wage, hour, and working condition protections.

- **Health and safety risks:** Long hours and pressure for fast deliveries increase physical and accident risks.
- **Algorithmic control:** Platforms use opaque algorithms and ratings, often penalizing workers unfairly.
- **Low pay:** Many earn modest incomes; e.g., Blinkit pays Rs. 15 per delivery, barely covering fuel costs.

Conclusion:

The passage of the Gig Workers' Welfare Bill, 2025, is a landmark moment for gig workers in Karnataka. The legislation has the potential to improve the lives of thousands of gig workers and sets a precedent for other states to prioritize the welfare of gig workers. As the gig economy continues to grow, it is essential to ensure that gig workers have access to basic rights and protections

Mines and Minerals Amendment Bill, 2025

Context:

Recently, parliament passed the Mines and Minerals (Development and Regulation) Amendment Bill, 2025, a landmark legislation aimed at boosting India's access to critical minerals such as lithium, cobalt, and nickel. The Bill allows existing leaseholders to mine these critical minerals without paying additional royalty, making India more attractive for investment and self-reliance in strategic resources.

About Critical minerals:

- Critical minerals are essential components in many modern technologies, including clean energy, electronics, and defense applications, and their supply chains are often vulnerable to disruption. These minerals are essential for sectors like electric vehicles, semiconductors, batteries, renewable energy, and defence manufacturing.

Key Provisions of the Amendment Bill:

- The Bill amends the Mines and Minerals (Development and Regulation) Act, 1957. Major features include:
 - » Allowing leaseholders to add critical minerals to their mining portfolio without additional royalty.
 - » Empowering the Union Government to create mineral exchanges to enhance transparency and efficiency in mineral trading.
 - » Reinforcing the government's ability to promote exploration, extraction, and development of critical minerals.

Its objectives include:

- » Exploration of 24 identified critical minerals.
- » Development of domestic and offshore reserves.
- » Strengthening public-private partnerships in mining.
- The National Mineral Exploration Trust has been renamed the National Mineral Exploration and Development Trust to reflect the new focus on industrial application and development.

Challenges:

- While the reform is ambitious, it faces key challenges:
 - » Environmental risks in ecologically sensitive zones.
 - » Global competition in a space already dominated by technologically advanced countries.
 - » Lack of domestic refining and processing capabilities.
 - » Geopolitical complexities due to strategic nature of these minerals.

Conclusion:

Nonetheless, if implemented responsibly, this Bill could make India a global player in the critical minerals market, while supporting Atmanirbhar Bharat, the energy transition, and Make in India initiatives.



Significance of the Reform:

- **Resource Security:** Reduces India's dependence on imports, especially from dominant players like China.
- **Clean Energy Push:** Provides domestic supply for EVs, solar panels, and battery storage.
- **Strategic Sector Support:** Strengthens India's manufacturing in defence, electronics, and aerospace.
- **Ease of Doing Business:** Incentivises investment by reducing royalty burdens and simplifying mining operations.

About National Critical Mineral Mission:

- Complement the reforms, the government launched the National Critical Mineral Mission with an outlay of Rs. 34,000 crore.

Constitution (One Hundred and Thirtieth Amendment) Bill, 2025

Context:

On August 20, the government introduced the Constitution (One Hundred and Thirtieth Amendment) Bill, 2025 in Lok Sabha, triggering fierce opposition protests. This Bill seeks to amend key constitutional provisions — Articles 75, 164, and 239AA — to introduce a mandatory mechanism for the removal of Ministers and Chief Ministers who are arrested and detained on serious criminal charges for a continuous period of 30 days, was eventually referred to

a Joint Parliamentary Committee (JPC) for further scrutiny.

Key Provisions of the Amendment:

- At its core, the amendment proposes that:
 - » Any Union Minister, including the Prime Minister, who is arrested and held in custody for 30 consecutive days on charges punishable with five years or more of imprisonment, must either resign or face automatic removal from office.
 - » If the Prime Minister does not resign by the 31st day of custody, he/she will automatically cease to hold office.
 - » Similar provisions will apply to State Ministers and Chief Ministers, where the responsibility for recommending removal lies with the Governor upon the Chief Minister's advice (or in the CM's own case, voluntary resignation is expected).
 - » In the case of Delhi's Government, under Article 239AA, parallel provisions have been proposed, where removal will be initiated by the President on the advice of the Chief Minister.
- Importantly, the Bill allows for reappointment of such individuals after their release from custody, if acquitted or legally eligible, thereby balancing fairness with the need for temporary removal during periods of legal uncertainty.

Objectives:

- **Uphold Constitutional Morality:** Ensure that individuals facing serious criminal allegations do not retain ministerial power, which could undermine public trust.
- **Clean Governance:** Prevent detained individuals from continuing in executive roles, aligning with principles of good governance.

Controversies and Concerns:

- **Potential Misuse:** Critics argue that the bill could be used to target opposition leaders through selective arrests and detention, undermining the presumption of innocence.

- **Federalism and Separation of Powers:** The bill may infringe upon the principles of federalism and separation of powers, sparking debates about its constitutionality.

KEY PROVISIONS OF THE BILL

AMENDMENT TO ARTICLE 75

- Relates to Council of Ministers at the Union level

GROUNDINGS FOR REMOVAL

- Any minister detained in custody for 30 days must be removed from office

PROCEDURE

- Removal within 31 days of detention by the President (Union level) or Governor (State level), based on PM/CM's advice
- Ministers can be re-appointed once released from custody

GROUNDINGS FOR REMOVAL

- Any minister detained in custody for 30 days must be removed from office

OBJECTIVE

- To strengthen good governance and ensure ministers uphold moral and constitutional integrity

GOVERNMENT'S STAND

Ensures that ministers facing prolonged detention on serious charges do not continue in office
Promotes trust, accountability and ethical governance

About Joint Parliamentary Committee:

- A Joint Parliamentary Committee (JPC) is an ad-hoc, bipartisan committee formed under Lok Sabha rules to examine specific bills or policy matters in detail.
- Constituted by the Lok Sabha Speaker, with members from both Houses (typically 21 from Lok Sabha and 10 from Rajya Sabha), it reflects party strength proportionally.
- The JPC can summon documents, witnesses, and experts. Though its recommendations are advisory, they influence legislation. It generally has 90 days to submit a report, which is then presented to Parliament.

Way Forward:

The Constitution (130th Amendment) Bill, 2025 has sparked a crucial debate on balancing accountability in public office with the principles of due process and federalism. As the Joint Parliamentary Committee (JPC) begins its review, a balanced, consensus-driven approach will be key to ensuring reforms without eroding democratic norms.

Right to Life and Personal Liberty of foreigners

Context:

The Punjab and Haryana High Court recently granted bail to a Bangladeshi woman in custody since February 2025 for alleged cheating, forgery, and illegal stay in India. The court invoked Article 21 of the Constitution, affirming that foreigners also enjoy the right to life and personal liberty, and prolonged pre-trial detention of undocumented migrants may amount to “irreversible injustice.”

About the Case:

- The woman, Farida Praveen, also known as Shikha Gaur, was arrested under Sections 420, 467, 468, 471 IPC and Section 14-A of the Foreigners Act.
- She was accused of illegal entry, creating fake identity documents (Aadhaar, PAN, Voter ID), and financial fraud. The chargesheet was filed, but her continued incarceration raised legal and humanitarian concerns.

Implications for Governance:

- **Article 21 Protections Extend to Foreigners:** The judgment aligns with Supreme Court precedents that “person” under Article 21 includes non-citizens, reinforcing India’s constitutional morality and international human rights commitments.
- **Bail as a Right, Not a Privilege:** The ruling reflects a progressive interpretation of criminal procedure, emphasizing that pre-trial custody must be reasonable and just, especially for marginalized or stateless individuals.
- **Judicial Humanitarianism:** By allowing release on personal bond, the court recognized the practical difficulties faced by undocumented migrants, especially women, in furnishing sureties.
- **Impact on Foreigner and Refugee Jurisprudence:** The case adds to the evolving legal framework on the treatment of foreign nationals in India, highlighting gaps in detention, deportation policy, and human

rights protections.

Bail under BNSS:

- Bail refers to the temporary release of a person suspected or accused of a crime, with a guarantee that they will appear before the court when required.
- While earlier this definition came primarily from judicial interpretation, Clause 479 of the BNSS, 2023 provides a statutory definition, enhancing legal clarity.
- The BNSS also mandates that the accused must be informed of the grounds of arrest, aligning with the rights protected under Article 22 of the Constitution and mirroring provisions from Section 50 of the CrPC.
- **Key Changes in Bail Provisions:**
 - » The BNSS introduces mandatory bail for first-time offenders after serving one-third of the maximum sentence, as opposed to the half-sentence rule in the CrPC.
 - » However, this benefit does not apply to those facing multiple charges or cases.

Fundamental rights available to foreigners:

Foreigners in India generally have access to fundamental rights, including:

- Article 14 (Equality before the law),
- Article 20 (Protection from conviction for offenses),
- Article 21 (Protection of life and personal liberty),
- Article 21A (Right to elementary education for children),
- Article 23 (Prohibition of human trafficking and forced labor),
- Article 24 (Prohibition of child labor in factories), and
- Religious freedoms under Articles 25, 26, 27, and 28.

Conclusion:

The High Court’s ruling serves as a reminder that India’s constitutional values are not restricted to its citizens, but extend to every individual on its soil, regardless of nationality.



International Relations



Context:

The 25th Summit of the Shanghai Cooperation Organisation (SCO) was held in Tianjin, China, in 2025, bringing together leaders of ten member states—China, Russia, India, Pakistan, Iran, Belarus, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan. The summit came at a critical juncture: global politics is increasingly multipolar, Eurasia is becoming the new frontline of great power competition, and institutions like the SCO are being tested on whether they can go beyond symbolic declarations to deliver concrete cooperation.

For India, participation was significant. It marked Prime Minister Narendra Modi's first visit to China in seven years and his first bilateral meeting with Chinese President Xi Jinping since the 2020 border clashes. Against this backdrop, the summit was as much about geopolitics as it was about institutional cooperation.

Major Outcomes of the 2025 Summit:

❖ Counter-Terrorism and Security Cooperation

- » The Tianjin Declaration adopted at the summit renewed commitment to combat terrorism, extremism, and separatism—the so-called “three evils.”
- » Members agreed to intensify coordination through RATS, including more joint exercises and intelligence sharing.
- » Cybersecurity emerged as a priority, with discussions on creating a regional mechanism against cyber terrorism and online radicalization.
- » India reiterated its concern over “double standards” in counter-terrorism, indirectly targeting Pakistan for cross-border terrorism and those providing political cover to such activities.
- » Leaders of the Shanghai Cooperation Organisation (SCO) issued a joint-declaration which, among other things, strongly condemned the terrorist attack in Pahalgam on April 22, 2025.

❖ Connectivity and Trade

- » China pushed for stronger alignment with the Belt and Road Initiative (BRI). While Russia and Central Asian states supported it, India stood firm in its opposition, citing violations of sovereignty in the China-Pakistan Economic Corridor (CPEC).
- » Iran promoted the Chabahar Port and its International North-South Transport Corridor (INSTC) links, presenting it as a neutral alternative to BRI.
- » A working group on digital economy, e-commerce, and fintech cooperation was established, marking a step towards reducing dollar dependence in trade.
- » Agreement was reached to promote local currency settlements among member states.

❖ Energy and Climate Change

- » Energy-rich members like Russia, Kazakhstan, and Iran stressed the need for stable energy flows to South Asia and beyond.
- » Proposals were made for cross-border pipelines, renewables cooperation, and regional electricity grids.
- » India emphasized clean energy technologies and affordable financing for the energy transition.
- » The SCO adopted a Joint Climate Action Plan, focusing on desertification control, water security, and renewable energy expansion.

❖ Institutional Expansion and Reform

- » Belarus was admitted as the newest full member, expanding the SCO to ten states.
- » Observer states like Mongolia, Afghanistan, and Turkey expressed interest in deeper involvement.
- » Discussions were held on institutional reforms, with India pushing for greater transparency, consensus-based decision-making, and reduced dominance of any single member.

India's Role at Tianjin:

India approached the summit with calibrated

pragmatism:

❖ Terrorism as the Core Issue:

- » PM Modi strongly reiterated that terrorism remains the greatest threat to peace and prosperity in the region.
- » India used the SCO to underline Pakistan's duplicity while avoiding direct confrontation.

WHAT IS THE SCO?

The Shanghai Cooperation Organisation (SCO) is a Eurasian political, economic, international security and defence organisation established on June 15, 2001 in Shanghai by Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan and Uzbekistan. It evolved from the 'Shanghai Five' grouping.

SHANGHAI COOPERATION ORGANISATION

KEY DATES

JUNE 15, 2001

The Shanghai Cooperation Organisation established.

2002

The Charter of the SCO signed at the meeting of the Council of Heads of States in St Petersburg.

2003

The charter entered into force.

2017

The organisation expanded to eight member countries with the inclusion of India and Pakistan.

2023

Iran joined the group.



2024

Belarus became its 10th member state.

SCO MEMBER COUNTRIES

10

MEMBER STATES

India, Iran, Kazakhstan, China, Kyrgyzstan, Pakistan, Russia, Tajikistan, Uzbekistan, Belarus.

2

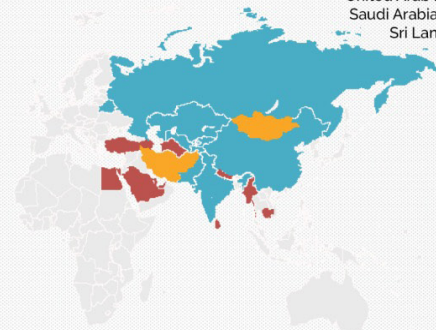
OBSERVER STATES

Afghanistan, Mongolia.
These are the states interested in acceding to full membership

14

DIALOGUE PARTNERS

Azerbaijan, Armenia, Bahrain, Egypt, Cambodia, Qatar, Kuwait, Maldives, Myanmar, Nepal, the United Arab Emirates, Saudi Arabia, Turkey, Sri Lanka



❖ **Connectivity with Caution:**

- » India stressed the importance of physical and digital connectivity, but with the condition that it must respect sovereignty and territorial integrity.
- » By promoting Chabahar and INSTC, India presented an alternative connectivity vision, reducing overdependence on Chinese projects.

❖ **Balancing Great Powers:**

- » Despite its strained ties with both China (border tensions) and Russia (Moscow's closeness with Beijing), India chose active participation to avoid being isolated from Eurasian geopolitics.
- » This reflects India's broader strategy of multi-alignment, engaging with different blocs without fully subscribing to any.

❖ **Economic and Energy Interests:**

- » India highlighted its need for access to Central Asian energy resources.
- » Proposed closer cooperation in pharmaceuticals, IT, and digital technologies, areas where India has comparative advantage.

About Shanghai Cooperation Organisation

- ❖ **Origins and Membership:** Established in 2001 by China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan, primarily to manage border disputes and build trust. India and Pakistan joined in 2017, Iran in 2023, and Belarus in 2025.
- ❖ **Structure:** The SCO operates through the Council of Heads of State (summit level), Council of Heads of Government (economic cooperation), and specialized bodies like the Regional Anti-Terrorist Structure (RATS) in Tashkent.
- ❖ **Scope:** Initially security-focused, it has expanded into trade, connectivity, energy, environment, and cultural ties.
- ❖ **Global Weight:** SCO members together represent over 40% of the global population, 30% of world GDP, and a landmass spanning Eurasia, making it the world's largest regional bloc by geography.

Why the SCO Matters for India:

- ❖ **Strategic Access to Central Asia:** India lacks direct land connectivity with Central Asia due to Pakistan's obstruction. The SCO provides a multilateral platform to engage the region.
- ❖ **Countering China and Pakistan:** India cannot afford to vacate Eurasia, leaving the space open for China-Pakistan influence. The SCO keeps India in the room where strategic decisions are being shaped.
- ❖ **Energy Security:** With growing energy needs, India sees the SCO as a mechanism to secure stable energy ties with Russia, Kazakhstan, and Iran.
- ❖ **Platform for Narrative Building:** India uses the SCO to highlight terrorism, sovereignty, and transparency, aligning with its global image as a responsible stakeholder.
- ❖ **Bridge in Multipolar Politics:** India's presence ensures it remains engaged with both Russia and China, while balancing its ties with the US and Europe through other groupings like the Quad and G20.

Challenges and Limitations:

- ❖ **China's Dominance:** The SCO is heavily tilted towards China, both financially and institutionally.
- ❖ **India-Pakistan Rivalry:** Bilateral disputes often spill into the organization, limiting its effectiveness.
- ❖ **Russia-China Convergence:** With Moscow leaning closer to Beijing due to Western sanctions, India faces a narrowing space to maneuver.
- ❖ **Lack of Binding Commitments:** SCO declarations often remain non-binding, reducing their practical impact.
- ❖ **Contradictory Interests:** While members agree on combating terrorism in principle, definitions vary widely. For example, groups India sees as terrorist outfits are viewed differently in Pakistan or China.

Wider Geopolitical Implications:

- ❖ **For Eurasia:** The SCO is becoming the principal platform shaping Eurasian geopolitics, competing with Western-led

institutions like NATO and the EU.

- ❖ **For Global Governance:** It reflects the trend of non-Western groupings asserting influence, with China and Russia projecting the SCO as a counterweight to Western dominance.
- ❖ **For India:** Balancing between SCO (China-Russia led) and Quad/IBSA (democratic, Indo-Pacific focused) highlights the complexity of India's strategic diplomacy.
- ❖ **For Global Economy:** With initiatives like local currency settlements and energy corridors, the SCO is slowly pushing towards de-dollarization in Eurasian trade.

Conclusion

The Tianjin SCO Summit 2025 reinforced the

relevance of the organization as a Eurasian platform, but also exposed its contradictions. For India, participation is not about endorsing China's vision but about protecting its interests, keeping its strategic footprint in Eurasia, and pushing back against terrorism and unilateral connectivity projects. The challenge ahead for India is to maintain a fine balance: staying engaged without being overshadowed, using the SCO as a stage for narrative-building while simultaneously deepening other partnerships in the Indo-Pacific and beyond. In short, the SCO for India is less a choice and more a necessity—one that secures its place in the evolving multipolar world order.



Introduction:

India and Japan today stand as two of Asia's leading democracies and major global economies, bound together by shared values of peace, stability, and development. Their partnership has grown steadily over the past two decades—from being primarily economic and developmental to encompassing strategic, technological, and security dimensions. Japan has emerged as India's largest development partner, while India provides Japan with a vast market, skilled workforce, and a reliable partner in shaping regional stability.

Prime Minister Narendra Modi's visit to Japan in August 2025 for the 15th Annual

Summit came at a crucial juncture. The global order is in flux, marked by economic uncertainties, trade tensions, and rising security challenges in the Indo-Pacific. Against this backdrop, the visit was more than a routine diplomatic engagement. It signaled the deepening of a partnership that now spans infrastructure, digital technologies, clean energy, semiconductors, defence, and even outer space. At its core, the visit reinforced the idea that India and Japan are not just economic partners but also strategic allies with a shared vision for the future.

About India-Japan Relationship:

- ❖ India and Japan share a long history of

friendship, but in the past two decades, the relationship has acquired unprecedented depth and strategic significance. The progression of ties is evident in the successive upgradation of the partnership:

- » 2000 – Global Partnership
- » 2006 – Strategic and Global Partnership
- » 2014 – Special Strategic and Global Partnership

- ❖ Both nations today stand as major Asian democracies and are among the top five global economies. Their cooperation extends well beyond bilateral ties, encompassing regional and global platforms such as the Quad, the International Solar Alliance (ISA), the Coalition for Disaster Resilient Infrastructure (CDRI), and the Supply Chain Resilience Initiative (SCRI).
- ❖ Japan is also India's largest overseas development partner, with Tokyo's Official Development Assistance (ODA) shaping some of India's most ambitious infrastructure projects, including the Mumbai-Ahmedabad bullet train.

Key Agreements and MoUs during the summit:

- ❖ The summit produced several landmark agreements and MoUs that deepen cooperation across multiple fields:
 - » **Decarbonising Technologies** – Establishment of a Joint Crediting Mechanism to help reduce greenhouse gas emissions.
 - » **Digital Partnership 2.0** – Collaboration in Artificial Intelligence, semiconductors, and digital infrastructure to prepare for the next wave of technological transformation.
 - » **Wastewater Management** – Adoption of decentralised, sustainable solutions tailored to Indian cities.
 - » **Skilled Workers Agreement** – Japan will provide opportunities for 5 lakh Indian workers, including 50,000 skilled professionals, over the next five years.
 - » **Mineral Resources Cooperation** – Strengthening the supply chains of

critical minerals under initiatives like the Minerals Security Partnership (MSP) and the Quad.

- » **Cultural Exchange** – New initiatives between the foreign service institutes of both countries to encourage cultural understanding and people-to-people ties.
- ❖ In addition, both leaders adopted a Joint Vision Statement, a forward-looking document outlining cooperation for the next decade across eight key areas: economy, security, sustainability, innovation, technology, regional stability, connectivity, and people-to-people relations.

Space Cooperation: Chandrayaan-5 Mission

- ❖ Space collaboration featured prominently in the summit. ISRO and JAXA (Japan Aerospace Exploration Agency) signed an agreement for the Chandrayaan-5 Lunar Polar Exploration (LUPEX) Mission.
 - » **Objective:** To explore the Moon's south pole with a focus on studying water and other critical resources.
 - » **Launch:** Japan's H3-24L rocket will carry ISRO's lander, which will deploy a Japanese rover.
 - » **Significance:** This mission not only advances India's space ambitions but also deepens Indo-Japanese cooperation in cutting-edge science and technology.

Japan's Big Investment Plan in India:

- ❖ A major highlight of the visit was Japan's announcement of a ¥10 trillion (approximately Rs.6 lakh crore) investment plan in India over the next decade.
 - » **Focus areas:** Artificial Intelligence, semiconductors, clean energy, startups, and medical innovation.
 - » Surveys show that 80% of Japanese companies in India plan to expand operations, while 75% are already profitable.
 - » India's advantages – political stability, sustained economic growth, and a large skilled workforce – make it an attractive investment hub.

- ❖ This investment commitment also comes at a crucial time for India, as it faces new U.S. tariffs on its exports, making Japanese support all the more vital for economic resilience.
- ❖ **Focus on Semiconductors and Artificial Intelligence:** The two nations launched the Economic Security Cooperation Initiative, aimed at securing critical sectors for the future:
 - » AI development and applications
 - » Semiconductor manufacturing
 - » Rare earth mineral supply chains
 - » Digital public infrastructure
- ❖ PM Modi visited the Sendai semiconductor plant, which is set to produce 12-inch wafers and expand into advanced 28 nm and 55 nm node technologies.
- ❖ **Defence and Security Agreements:** Security cooperation was another major pillar of the summit. India and Japan signed a Joint Declaration on Security Cooperation, which includes:
 - » Regular institutional dialogue between the National Security Advisers (NSAs) of both countries.
 - » More frequent joint military exercises across the Army, Navy, and Air Force.
 - » Enhanced naval cooperation for secure sea lanes, anti-piracy measures, and freedom of navigation in the Indo-Pacific.
 - » Joint work in counter-terrorism, cybersecurity, disaster relief, and defence R&D.
- ❖ **Infrastructure and Development Projects:** Japan continues to be India's largest aid donor, providing about \$4.5 billion in 2023–24 alone.
 - » The Mumbai-Ahmedabad bullet train project remains the flagship symbol of Indo-Japanese cooperation.
 - » New commitments include broader mobility partnerships (rail, roads, and bridges), renewable energy projects, and hydrogen-based energy solutions.
 - » Expanded opportunities for both Japanese private and public investments in Indian infrastructure.

- ❖ **People-to-People and Cultural Exchange:** Cultural and human linkages remain central to the partnership.
 - » **Education:** Over 665 academic partnerships now exist between Indian and Japanese universities.
 - » **Skill Connect:** A platform launched in 2023 linking Indian youth with Japanese employers.
 - » **Tourism:** The year 2023–24 was celebrated as the “Year of Tourism Exchange – Connecting Himalayas with Mount Fuji.”
 - » **Diaspora:** Around 54,000 Indians live in Japan, mostly working in IT, engineering, and skilled sectors.

PM MODI RECEIVES DARUMA DOLL IN JAPAN

What is a Daruma Doll?

- 🌀 A traditional Japanese good-luck charm.
- 🌀 Symbol of perseverance, resilience & goal-setting.
- 🌀 Inspired by Bodhidharma, the Indian monk who founded Zen Buddhism.
- 🌀 The word 'Daruma' in Japanese refers to Bodhidharma.



The Eye Ritual

- One eye is painted when setting a goal.
- Second eye painted after achieving it.
- Represents determination & fulfillment.

Why it Matters in Diplomacy

- The gift to PM Modi reflects India–Japan cultural ties.
- Symbolises hope, partnership & shared values between the nations.

About Daruma Doll

- Daruma Doll, a symbol of perseverance and goal-setting in Japanese culture, which also traces its roots to Indian Buddhist traditions—a gesture that highlighted shared civilizational ties.
 - » The Daruma doll is a famous cultural symbol in Japan, recently seen during Prime Minister Narendra Modi's visit.

- » Given by Rev Seishi Hirose of Daruma-ji temple, it stands for perseverance, good luck, and goal-setting.
- » Made of papier-mâché, the doll always returns upright when tilted, showing resilience. The saying “fall seven times, stand up eight” is linked to it.
- » Traditionally, one eye is drawn when making a goal, and the other when it is achieved, reminding people to stay focused and persistent.

Significance of the Visit:

- ❖ At a time when India's ties with the U.S. are strained due to new tariffs, Japan's economic and diplomatic support provides crucial balance.
- ❖ India's Act East Policy and Indo-Pacific Oceans Initiative align with Japan's Free and Open Indo-Pacific (FOIP) vision.
- ❖ Cooperation in semiconductors and

critical minerals strengthens supply chain resilience, a pressing global concern.

- ❖ Expanded defence and space cooperation demonstrate that India-Japan relations now extend well beyond economics to strategic, technological, and security domains.

Conclusion:

Prime Minister Modi's two-day visit to Japan was both substantive and symbolic. It delivered progress in critical areas such as technology, space, defence, and infrastructure, while also reaffirming the central role of cultural and people-to-people linkages. For India, the visit reaffirmed that Japan is not just a trusted economic partner but a key pillar of its Indo-Pacific strategic vision. With new investments, upgraded defence ties, and a clear roadmap for the coming decade, the visit has elevated the India-Japan partnership to a new, future-oriented phase.

Short Issues

Azerbaijan-Armenia Peace Agreement

Context:

A historic peace agreement was signed between Azerbaijan and Armenia on August 8, 2025, at the White House, marking a significant breakthrough in the decades-long conflict between the two nations. The deal, brokered by US President Donald Trump, aims to bring lasting peace and stability to the region.

Key Provisions:

- **Permanent Cessation of Hostilities:** Both countries have agreed to permanently cease all hostilities, paving the way for a peaceful resolution to the conflict.
- **Reopening of Transport Routes:** The agreement includes the reopening of key transport routes between Armenia and Azerbaijan, promoting trade and economic cooperation.

- **Resumption of Travel, Business, and Diplomatic Relations:** The two nations will resume travel, business, and diplomatic relations, strengthening their bilateral ties.
- **Trump Route:** The US will assist in building a major transit corridor, known as the "Trump Route for International Peace and Prosperity," connecting mainland Azerbaijan to its Nakhchivan exclave via Armenian territory.

Strategic Significance:

- **Enhanced US Geopolitical Influence:** The agreement enhances US geopolitical influence in the Caucasus region, reducing Russia's dominance and promoting American interests.
- **Regional Connectivity:** The Trump Route will facilitate the transportation of goods and people between Turkey, Azerbaijan, and Central Asia, bypassing Iran and Russia.
- **Economic Benefits:** The corridor is expected

to boost trade and economic cooperation between the two nations, promoting regional prosperity.

Historical Background:

- Nagorno-Karabakh, a predominantly Armenian (Christian) enclave within Muslim-majority Azerbaijan, was an autonomous region during the Soviet era. As the USSR collapsed, ethnic tensions escalated, leading to the First Nagorno-Karabakh War (1988–1994).
- Armenia took control of Nagorno-Karabakh and surrounding Azerbaijani areas. Although the region was governed by ethnic Armenians, it remained internationally recognized as part of Azerbaijan.



Recent Developments:

- In the Second War (2020), Azerbaijan recaptured significant territory. In 2023, a swift one-day offensive led to Azerbaijan regaining full control of Nagorno-Karabakh, which was then officially dissolved. Over 100,000 ethnic Armenians fled to Armenia, marking a major humanitarian crisis.

India's Position and Strategic Interest:

- India has remained neutral, supporting a peaceful resolution through the OSCE Minsk Group. Both Armenia and Azerbaijan

are part of the International North-South Transport Corridor (INSTC), a vital route for India's trade with Central Asia and beyond, making regional peace strategically important.

Challenges Ahead:

- **Implementation:** The success of the agreement depends on its implementation and the willingness of both parties to work together.
- **Refugee Resettlement:** The fate of displaced Armenians from Nagorno-Karabakh and prisoners of war remains a contentious issue.
- **Domestic Opposition:** Both countries face domestic opposition, which could impact the agreement's stability.

Conclusion:

The Azerbaijan-Armenia peace agreement marks a significant step towards lasting peace and stability in the region. While challenges lie ahead, the agreement has the potential to promote economic cooperation, reduce tensions, and enhance regional connectivity.

Alaska Summit 2025

Context:

The Alaska Summit 2025, held on August 15 in Anchorage, marked the first meeting between US President Donald Trump and Russian President Vladimir Putin since the Ukraine war began in 2022. Convened amid escalating conflict and global security concerns, the summit ended without a ceasefire, highlighting enduring divisions but signaling a rare reopening of dialogue between Washington and Moscow.

Significance of the Alaska Summit 2025:

- The Alaska Summit was the first meeting between US and Russian leaders on American soil since 1988.
- Central theme was exploring pathways to end the Ukraine conflict.
- The US perspective emphasized the destabilizing impact of the war on European security, NATO unity, and transatlantic

relations.

- The Russian position sought international recognition of its territorial control in Ukraine.

Outcome & Broader Implications:

- No breakthrough or ceasefire agreement was reached, reflecting entrenched positions.
- However, the outcome holds potential consequences for:
 - » **Global geopolitics:** recalibration of US-Russia relations, influence on multipolarity debates.
 - » **Energy markets:** continued volatility in oil and gas supplies due to prolonged conflict.
 - » **Trade relations:** sanctions regime may see revisions, impacting global supply chains.
 - » **NATO cohesion:** the alliance may further consolidate against Russia.

Diplomatic Significance:

- Re-established direct channels of communication between Washington and Moscow after years of hostility.
- Both leaders agreed to continue talks, keeping the possibility of future negotiations alive.



Russia-Ukraine War:

- **Historical Context**
 - » The roots of the conflict go back to the collapse of the Soviet Union in 1991.
 - » Ukraine, as a former Soviet republic, has remained strategically significant as a buffer state between Russia and

Western Europe.

- » Ukraine's post-independence tilt towards NATO and the European Union has consistently been viewed by Russia as encroachment into its sphere of influence.
- **Escalation Since 2014**
 - » Russia's annexation of Crimea in 2014 marked a turning point, drastically worsening ties.
 - » The conflict in Eastern Ukraine further deepened mistrust.
 - » Diplomatic efforts, including the Minsk Agreements, failed to create sustainable peace.

Causes of the 2022 War:

- **Underlying Factors**
 - » Russia's claim over Ukraine as part of its historical and geopolitical sphere of influence.
 - » Strong resistance to Ukraine's deepening alignment with the West and NATO aspirations.
- **Russian Justification**
 - » Moscow framed the invasion as a mission to "demilitarize" and "denazify" Ukraine.
- **Key Drivers of Conflict:**
 - » NATO expansion fears and Russia's security anxieties.
 - » Ukraine's moves toward closer ties with Western institutions.
 - » Putin's strategic ambition to reassert Russian power and influence in Eastern Europe.
 - » Continuation of tensions since the 2014 annexation of Crimea.

Global Implications of the War:

- **Sanctions & Economic Measures:**
 - » Western nations imposed sweeping sanctions targeting Russia's economy, financial system, and elites.
 - » Simultaneously, large-scale military and financial aid was directed to Ukraine.
- **Global Crises Triggered:**
 - » Severe energy crisis, with disruptions in oil and gas supplies.

- » Food insecurity worsened by reduced grain exports from the Black Sea region.
- » Humanitarian emergency, with millions displaced and large-scale civilian casualties.
- **Diplomatic Efforts:** Multiple attempts at mediation, including:
 - » UN appeals for ceasefire and humanitarian corridors.
 - » Turkey's mediation in brokering limited agreements such as the Black Sea grain deal.
 - » NATO's recalibrated strategies to bolster deterrence in Eastern Europe.

Conclusion:

The Alaska Summit may not have delivered peace, but it served as a reminder of diplomacy's dual nature—part negotiation, part theatre. In global affairs, even failed summits have strategic value, influencing public perception, alliances, and the path of future negotiations.

Discount on Purchase of Oil from Russia

Context:

As global tensions escalate over the Ukraine war and U.S. trade retaliation, Russia has offered India a 5% discount on crude oil, reinforcing energy ties amid mounting geopolitical pressure. The announcement comes as India's External Affairs Minister, S. Jaishankar, recently visited Moscow for the 26th session of the India-Russia Inter-Governmental Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation (IRIGC-TEC).

Backdrop:

- The visit unfolds amid heightened tension with the US, which slapped India with 50% tariffs—a combination of a 25% reciprocal duty and an additional 25% penalty specifically linked to imports of Russian oil. These commercial penalties have escalated a broader 2025 US-India diplomatic and trade crisis.

Implication of visit:

- The visit underscores the importance of the India-Russia relationship, which has remained steadfast over the years. The two nations have a long history of cooperation in defense, energy, and trade. India buys approximately 35% of its crude oil from Russia, and Russia is a dependable supplier of military equipment to India.

INDIA-RUSSIA RELATIONS

A Strategic Partnership Amid Global Realignments

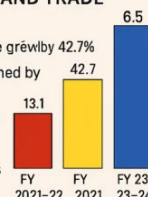


EVOLUTION OF RELATIONS

- **Cold War Solidarity (1950–1991)**
 - Soviets support on Kashmir and Goa's liberation
- **Post-Soviet Adjustment 0991–2000**
 - Recalibration following the Soviet Union's dissolution to sustain defense and strategic ties
- **Strategic Partnerships (2000–present)**
 - Major exports follow global institutionalizing cooperation across sectors

ECONOMIC AND TRADE RELATIONS

- Bilateral trade grew by 42.7%
- Imports declined by 39.9%
- Major exports from India
- Major Imports from Russia



ENERGY COOPERATION

- Russia accounts for 35% of India's total crude imports
- European sanctions provide cheaper Russian oil cushioned from global price volatility



ENERGY COOPERATION

- Russia accounts for 35% of India's total crude imports
- European sanctions provide cheaper Russian oil cushioned from global price volatility
- Assistance in the Kudankulam Nuclear Power Plant

DEFENSE CO-DEVELOPMENT

- Transition from buyer to co-developer defense partnership enhancing India's indigenous capabilities and strategic autonomy
- Flagship programs: Brahmos missiles and S-300 production
- Despite diversification to other suppliers like France and Israel

STRATEGIC WAY FORWARD

- Diversify economic engagement beyond energy
- Strengthen Defense co-development
- Expand Arctic and energy collaboration



STRATEGIC WAY FORWARD FOR INDIA

- Diversify economic

About India – Russia relationship:

- India and Russia (then the Soviet Union) established diplomatic relations in April 1947, even before India's independence. In its early years, India's focus on industrial self-sufficiency found a natural partner in the USSR.
- The Indo-Soviet relationship deepened significantly during the Cold War. The USSR supported India in the 1965 India-Pakistan war and hosted the Tashkent Summit in 1966 to mediate peace.

- More significantly, during the 1971 Bangladesh Liberation War, the Soviet Union stood firmly with India while the US and China supported Pakistan. This culminated in the 1971 Treaty of Peace, Friendship and Cooperation, marking the peak of the relationship.
- The USSR also backed India in the UN Security Council, using its veto multiple times between 1957 and 1971—often on the Kashmir issue or Goa's liberation. For Indian policymakers of that era, Moscow became a trusted strategic anchor.
- After the Soviet Union's collapse, the relationship transitioned into a Strategic Partnership in 2000, which was upgraded to a Special and Privileged Strategic Partnership in 2010.
- Annual summits between Indian prime ministers and Russian presidents have become a fixture (except for a few exceptions), reinforcing diplomatic continuity. Since 2021, both sides have also held 2+2 ministerial dialogues, underscoring the multifaceted nature of the relationship in defence, energy, and diplomacy.

Conclusion:

With Jaishankar's Moscow visit reinforcing long-standing ties and Russia offering discounted oil, India is navigating a delicate balancing act—safeguarding its economic interests, upholding strategic partnerships, and resisting geopolitical pressure. As the global order shifts, New Delhi is steadily asserting its place through diplomacy and resilience.

India-Philippines Strategic Partnership

Context:

The strategic partnership between India and the Philippines was recently officially formalised during the recent visit of Philippine President Ferdinand Marcos Jr. to India. This visit marked a pivotal moment in the bilateral relations of both countries, fostering closer cooperation in

areas such as defence, trade, maritime security, and regional stability.



STATE VISIT of PRESIDENT OF THE PHILIPPINES TO INDIA

OUTCOMES

Declaration on the Establishment of **Strategic Partnership** between India & the Philippines

India-Philippines Strategic Partnership: Plan of Action (2025-29)

ToR* between **Indian Air Force & Philippine Air Force** on Air Staff Talks

ToR* between **Indian Army & Philippine Army** on Army-to-Army Staff Talks

ToR* between **Indian Navy & Philippine Navy** on Navy-to-Navy Talks

Key Highlights of President Marcos Jr.'s Visit to India

- **Strategic Partnership Formalised:** The two countries officially elevated their relationship to a Strategic Partnership, reinforcing long-term cooperation in strategic sectors such as defence, trade, and regional security.
- **Maritime Security and Defence Dialogue:** A Ministerial Defence Dialogue was institutionalised, focusing on enhancing cooperation in defence technologies and military training.
- **Expansion of BrahMos Deal:** The Philippines reaffirmed its interest in expanding the BrahMos missile deal, including exploring joint production and co-development of advanced defence technologies.
- **Regional Cooperation in the Indo-Pacific:** India reiterated its support for ASEAN centrality in regional security frameworks, stressing the importance of a unified approach to the challenges in the Indo-Pacific region. India also expressed its unwavering support for the 2016 Arbitral Tribunal ruling on the South China Sea,

aligning with the Philippines' territorial position.

- **Trade and Economic Commitments:** Both countries committed to doubling bilateral trade by 2030. Several Memoranda of Understanding (MOUs) were signed, particularly in the areas of pharmaceuticals, digital payments, and green energy, which would further strengthen economic ties.

Historical Background:

- India and the Philippines have shared diplomatic relations since 1949. Over the decades, their ties have evolved, shaped by shared democratic values, anti-colonial legacies, and similar geopolitical concerns.
- India's "Look East" and later "Act East" policy has significantly boosted its engagement with Southeast Asian nations, and the Philippines has emerged as an important partner in this vision.

Trade and Economic Ties:

- India and the Philippines have enjoyed a long-standing economic relationship. Their formal Trade Agreement was signed in 1979, but it was in the late 1990s, propelled by India's Look East Policy, that bilateral trade began to show remarkable growth.
- The India-ASEAN Trade in Goods Agreement signed in 2009 further accelerated this trade relationship.
- Bilateral trade crossed the USD 3 billion mark for the first time in 2022-23, reaching USD 3.53 billion in 2023-24. India currently enjoys a trade surplus with the Philippines.

Conclusion:

The formalisation of the India-Philippines Strategic Partnership is a significant milestone in their growing bilateral relationship. Both nations are poised to benefit from deeper defence cooperation, trade expansion, and regional stability efforts, particularly in the Indo-Pacific region. With shared concerns over China's maritime assertiveness and the common goal of a free, open, and rules-based maritime order, the India-Philippines relationship is set to play a key role in shaping the future security

landscape of Southeast Asia and beyond.

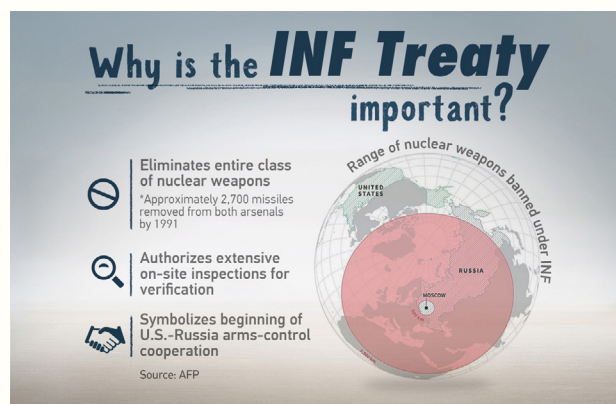
Russia withdraws from INF Treaty

Context:

Russia recently announced its withdrawal from the Intermediate-Range Nuclear Forces (INF) Treaty, a landmark arms control agreement signed in 1987 between the US and the Soviet Union. This move comes amid rising tensions between the two nations, fueled by geopolitical friction, sanctions, and nuclear posturing.

About INF Treaty:

- The INF Treaty signed in 1987 by the US and the former Soviet Union—was a key arms control agreement that helped prevent the deployment of nuclear missiles with ranges between 500 and 5,500 kilometers.
- INF Treaty was a significant achievement in the Cold War-era arms control framework, aimed at reducing the risk of a fast-escalating nuclear conflict, especially in Europe.
- The treaty effectively removed missiles that could be quickly deployed and fired across short distances.



Reasons behind Russia Abandon the INF Treaty:

- Russia's decision to exit the treaty is a response to the US's actions, particularly the deployment of intermediate-range missiles in Europe and Asia.

- Moscow views these deployments as a threat to its national security and argues that they undermine the spirit of mutual restraint that defined the treaty.
- Another reason is recent escalation set off by US President Donald Trump through sweeping sanctions on Russia.
- These sanctions included punitive measures targeting nations, like India and China, that continue to purchase Russian oil, as well as threats to penalize those that do not comply with US demands over the Ukraine conflict.

Which Countries Are Most Threatened?

- The most immediate victims of this breakdown in the INF Treaty are NATO member states in Europe and countries in the Asia-Pacific region. Russia's withdrawal from the treaty and its intention to redeploy intermediate-range missiles pose a direct threat to European nations, particularly those bordering Russia. The proximity of NATO allies to Russian borders, such as Estonia, Poland, and Ukraine, means they are now within range of new Russian missile deployments.

Impact on Global Security:

- The collapse of the INF Treaty signals a more dangerous and unstable world, where deterrence may be determined by the presence of missiles on hair-trigger alert rather than diplomacy.
- Experts warn that without a framework to manage military escalation, the world faces a higher risk of miscalculation and conflict.
- The lack of direct communication channels between Washington and Moscow adds to the uncertainty

Conclusion:

Russia's departure from the INF Treaty and its renewed missile ambitions have raised concerns that the world is heading toward a new Cold War scenario. The mutual deployment of nuclear-capable assets, rising regional tensions, and the tit-for-tat imposition of sanctions suggest that the post-Cold War era of strategic cooperation may be ending.

India-Singapore Ministerial Roundtable

Context:

Recently, the 3rd round of the India-Singapore Ministerial Roundtable was held in New Delhi, with the aim of strengthening the Comprehensive Strategic Partnership between the two nations.

Key Focus Areas on the meeting:

- The Roundtable focused on six key pillars of cooperation under ISMR:
 - » Digitalization
 - » Skill Development
 - » Sustainability
 - » Healthcare and Medicine
 - » Advanced Manufacturing
 - » Connectivity

India-Singapore Relations:

- **Historical and Cultural Ties:**
 - » India and Singapore share deep historical roots. In 1819, Sir Stamford Raffles established Singapore as a trading station, governed then from Kolkata.
 - » Post-independence, India was one of the first countries to recognize Singapore in 1965. The large ethnic Indian population in Singapore—about 9.1%—strengthens this historic bond.
 - » Tamil is also one of the country's four official languages, further cementing cultural ties. With approximately one-fifth of foreign nationals in Singapore being Indian citizens, people-to-people connections remain robust.
- **Economic, Strategic, and Defence Cooperation:**
 - » Singapore remains a crucial partner in India's Act East Policy, Indo-Pacific Vision, and MAHASAGAR initiative.
 - » It is India's largest trading partner in ASEAN and its 6th largest globally (2023–24), with bilateral trade reaching USD 35.6 billion following the Comprehensive Economic Cooperation Agreement (CECA).

- » India is a net importer, and the Direct Tax Avoidance Agreement (DTAA), signed in 2016, aims to reduce tax evasion.
- » Defence cooperation is strong, involving tri-service exercises like Agni Warrior (Army), SIMBEX (Navy), and Joint Military Training (Air Force).
- » The countries also lead in fintech collaboration, with landmark developments like RuPay-UPI-PayNow linkage.



Challenges in Bilateral Relations:

- Despite strong ties, challenges exist. Singapore's overwhelming investment presence in China (85% of BRI inbound) and its reputation as a tax haven raise concerns about roundtripping.
- Trade frictions also include limited service export access and professional mobility.
- Gold smuggling and incidents of anti-India sentiment targeting Indian workers further complicate relations.

Conclusion:

The India-Singapore Ministerial Roundtable has evolved into a powerful platform for advancing strategic cooperation and mutual prosperity. By focusing on future-ready sectors such as digital technology, green growth, and advanced manufacturing, both nations are reaffirming

their commitment to a resilient and inclusive Indo-Pacific. The outcomes of the Roundtable underscore a shared vision for deeper economic integration, regional stability, and innovation-driven growth in the years ahead.

India's Stance Toward Taiwan

Context:

India clarified that its policy on Taiwan remains unchanged, following a Chinese Foreign Ministry statement claiming that External Affairs Minister S. Jaishankar had affirmed "Taiwan is part of China" during talks with Chinese Foreign Minister Wang Yi in New Delhi on August 18–19, 2025.

What is the Issue?

- The Chinese readout, released in Mandarin and later in English, asserted that India acknowledged China's stance on Taiwan.
- However, Indian government sources refuted this, stating Mr. Jaishankar did not use the specific phrase claimed by China.
- India emphasized that while it does not officially recognize Taiwan as a sovereign nation, it maintains robust economic, technological, and cultural ties with Taiwan.
- India has not reiterated the 'One China policy' since 2010, after China issued stapled visas to residents of Arunachal Pradesh and Jammu & Kashmir, treating them as disputed regions.

Implications:

- India's refusal to reaffirm the 'One China Policy' sends a subtle message to China about its own sovereignty concerns (e.g., Arunachal Pradesh and J&K).
- India is balancing ties with both China and Taiwan without breaching formal diplomatic protocols, showcasing strategic autonomy. This situation reinforces Taiwan's growing importance in global supply chains and strategic calculus in the Indo-Pacific.
- India's clear statement that it will continue economic, technological, and cultural ties with Taiwan reflects intent to deepen

functional cooperation, especially in semiconductors, electronics, and education.



About India-Taiwan Relations:

- India-Taiwan relations began deepening in the early 1990s with the opening of representative offices. The India-Taipei Association (ITA) and Taipei Economic and Cultural Centers (TECC) now function as de facto embassies. India's Look East Policy and Taiwan's New Southbound Policy (2016) have provided strong frameworks for expanding engagement.

Economic and Technological Ties:

- Bilateral trade reached \$8.22 billion in 2023, with major Taiwanese investments in electronics, ICT, and semiconductors. Companies like Foxconn and TSMC are deepening their presence in India, while joint ventures like Tata-Powerchip reflect semiconductor cooperation. Despite China's pressure, both sides continue to pursue mutually beneficial ties in tech and manufacturing.

Conclusion:

The disagreement reflects underlying tensions in India-China ties despite ongoing diplomatic engagement. India's nuanced position signals its intent to balance relations with Taiwan without breaching diplomatic protocols with

China, while also asserting reciprocal respect for its own territorial integrity. The broader bilateral relationship remains under strain but is cautiously advancing, ahead of PM Modi's planned visit to China for the SCO Summit.

Row Over Lipu-Lekh Pass

Context:

The agreement between India and China to restart border trade through the Lipu Lekh Pass has sparked a diplomatic row between Nepal and India. Nepal claims that the Lipu Lekh region is part of its sovereign territory, while India maintains that its territorial claims are "neither justified nor based on historical facts and evidence"

About Territorial Dispute:

- The Kalapani-Lipu Lekh-Limpiyadhura region is a tri-junction area between India, Nepal, and China.
- Nepal claims the area east of the Mahakali River as per the 1816 Treaty of Sugauli with the British, arguing that Lipu Lekh lies within its territory.
- In 2019, India published a new political map that showed the region as part of Uttarakhand — sparking strong protests from Nepal.
- Nepal later amended its constitution and map, including these disputed areas.

About India-China Border Trade Resumption:

- India and China have decided to resume trade through three passes:
 - Lipu Lekh (Uttarakhand)
 - Shipki La (Himachal Pradesh)
 - Nathu La (Sikkim)
- India maintains that trade through Lipu Lekh began in 1954 and is not related to Nepal.



Key Points of Contention

India's View	Nepal's View
Lipu Lekh trade route is historical, dating back to 1954.	The route lies in Nepal's territory, as per the Sugauli Treaty.
India rejects Nepal's claims as not historically justified.	Nepal asserts the area is east of Mahakali River, thus Nepalese.
India-China agreements on Lipu Lekh are bilateral.	Nepal wants to be consulted on any activity in the area.

Significance of Lipu Lekh:

- Located at a trijunction between India, Nepal, and Tibet (China).
- Crucial for border trade and pilgrimage routes, including to Mount Kailash and Mansarovar.
- A flashpoint in India-Nepal relations due to nationalist sentiments and territorial sensitivities.

India – Nepal relations:

- India and Nepal share a unique and deeply intertwined relationship rooted in the 1950 Treaty of Peace and Friendship. This treaty allows open borders, free movement of people, and grants mutual privileges to each other's citizens, laying the groundwork for their strong bilateral ties. India is Nepal's largest trading partner and biggest

developmental aid contributor. India supports key infrastructure projects like roads, airports, and health facilities.

- Nepal's position between India and China makes it a strategic buffer for India. However, challenges remain—border disputes (e.g., Kalapani-Lipu Lekh), trade imbalances, and Nepal's growing ties with China raise concerns. There are also internal calls within Nepal to revisit the 1950 treaty, reflecting evolving geopolitical dynamics.

Conclusion:

The diplomatic row between Nepal and India over the Lipu Lekh region highlights the complexities of border disputes and the need for diplomatic resolution. While both countries have a long-standing relationship and are keen to maintain their ties, the issue of territorial claims needs to be addressed through constructive dialogue and diplomacy. The upcoming visit of Nepal's Prime Minister K.P. Sharma Oli to India may provide an opportunity for both countries to discuss the issue and find a mutually acceptable solution.

Nepal joins International Big Cat Alliance (IBCA)

Context:

On August 24, 2025, Nepal formally joined the International Big Cat Alliance (IBCA) by signing its Framework Agreement. This makes Nepal a part of a global coalition initiated by India to ensure the conservation of seven species of big cats across their natural ranges.

Why is Nepal's Membership Important?

- Nepal hosts three of the seven big cats: Tiger, Snow Leopard, and Common Leopard.
- Its landscapes — from the Terai to the Himalayas — are critical habitats for these species.
- Nepal is recognized for successful transboundary conservation initiatives, particularly for tigers.

What is the International Big Cat Alliance?

- The IBCA was launched by Prime Minister

Narendra Modi on April 9, 2023, during an event commemorating the 50th anniversary of Project Tiger.

- The initiative's main objective is the conservation of seven major big cat species: the Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar, and Puma.
- In a cabinet meeting on February 29, 2024, the government officially approved the establishment of the IBCA, with its headquarters based in India.
- The establishment of the IBCA was spearheaded by the National Tiger Conservation Authority (NTCA), a nodal organization under the Ministry of Environment, Forest & Climate Change (MoEFCC).
- Its mission is to facilitate international collaboration and synergy in conservation efforts, consolidating successful practices and expertise for the global protection of big cats.
- The membership of the IBCA is open to all UN member countries, especially those that host these species, and to non-range countries that are interested in supporting big cat conservation efforts.
- As of August 25, 2025, Nepal is the latest country to join the International Big Cat Alliance (IBCA), bringing the total number of countries with consented membership to 35, with 12 having signed the Framework Agreement.



Big Cats under Protection & Their Conservation Status:

- **Tiger (Scientific name: *Panthera tigris*)**
 - » IUCN Status: Endangered

- » CITES Status: Appendix I
- » Wildlife Protection Act, 1972 (India): Schedule 1

- **Asiatic Lion (Scientific name: *Panthera leo persica*)**

- » IUCN Status: Endangered
- » CITES Status: Appendix I
- » Wildlife Protection Act, 1972 (India): Schedule 1

- **Leopard (Scientific name: *Panthera pardus*)**

- » IUCN Status: Vulnerable
- » CITES Status: Appendix I
- » Wildlife Protection Act, 1972 (India): Schedule 1

- **Snow Leopard (Scientific name: *Panthera uncia*)**

- » IUCN Status: Vulnerable
- » CITES Status: Appendix I
- » Wildlife Protection Act, 1972 (India): Schedule 1

- **Cheetah (Scientific name: *Acinonyx jubatus*)**

- » IUCN Status: Vulnerable
- » CITES Status: Appendix I
- » Wildlife Protection Act, 1972 (India): Schedule 1

- **Jaguar (Scientific name: *Panthera onca*)**

- » IUCN Status: Near Threatened
- » CITES Status: Appendix I
- » Wildlife Protection Act, 1972 (India): Not found in India

- **Puma (Scientific name: *Puma concolor*)**

- » IUCN Status: Least Concern
- » CITES Status: Appendix I
- » Wildlife Protection Act, 1972 (India): Not found in India

Conclusion:

Nepal's inclusion in the International Big Cat Alliance marks a significant step in strengthening regional and global collaboration on big cat conservation. It reinforces the vision of ecological security through collective responsibility, and enhances South Asia's role in protecting vulnerable apex predators. With shared landscapes and species, India and Nepal can now deepen transboundary conservation efforts, especially in the face of climate change

and habitat loss.

India-Fiji Relations

Context:

Prime Minister Sitiveni Rabuka of Fiji visited India from 24–26 August 2025, at the invitation of PM Narendra Modi and reaffirming the deep-rooted relationship between the two countries. His visit signals the deepening of India's engagement with the Pacific Island nations under its Act East and Indo-Pacific policies.

Key Agreements Signed During the Visit:

- **Healthcare and Pharmaceuticals**
 - » MoU signed for a 100-bed Super Specialty Hospital in Suva, India's largest Pacific development project.
 - » Recognition of Indian Pharmacopoeia enables Indian medicines in Fiji, boosting affordable healthcare.
 - » India to hold a second Jaipur Foot Camp and provide tertiary care for 10 Fijians under the 'Heal in India' programme.
- **Defence and Maritime Cooperation**
 - » Strengthened ties under the 2017 Defence MoU, covering UN peacekeeping, military medicine, white shipping info exchange, and maritime domain awareness.
 - » Establishment of a Cyber Security Training Cell in Fiji.
 - » Planned port call by an Indian Naval Ship to enhance Indo-Pacific naval cooperation.
- **Climate, Energy, and Blue Economy**
 - » Renewed commitment to Mission LiFE and Fiji's 2050 Blue Pacific Strategy.
 - » Fiji's active participation in International Solar Alliance (ISA), Global Biofuels Alliance (GBA), and Coalition for Disaster Resilient Infrastructure (CDRI).
 - » STAR Centre for solar tech to be established at Fiji National University.
- **Regional Cooperation and Global South Solidarity**
 - » Commitment to a free, open, inclusive Indo-Pacific.

- » Fiji's interest in joining India-led Indo-Pacific Oceans Initiative (IPOI) welcomed.
- » Shared vision of an "Ocean of Peace" endorsed by both leaders.
- » Joint support for UN reforms; Fiji backs India's permanent UNSC seat and 2028–29 non-permanent membership bid.



India-Fiji Relations:

- **Historical Background**
 - » India-Fiji ties date back to 1879, when Indian indentured laborers were brought to Fiji under British rule.
 - » India maintained a Commissioner in Fiji since 1948 and recognized Fiji's independence in 1970.
 - » Fiji established its High Commission in New Delhi in 2004.
- **Political Relations**
 - » The Forum for India-Pacific Islands Cooperation (FIPIC) was launched in Suva, Fiji (2014), followed by summits in Jaipur (2015) and Papua New Guinea (2023).
 - » Fiji is an active partner in global platforms like the International Solar Alliance (ISA), Coalition for Disaster Resilient Infrastructure (CDRI), and the Global Biofuel Alliance.
- **Economic & Commercial Relations**

- » India's exports to Fiji increased from US \$76.28 million (2023–24) to US \$84.67 million (2024–25).
- » Imports from Fiji rose from US \$1.19 million to US \$1.54 million in the same period.
- » The trade surplus expanded to US \$83.13 million, reflecting India's growing presence in the Fijian market.

Significance of Fiji for India:

- Fiji's strategic location in the South Pacific makes it a vital partner in India's Indo-Pacific vision, maritime security, and climate action diplomacy.
- Fiji offers a growing market for Indian pharmaceuticals, IT services, and capacity-building initiatives. India supports multiple developmental projects, including solar energy and health infrastructure.
- With increasing Chinese influence in the Pacific, India's defence outreach to Fiji helps balance strategic dynamics in the region. Naval visits and training exchanges enhance interoperability.
- Indo-Fijians make up nearly one-third of Fiji's population. Fiji-Hindi is an official language, and events like Girmit Day commemorate shared history. India's cultural diplomacy, including ICCR scholarships, strengthens people-to-people bonds.

Conclusion:

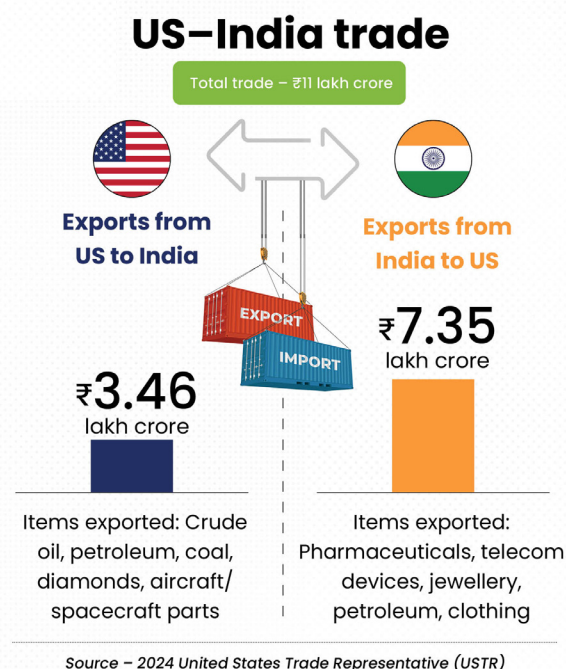
Prime Minister Rabuka's visit comes as a turning point in India-Fiji ties, reflecting a move from past estrangement (especially post-1987 coup) toward reconciliation and forward-looking cooperation. With shared colonial legacies, a vibrant diaspora, and growing convergence on global platforms, India and Fiji are poised to become strong partners in a multipolar Indo-Pacific.

United States implemented 25% tariff on Indian goods

Context:

On August 27, 2025, the United States

implemented an additional 25% tariff on Indian goods, bringing the total tariff burden to 50% on several key Indian exports. The move, justified under national security concerns due to India's purchase of Russian crude oil, marks a significant escalation in the ongoing US-India trade tensions. According to a report by SBI Research, these tariffs are expected to reduce US GDP growth by 40–50 basis points (bps) in FY2025 and intensify inflationary pressures.



Key Observations from SBI Report:

- **US GDP Growth Halved:** Economic growth slowed from 2.5% in H1 2024 to 1.2% in H1 2025, coinciding with the first five months of the Trump administration and tariff escalation.
- **Rising Inflation:** US inflation surged to 2.7% in July 2025, a sharp rise of 202 basis points from June, driven by pass-through effects of tariffs and a weaker dollar.
- **Inflation Likely above Target Till 2026:** Import-sensitive sectors such as electronics, autos, and consumer durables are witnessing the highest price hikes.
- **Affected Trade Volume:** An estimated \$45 billion worth of Indian goods will be affected

by the 50% tariffs.

Impact on the US Economy:

- **GDP Erosion:**
 - » Tariff-induced cost pressures are estimated to shave 40–50 bps off US GDP this fiscal.
 - » Growth already slowed to 1.2% in Jan–June 2025.
- **Worsening Inflation:**
 - » Tariffs increase the cost of imports, pushing consumer prices higher, especially in sectors like furniture, clothing, and processed goods.
 - » The Producer Price Index has shown the steepest rise in over three years.
- **Fragile Labor Market and Policy Dilemma:**
 - » The Federal Reserve faces a challenging trade-off between controlling inflation and protecting jobs.
 - » Fed Chair Jerome Powell acknowledged that the effects of tariffs on prices are “now clearly visible.”

Impact on the Indian Economy:

- **Key Export Sectors Affected:**
 - » **Textiles and Apparel:** Employs 45 million, contributes 2.3% to GDP, and exports heavily to the US. India’s growing share in the US market now faces a setback.
 - » **Gems & Jewellery:** The US accounts for one-third of India’s \$28.5 billion annual shipments. A \$10 billion trade exposure is at risk.
 - » **Seafood (Shrimp):** Over 50% of exports go to the US. Higher tariffs could lead to order cancellations and market share loss to competitors like Ecuador.
- **Trade Surplus at Risk:**
 - » India had a \$41 billion trade surplus with the US in FY25.
 - » With \$45 billion in exports now under heavy tariff, this surplus may turn into a deficit unless mitigated by diversification and trade diplomacy.

Conclusion:

The recent tariff hikes represent a classic trade war scenario with no immediate winners. While

the US aims to assert geopolitical pressure, it risks domestic inflation, GDP contraction, and policy complications. For India, the tariff escalation threatens key labour-intensive sectors, particularly MSMEs in textiles and jewellery. Going forward, both nations must recalibrate their trade strategies. India should intensify efforts to diversify export markets, enhance competitiveness, and leverage FTAs with alternative economies.

India-Japan Economic Forum

Context:

Prime Minister Narendra Modi attended the India-Japan Economic Forum in Tokyo on August 29, 2025, alongside Japanese Prime Minister Shigeru Ishiba. The forum, organized by the Confederation of Indian Industry and Keidanren (Japan Business Federation), aimed to strengthen bilateral trade and investment between the two nations.

Major announcement during the forum meeting:

- The 12th India-Japan Business Leaders’ Forum (IJBLF) report was presented, highlighting new partnerships during the forum meeting. Several B2B Memorandums of Understanding (MoUs) were signed across sectors such as steel, AI, space, clean energy, education, and skill development. These agreements aim to leverage Indian talent and Japanese technology to build resilient and future-ready supply chains.

Key sectors were identified for future India-Japan collaboration:

- Prime Minister Modi outlined five priority areas for deeper cooperation during the meeting:
 - » **Manufacturing** – Batteries, semiconductors, robotics, ship-building, and nuclear energy.
 - » **Technology & Innovation** – Including AI, biotech, space, and quantum computing.
 - » **Green Energy Transition** – supporting India’s targets of 500 GW of renewable

energy by 2030 and 100 GW of nuclear power by 2047.

- » **Next-Gen Infrastructure** – High-speed rail, mobility solutions, and logistics.
- » **Skill Development & People-to-People Ties** – Enhancing human resource exchanges and talent collaboration.

INDIA-JAPAN

Bilateral Treaties and Agreements

Treaty of Peace (1952)

Agreement for Air Service (1956)

Cultural Agreement (1957)

Agreement of Commerce (1958)

Convention for the Avoidance of Double Taxation (1960)

Agreement on Cooperation in the field of Science and Technology (1985)

Japan-India Comprehensive Economic Partnership Agreement (2011)

Agreement for Transfer of Defence Equipment and Technology (2015)

Agreement for Security Measures for the Protection of Classified Military Information (2015)

Agreement on Social Security (2016)

Agreement for Cooperation in the Peaceful Uses of Nuclear Energy (2017)

Agreement for Reciprocal Provision of Supplies and Services between the Self-Defense Forces of Japan and the Indian Armed Forces (2021)

About India Japan Relations:

- **Historical Background:** India-Japan ties date back to the 6th century when Buddhism was introduced to Japan, profoundly impacting Japanese culture. This historical connection has fostered a sense of closeness between the two nations. In the post-World War II period, India's iron ore helped Japan recover from devastation, laying the groundwork for future cooperation.
- **Key Developments in India-Japan Relations:** Their bilateral relationship evolved over the years—from the Global Partnership (2000) to the Special Strategic and Global Partnership (2014).
- **Indo-Pacific and Defence Synergy:** India's Act East Policy and the Indo-Pacific Oceans

Initiative (IPOI) align with Japan's Free and Open Indo-Pacific (FOIP) vision. Defence ties have grown through key agreements, joint naval exercises like JIMEX and Malabar, and co-development projects like UNICORN. Both sides are now considering an upgrade to their 2008 Security Cooperation Framework in response to evolving regional dynamics.

- **Economic & Infrastructure Cooperation:** Bilateral trade touched \$22.8 billion in 2023–24, with Japan among India's top investors. Japan's ¥580 billion Official Development Assistance (ODA) in 2023–24 supported infrastructure projects like the Mumbai-Ahmedabad Bullet Train. Emerging sectors include semiconductors, AI, and supply chain resilience, with new economic security initiatives in the pipeline.
- **People-to-People and Multilateral Cooperation:** Over 665 academic partnerships, cultural exchanges, and diaspora ties continue to strengthen mutual understanding. India and Japan also cooperate in multilateral platforms like the Quad, ISA, CDRI, and SCRI, reinforcing shared goals for a free, inclusive Indo-Pacific.

Conclusion:

The India-Japan Economic Forum showcased the growing partnership between the two nations, with a focus on economic cooperation, technological innovation, and sustainable development.

India-Bhutan Relations on Agriculture

Context:

On August 28, 2025, India and Bhutan signed a Memorandum of Understanding (MoU) on Technical Cooperation in Agriculture and Allied Sectors in Thimphu during the 1st Joint Technical Working Group (JTWG) meeting. This development marks a major milestone in deepening bilateral development cooperation in agriculture, food security, and sustainable

farming.

Key Areas of Cooperation:

- **Agricultural Research and Innovation:** Joint research initiatives and knowledge sharing to improve crop yields and farming practices.
- **Livestock Health and Production:** Collaboration on animal health, breeding, and nutrition to enhance livestock productivity.
- **Post-Harvest Management:** Improving techniques for handling, storing, and marketing agricultural produce.
- **Value Chain Development:** Enhancing the efficiency and profitability of agricultural value chains.
- **Capacity Building:** Training and capacity-building programs for farmers, researchers, and extension workers.



India–Bhutan Relations:

- India and Bhutan enjoy a special and enduring bilateral relationship rooted in geographic proximity, cultural affinity, and shared strategic interests. The recent MoU on technical cooperation in agriculture and allied sectors must be seen as part of this broader, time-tested partnership.

Foundations of Bilateral Cooperation:

- **Treaty-Based Relationship:** The Treaty of Friendship and Cooperation (1949), revised in 2007, provides the legal and diplomatic foundation of ties. It guarantees mutual

respect for each other's sovereignty while promoting peace and cooperation.

- **Economic Engagement:** India remains Bhutan's largest trading partner and top investor. The 2016 Trade, Commerce, and Transit Agreement facilitates duty-free transit for Bhutanese exports through India, supporting Bhutan's economic sustainability.
- **Developmental assistance:** India plays a critical role in Bhutan's development, funding substantial portions of its Five-Year Plans. Key areas of support include infrastructure, health, education, and digital initiatives such as the Digital Drukgyul mission.
- **Defense and Security Cooperation:** With no air force or navy of its own, Bhutan depends heavily on India for military training, equipment, and air defense. India also supports Bhutanese officers at Indian military institutions.
- **Digital Cooperation and Connectivity:** India is supporting Bhutan's digital transformation through fiber optic networks, e-governance platforms, and capacity-building under the Digital Drukgyul initiative.
- **Strategic Geography:** Bhutan's location between India and China gives it immense strategic importance. The Doklam plateau, near the Chumbi Valley, remains sensitive due to its proximity to the Siliguri Corridor (India's 'chicken neck').

Conclusion:

The 2025 India–Bhutan MoU on Agriculture reflects more than just technical cooperation—it is part of a larger strategic and development framework that sustains India's enduring ties with Bhutan. At a time when Bhutan is engaging more globally (e.g., with China), India's proactive, respectful partnership in vital sectors like agriculture, digital infrastructure, and defense reaffirms its position as Bhutan's most reliable ally. It is a model for India's broader regional diplomacy and South-South cooperation.



Environment & Ecology



India is often described as a land of rivers and monsoons, yet beneath this image lies a stark reality—groundwater, not surface water, sustains the majority of the country's basic needs. It provides over 85% of rural drinking water and nearly 65% of irrigation water, making it the lifeline for both households and agriculture. But in recent decades, excessive and often unregulated extraction has not only depleted aquifers but also triggered a far more insidious threat—widespread groundwater pollution. Once considered one of nature's purest reserves, groundwater in many regions is now tainted with nitrates, heavy metals, industrial chemicals, radioactive elements, and disease-causing microbes. The contamination is often invisible, seeping silently into daily life, yet it poses a severe risk to the health and livelihoods of millions.

Extent of the Problem:

❖ The 2024 Annual Groundwater Quality Report by the Central Ground Water Board (CGWB) offers a sobering assessment.

Testing samples from 440 districts across the country, the report found:

- » Nitrate contamination in over 20% of samples, driven largely by the overuse of chemical fertilisers and leaching from faulty septic systems.
- » Fluoride levels above safe limits in over 9% of samples, with serious health impacts in states such as Rajasthan, Andhra Pradesh, and Telangana.
- » Arsenic pollution in parts of Punjab and Bihar far exceeding the WHO's 10 µg/L limit, linked to cancer and neurological disorders.
- » Uranium concentrations above 100 ppb in several districts of Punjab, Andhra Pradesh, and Rajasthan—traced to phosphate fertiliser use and excessive groundwater withdrawal.
- » Iron contamination in over 13% of tested samples, contributing to gastrointestinal and developmental problems.

❖ These are not abstract numbers—they represent long-standing neglect, weak

policy enforcement, and the absence of robust preventive action.

Groundwater “Death Zones” in India:

- ❖ In some places, contamination has reached levels that have caused immediate and visible tragedies:
 - » In Budhpur, Baghpat (U.P.), 13 people died within two weeks due to kidney failure and related complications—suspected to be linked to toxic industrial discharges from nearby paper and sugar mills polluting borewells.
 - » In Jalaun (U.P.), residents reported petroleum-like fluids from hand pumps, likely due to underground fuel leaks.
 - » In Paikarapur, Bhubaneswar, a faulty sewage treatment plant allowed wastewater to seep into groundwater, causing mass illness among hundreds.
- ❖ Such events are not isolated. They reflect a consistent pattern of weak enforcement, inadequate oversight, and the lack of public visibility for what is essentially an underground disaster

Health Impacts:

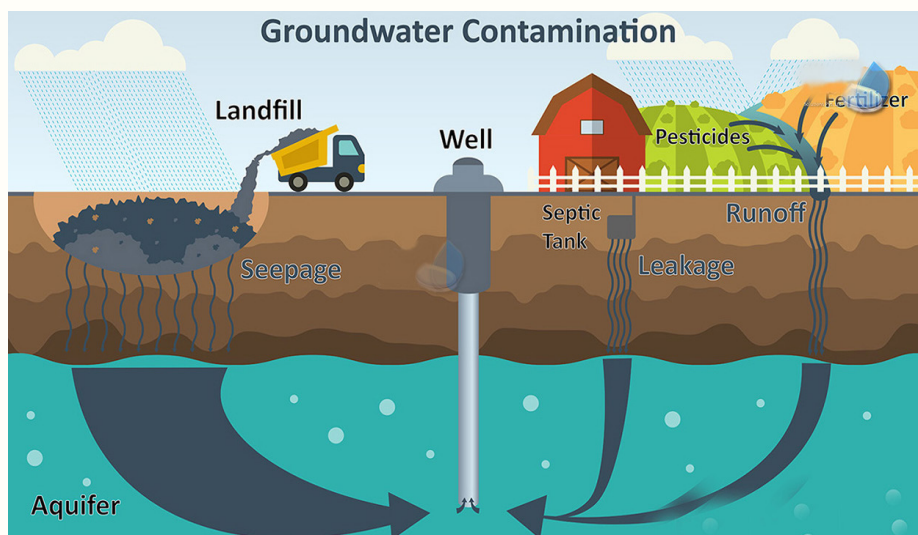
Studies by the Indian Council of Medical Research (ICMR) and WHO India confirm that contaminated groundwater has become a nationwide public health crisis.

❖ Fluoride

- » Present in 230 districts across 20 states, fluoride contamination affects around 66 million people.
- » Skeletal fluorosis, a painful and disabling condition causing joint stiffness, bone deformities, and stunted growth, is

especially common among children.

- » In Rajasthan, more than 11,000 villages report cases.
- » In Jhabua (M.P.), fluoride exceeds 5 mg/L, with 40% of tribal children affected.
- » In Unnao (U.P.), over 3,000 cases of skeletal deformities have been recorded.
- » The 2024 CGWB report found 9.04% of 15,259 samples above the WHO limit of 1.5 mg/L, with Sonebhadra (U.P.) recording a 52.3% prevalence and Shivpuri (M.P.) showing levels of 2.92 mg/L.



❖ Arsenic

- » Concentrated in the Gangetic belt—including West Bengal, Bihar, Uttar Pradesh, Jharkhand, and Assam.
- » Long-term exposure causes skin lesions, gangrene, respiratory illnesses, and cancers of the skin, kidney, liver, bladder, and lungs.
- » A 2021 study in Nature Scientific Reports found that elevated blood arsenic levels made 1 in 100 people highly vulnerable to cancer.
- » In Ballia (U.P.), arsenic reached 200 µg/L—20 times the WHO limit—linked to over 10,000 cancer and disease cases.
- » Similar trends are seen in Bhojpur and Buxar (Bihar).

- » The 2024 CGWB report flagged unsafe arsenic levels in 29 districts of U.P., with Bagpat recording a staggering 40 mg/L—4,000 times the safe threshold.

❖ **Nitrates**

- » Especially common in northern India, nitrates are dangerous for infants.
- » When nitrate-rich water is used in baby formula, it can cause methemoglobinemia, or “blue baby syndrome.”
- » The 2023 National Health Profile recorded a 28% rise in hospital admissions for nitrate toxicity over five years, particularly in Punjab, Haryana, and Karnataka.
- » 56% of Indian districts now exceed safe nitrate limits.

❖ **Uranium**

- » Once detected only in select geological zones, uranium contamination is now more common due to groundwater over-extraction and fertiliser use.
- » In Punjab’s Malwa region, a study by the Central University of Punjab found uranium levels above the WHO limit of 30 µg/L.
- » 66% of samples posed a health risk to children, and 44% to adults.

❖ **Heavy Metals**

- » Lead, cadmium, chromium, mercury enter aquifers from industrial discharges.
- » These metals can impair brain development, cause anaemia, weaken the immune system, and damage the nervous system.
- » ICMR–NIREH studies found dangerously high blood lead levels among children in Kanpur (U.P.) and Vapi (Gujarat).

❖ **Microbial Contamination**

- » Caused by leaking septic tanks and sewage infiltration, this leads to repeated outbreaks of cholera, dysentery, hepatitis A, and hepatitis E.
- » In Paikarapur, Bhubaneswar, over 500 people fell ill in a recent outbreak linked to sewage-contaminated groundwater.

Structural Causes

- ❖ The crisis is rooted in regulatory gaps, weak enforcement, and poor data transparency:
 - » The Water Act (1974) does not adequately address groundwater pollution.
 - » The CGWB lacks statutory enforcement powers.
 - » State Pollution Control Boards are chronically understaffed and ill-equipped.
 - » Penalties for polluters are minimal and rarely enforced.
 - » Public access to contamination data is limited.
 - » Over-extraction of groundwater mobilises naturally occurring toxins such as arsenic and fluoride.

Policy Gaps:

- ❖ Currently, India has no National Groundwater Pollution Control Framework. Responsibilities are fragmented between agencies handling drinking water, irrigation, and industrial regulation, and there is poor coordination between public health surveillance and water quality monitoring systems.

Way Forward:

A multi-pronged approach is required, combining regulation, technology, and community participation:

❖ **Regulatory Reforms**

- » Provide CGWB with statutory enforcement powers.
- » Establish clear accountability at state and district levels.

❖ **Monitoring & Data Integration**

- » Use real-time sensors and satellite aquifer mapping.
- » Integrate water quality data with health surveillance systems like HMIS.

❖ **Immediate Public Health Interventions**

- » Deploy arsenic and fluoride removal units in identified hotspots.
- » Expand access to safe piped drinking water.

❖ **Industrial & Agricultural Measures**

- » Mandate zero-liquid-discharge systems

in industries.

- » Monitor effluents and landfill leachate strictly.
- » Promote organic or low-chemical farming with farmer training on nutrient management.

❖ **Community Involvement**

- » Engage panchayats, schools, and local user groups in water testing.
- » Encourage community-led monitoring and reporting systems.

Conclusion:

India's groundwater challenge has shifted from a question of scarcity to one of safety. With over 600 million people dependent on it, contamination has emerged as a full-fledged public health emergency. Unless addressed through urgent legal reforms, institutional strengthening, and active community involvement, the damage to human health and water security could become irreversible.

Short Issues

First Detailed Map of Indri Lemur

Context:

In a groundbreaking study, researchers from Pompeu Fabra University (Spain) and the University of Trento (Italy) have created the first comprehensive map of the gut microbiome of the indri lemur (*Indri indri*). The study, published in *The ISME Journal*, identified 48 bacterial species, of which 47 are entirely new to science.

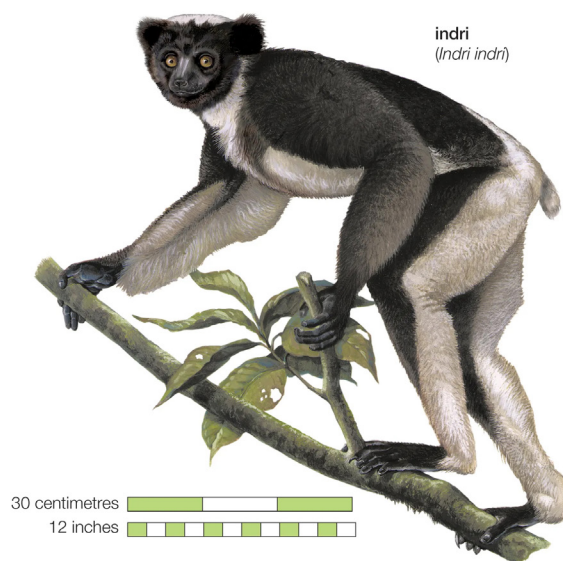
About Indri lemur:

- » **Common Name:** Indri lemur (locally called babakoto)
- » **Scientific Name:** *Indri indri*
- » **Size:** Largest living lemur species, 60–70 cm long with a rudimentary tail
- » **Habitat:** Remote northeastern rainforests of Madagascar (endemic), from sea level to 1,800 meters
- » **Appearance:** Black and white silky fur, varying geographically; round head with pointed face; large hands and feet
- » **Behavior:** Diurnal and arboreal (tree-dwelling)
- » **Diet:** Feeds on leaves, fruits, flowers, and other vegetation
- » **Lifespan:** 15–18 years in the wild
- **Conservation Status:**
 - » Critically Endangered (IUCN) due to habitat loss

- » It is listed by CITES on Appendix I, which prohibits the trade of specimens or parts, except for scientific purposes.

▪ **Social Structure and Behaviour:**

- » Indris live in small family groups, typically monogamous pairs with offspring. They are known for their loud, distinctive calls used for territorial communication.



Significance of the research:

- The indri lemur lives in small, stable family groups and cannot survive in captivity. As a folivorous primate, it plays an essential role in forest ecology.

- The study found that gut bacteria are not acquired from soil, despite indris ingesting it, but are instead socially transmitted within family units.
- Each group of indris hosts distinct bacterial strains, suggesting that microbiomes evolve with geographical and social isolation.

Threats to Indri Lemur:

- » Habitat loss caused by deforestation due to slash-and-burn agriculture and logging
- » Human encroachment into forest areas
- » Hunting by local populations
- These factors contribute significantly to their Critically Endangered status and threaten their survival in the wild

Conclusion:

The discovery highlights a symbiotic relationship between host and microbiome, reinforcing that species extinction also leads to the loss of unique microbial biodiversity. Since almost all identified bacteria are specific to the indri, protecting the species also protects an unexplored microbial ecosystem. This has potential implications for biodiversity conservation, evolutionary biology, and even future biomedical research.

Asian Giant Tortoise Reintroduced in Nagaland

Context:

Recently, 10 critically endangered Asian Giant Tortoises (*Manouria emys*) were reintroduced into the Zeliang Community Reserve in Nagaland's Peren district. This reintroduction was conducted by the Nagaland Forest Department and the India Turtle Conservation Programme (ITCP).

- A unique aspect of this conservation effort is the engagement of local youths as "Tortoise Guardians." These guardians will ensure the protection of the released tortoises and assist in data collection.

About Asian Giant Tortoise:

- The Asian Giant Tortoise (*Manouria emys*)

is the largest land tortoise in mainland Asia and plays a vital ecological role in tropical forest ecosystems. As a slow-moving herbivore, it aids in seed dispersal, soil turnover, and maintaining forest health, earning it the nickname "small elephant of the forest."

- **Habitat & Distribution:**

- » It inhabits moist tropical and subtropical forests across India, Bangladesh, Myanmar, Thailand, Malaysia, and Indonesia. In India, it was once widely found in Northeast India, especially Nagaland and Arunachal Pradesh.

- **Conservation Status**

- » IUCN Red List: Critically Endangered
- » Wildlife (Protection) Act, 1972: Schedule IV species

Key Characteristics:

- **Size:** Up to 60 cm long, weighs over 35 kg
- **Shell:** Dark, heavily domed with visible growth rings
- **Limbs:** Thick, scaly legs with elephant-like feet
- **Lifespan:** 80–100 years
- **Diet:** Leaves, fruits, mushrooms, and decaying plant matter
- **Activity:** Diurnal and solitary, thrives in humid forests

Unique Traits

- One of the few tortoise species that builds above-ground nests and guards its eggs—a rare form of maternal care. Its loss can disrupt forest regeneration, making it a keystone species essential for ecosystem balance.

About India Turtle Conservation Programme (ITCP):

- The program focuses on breeding threatened turtle species in captivity and reintroducing them into the wild.
- For example, the Asian Giant Tortoise, a critically endangered species, is being reintroduced with the help of local youth trained as "parabiologists".
- ITCP emphasizes community involvement

and awareness. Local communities are engaged in patrolling, data collection, monitoring, and raising awareness about turtle conservation.

About Community reserves:

- Community reserves are areas established on private or community land, designated by the State Government to conserve flora and fauna with the consent of local communities.
- These reserves aim to improve socioeconomic conditions and protect local customs, cultures, and practices alongside wildlife conservation.
- They are managed by a Community Reserve Management Committee and fall under the purview of the Wildlife Protection Act (WLPA), 1972.

Conclusion:

This conservation initiative highlights the effectiveness of community-led conservation models. The Zeliang Community Reserve, where the tortoises were released, is one of the many community and conservation reserves in Nagaland that have proven to be successful in preserving forests and wildlife under joint leadership of communities and the Forest Department.

Indo-Burma Ramsar Regional Initiative

Context:

The 15th Meeting of the Conference of the Contracting Parties (COP15) to the Ramsar Convention recently hosted a side event for the Indo-Burma Ramsar Regional Initiative (IBRRI), during which the IBRRI Strategic Plan 2025–2030 was officially launched. This marks a renewed regional commitment to wetland conservation, restoration, and transboundary collaboration in the Indo-Burma biodiversity hotspot.

What is IBRRI?

- The Indo-Burma Ramsar Regional Initiative

(IBRRI) is a regional wetland cooperation framework developed under the Ramsar Convention to address wetland degradation and promote conservation across Southeast Asia.

- It is a joint initiative launched by Cambodia, Lao PDR, Myanmar, Thailand, and Vietnam, in collaboration with the International Union for Conservation of Nature (IUCN) Asia Regional Office.
- Supported by the IUCN's BRIDGE project (Building River Dialogue and Governance)

Objectives of IBRRI:

- To implement the Ramsar Convention's Strategic Plan in a coordinated and transboundary manner.
- To protect, restore, and sustain wetland ecosystems in the Indo-Burma region, a globally recognized biodiversity hotspot.
- To promote multi-stakeholder collaboration, including both governmental and non-governmental entities.



About Strategic Plan 2025–2030:

- The newly launched plan outlines:
 - » A collaborative framework to halt and reverse wetland loss in the region.
 - » Integration of science, traditional knowledge, and regional diplomacy.
 - » Alignment with the Sustainable Development Goals (SDGs) and the Post-2020 Global Biodiversity Framework.

Significance of IBRRI:

- Focuses on the Indo-Burma Biodiversity Hotspot, home to many threatened species.

- **Supports wetland ecosystem services:** flood control, carbon sequestration, water purification, and livelihood generation.
- Promotes regional environmental diplomacy and South-South cooperation.
- Acts as a model for transboundary water governance and Ramsar site management.
- Encourages knowledge sharing among Ramsar parties.
- Builds capacity of wetland managers, researchers, and local communities.

About Ramsar Convention:

- The Ramsar Convention is an international treaty for the conservation and sustainable use of wetlands. It was signed in 1971 in Ramsar, Iran, and came into force in 1975. The convention focuses on the "wise use" of wetlands, recognizing their ecological, economic, cultural, and recreational value. India became a party to the convention on February 1, 1982.
- As of June 2025, India has 91 Ramsar sites, which are wetlands designated as "Wetlands of International Importance" under the Ramsar Convention.

Conclusion:

The IBRRI is a significant initiative for wetland conservation in the Indo-Burma region. By working together, member countries can share knowledge, expertise, and resources to address common challenges and achieve shared goals. Although, India is not a member of IBRRI group, but this initiative is important for regional environmental cooperation in India's extended neighborhood and supports India's Act East Policy.

Earthquake in Kamchatka, Russia

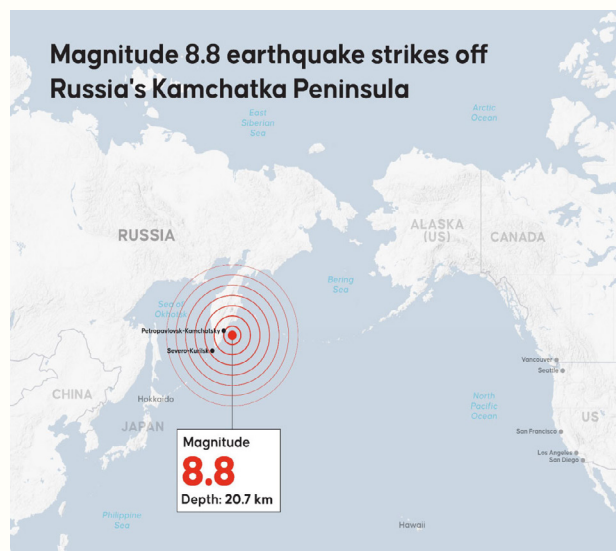
Context:

A massive earthquake measuring 8.8 on the Richter scale recently struck off the coast of Russia's Kamchatka Peninsula on July 30, triggering tsunami warnings across Japan, the west coast of the United States, and evacuations

in Hawaii. This is the most powerful quake globally since the 2011 Japan disaster, which caused a large-scale tsunami and led to the Fukushima nuclear crisis.

Why Kamchatka is a Seismic Hotspot?

- The Kamchatka Peninsula, a 1,250-km-long landmass in Russia's Far East, is one of the world's most seismically active regions. Significant earthquakes have occurred here in 2020, 2006, 1959, 1952, and 1923, many of which were followed by tsunamis.
- This activity is driven by the subduction of the Pacific Plate beneath the Okhotsk microplate. The plate boundary lies along the Kuril-Kamchatka Trench, an oceanic trench that reaches nearly 10 km in depth.
- As the Pacific Plate moves northwestward at a rate of around 86 mm per year, stress builds along the megathrust boundary. When this stress exceeds a threshold, it is released suddenly in the form of an earthquake.



Role of the Pacific Ring of Fire:

- Kamchatka lies along the Pacific Ring of Fire. It is a 40,000-km-long horseshoe-shaped zone of frequent seismic and volcanic activity. It encircles the Pacific Plate and touches over 15 countries including Japan, Indonesia, Chile, Mexico, and the U.S.

- This region is marked by active tectonic boundaries where plates collide, slide past each other, or undergo subduction. Volcanic activity is also common due to magma generation during subduction.

How the Tsunami was Triggered?

- The earthquake caused a sudden vertical displacement of the ocean floor along the subduction zone. When an undersea fault ruptures and shifts the seafloor, it displaces large volumes of water above it. This generates waves that travel outward across the ocean at high speeds, forming a tsunami.
- In this case, the abrupt movement along the Pacific-Okhotsk plate boundary disturbed the seabed in the North Pacific, leading to the formation of tsunami waves.
- As these waves approached shallow coastal waters, their height increased, prompting emergency warnings in nearby and distant coastal regions.

Magnitude vs. Intensity:

- The US Geological Survey (USGS) classifies the July 30 quake as a “great earthquake” (magnitude ≥ 8). Such events typically occur once a year worldwide. It is the sixth-largest quake ever recorded.
- Magnitude measures the energy released at the quake’s source and is recorded using seismographs. Each unit increase in magnitude reflects a 31.6 times increase in energy release. For example, this quake released vastly more energy than the 7.7 magnitude quake that struck Myanmar in March 2025.
- Unlike magnitude, intensity refers to the level of shaking felt at a specific location and can vary depending on distance from the epicentre.

Conclusion:

This event underscores the seismic vulnerability of subduction zones and the need for robust tsunami warning systems, disaster preparedness, and international coordination—especially for countries within the Pacific Ring

of Fire.

Plastics in South-east and East Asia

Context:

Recently, the Organization for Economic Cooperation and Development (OECD) has expressed concern over the growing plastic pollution crisis in South East and East Asia. This comment has come at a time when the United Nations talks on the global plastic treaty have failed again.

Current Situation:

- The ASEAN Plus Three (APT) region, which includes the 10 ASEAN countries (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam) along with China, Japan, and South Korea, is experiencing an unprecedented rise in plastic use.
- According to the OECD report, plastic consumption in this region is set to surge from 152 million tonnes in 2022 to 280 million tonnes by 2050 under current policies.
- This increase is primarily driven by packaging products, which make up the largest share of plastic usage.

Global Impact:

- The report also highlights the significant contribution of the plastic lifecycle to greenhouse gas emissions. The ASEAN Plus Three region’s emissions from plastic production and waste management are projected to nearly double from 0.6 GtCO₂e in 2022 to over 1 GtCO₂e by 2050.

About Global Plastics Treaty:

- The Global Plastics Treaty, officially titled "End Plastic Pollution: Towards an International Legally Binding Instrument", is a landmark international agreement under negotiation to tackle the escalating issue of plastic pollution.
- The treaty aims to introduce legally binding

measures to manage plastics throughout their entire lifecycle—from production to disposal—thus addressing one of the most pressing environmental challenges of our time.

Objective:

- The treaty seeks to end plastic pollution by 2040, promoting a circular economy for plastics.
- This involves a shift towards sustainable practices that emphasize responsible management across all stages of plastic use, including design, production, consumption, and disposal.
- By creating a circular system, the treaty aims to minimize plastic waste and reduce its environmental impact globally.

Focus Areas in Negotiations:

- Discussions during the negotiation process focus on:
 - » Phasing out single-use plastics (such as straws, bags, and bottles).
 - » Establishing design requirements for recyclability to ensure that plastic products are easier to recycle and reuse.
 - » Creating a framework for international cooperation, especially given the transboundary nature of plastic pollution.

India's Position:

- India, as one of the largest consumers and producers of plastics, plays a crucial role in the treaty's development. While it has not explicitly stated its position, India is likely to advocate for a balanced approach that considers both environmental protection and developmental needs.
- India's commitment to sustainable development goals (SDGs) and its growing role in global environmental governance will influence its position on the treaty.

Conclusion:

As the world prepares for the final round of UN negotiations on a global plastics treaty, the OECD's report serves as a timely reminder of the urgent need for action. Southeast and

East Asia, home to over a third of global plastic leakage, must act decisively to address plastic pollution and safeguard both the environment and human health.

Flash Floods in Uttarkashi district

Context:

On August 5, 2025, flash floods and mudslides hit the Dharali village in Uttarkashi district, Uttarakhand, resulting in the loss of at least four lives and extensive damage to buildings, shops, and hotels. While flash floods are not uncommon in the hilly regions of Uttarakhand, the cause of this particular disaster lies in a combination of the region's unique topography and heavy, continuous rainfall.

What caused flash flood in the Uttarkashi district:

- The flash floods in Uttarkashi were caused by a combination of factors:
 - » **Heavy Rainfall:** Continuous rainfall over several days saturated the ground, increasing runoff and leading to flash floods, even though it wasn't a "cloudburst."
 - » **Rugged Topography:** The steep, mountainous terrain and deep valleys caused rainwater to rapidly flow downhill, gaining momentum and triggering floods.
 - » **Landslides and Mudslides:** Heavy rain loosened the soil, causing debris to flow into rivers and streams, further increasing water flow.
 - » **Climate Change:** Accelerated melting of glaciers due to climate change added more water to already swollen rivers, heightening flood risks.
 - » **Lack of Vegetation:** Limited vegetation made it harder for the soil to absorb water, causing rainwater to flow quickly downhill, contributing to flash floods.

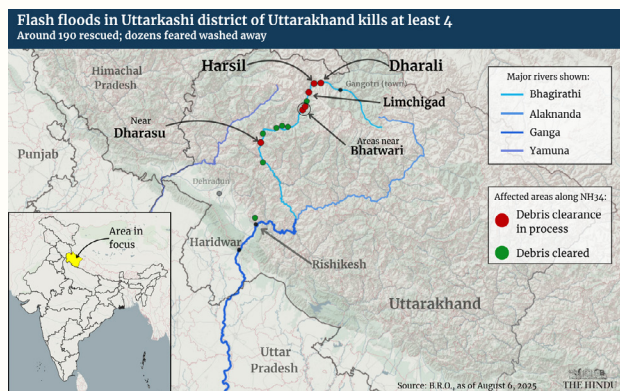
What are Flash Floods?

- Flash floods are sudden, rapid floods that

occur within a short period, usually within six hours of intense rainfall or other water accumulation events. They can cause swift rises in water levels in rivers, streams, or urban areas, often with little warning.

Causes of Flash Floods:

- Flash floods can result from heavy rainfall, dam failures, debris jams, or the sudden release of water from natural reservoirs like glacial lakes. In India, flash floods are frequently linked to cloudbursts, which involve intense rainfall over a short duration. Factors like the steepness of terrain, soil type, and human-made barriers also contribute to flash floods.



Features of Flash Floods:

- Flash floods are characterized by their high intensity, carrying large volumes of water, debris, and sediment.
- They can overwhelm drainage systems, cause Rivers to overflow, and inundate low-lying areas.
- Flash floods are more common in narrow, steep rivers or urban areas where concrete prevents water absorption.

Difference from Regular Floods:

- Flash floods develop rapidly, often within hours, while regular floods occur gradually over days or weeks.
- Flash floods are more intense but short-lived, whereas regular floods can last for longer periods.
- Flash floods offer little warning time, while

regular floods usually allow more time for evacuation.

Mitigating Flash Floods:

- Early warning systems, such as weather monitoring and river gauges, play a crucial role in minimizing damage. In India, agencies like IMD use Doppler radars for flash flood forecasting, while the NDMA advises regulation of habitation in flood-prone areas.

Conclusion:

The flash floods in Uttarkashi on August 5, 2025, highlight the vulnerability of the region's unique topography, which makes it prone to disasters such as landslides, debris flows, and flash floods. The continuous heavy rainfall, compounded by climate change, created the perfect conditions for such an event. This tragic event underscores the need for proactive measures, such as better early warning systems, infrastructure resilience, and the restoration of vegetation to prevent further destruction in such vulnerable regions.

New District Flood Severity Index

Context:

Researchers from IIT Delhi and IIT Gandhinagar have recently developed a new tool: the District Flood Severity Index (DFSI).

Need for the District Flood Severity Index:

- Most existing flood indices focus on the magnitude of flooding, such as the area submerged or the number of flood events.
- However, these measures do not capture the full human cost of floods—such as deaths, injuries, and displacement—which are critical for planning and disaster management.
- Since districts are the key administrative units for governance and relief work in India, having a district-level flood severity index can help policymakers prioritize resources more effectively.

Components of the DFSI:

The DFSI incorporates multiple factors:

- The mean duration of flooding events in days
- The percentage of district area historically flooded
- The total number of deaths and injuries caused by floods
- The population of the district, to assess the scale of impact relative to people affected
- This composite approach provides a more holistic understanding of flood severity, reflecting both the physical and social dimensions of flooding.

Implications:

- Analysis shows that the number of flood events alone does not determine severity. For example, Thiruvananthapuram district in Kerala experiences frequent floods but ranks lower on severity due to fewer fatalities, whereas districts like Patna face more severe human impacts despite fewer flood events. This highlights the importance of including human factors in flood assessment.

Future Scope:

- While the DFSI is a significant advancement, researchers note it currently excludes some data such as the extent of flooded agricultural land. Future refinements will include more detailed spatial data and urban-rural distinctions.
- The DFSI can guide flood mitigation strategies, improve early warning systems, and support disaster-resilient planning in flood-prone areas.

Flooding in India:

- Flooding remains one of India's most devastating natural disasters, affecting nearly 40 million hectares (10% of the land). The Indo-Gangetic-Brahmaputra plains are the most flood-prone, with states like Assam, Bihar, Uttar Pradesh, and West Bengal being highly vulnerable.
- Urban flooding is rising due to poor drainage and unplanned development. Climate change is intensifying rainfall, increasing

flood frequency and severity.

- Flash floods, habitat destruction, and displacement further amplify the socio-economic and environmental impacts of flooding.

Conclusion:

The DFSI will key for India's flood management strategy from focusing solely on floodwater to factoring in people and impact. It is a crucial tool for climate-resilient planning and protecting vulnerable populations in an era of increasing extreme weather events.

16th Lion Population Estimation Report

Context:

According to the 16th Lion Population Estimation Report (2025), India's Asiatic lion population has increased from 674 in 2020 to 891 in 2025, a significant 32.2% rise. This conservation success highlights the effectiveness of habitat management and protection efforts in Gir National Park and Wildlife Sanctuary, Gujarat the only habitat of Asiatic lions globally.

Key Highlights:

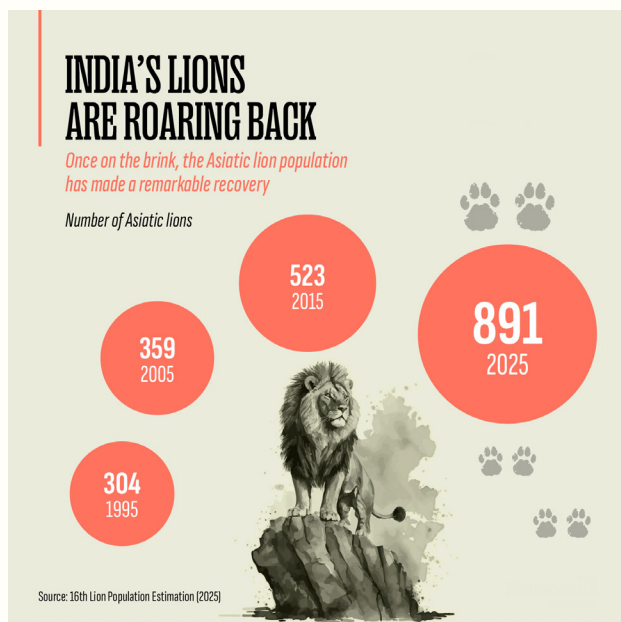
- **Population Growth:** The Asiatic lion population has surged by 70.36% over the past decade, from 523 in 2015 to 891 in 2025.
- **Area Expansion:** The area of distribution has expanded by 59.09% during the same period.
- **Adult Female Growth:** The number of adult females has grown from 260 to 330, a 26.9% increase, bolstering the species' reproductive capacity.

Regional Distribution:

- **Amreli District:** Currently holds the highest number of lions, with 82 adult males, 117 adult females, and 79 cubs.
- **Mitiyala Wildlife Sanctuary:** Recorded the sharpest growth, with a 100% increase in lion population.
- **Bhavnagar Mainland:** Saw an 84% increase,

while the South Eastern Coast recorded a 40% growth.

- **Declining Zones:** Girnar Wildlife Sanctuary (-4%) and Bhavnagar Coast (-12%) show marginal declines, reflecting possible stress from human-wildlife interactions.



Challenges:

- Despite the growth, experts express concern over changing lion behaviour due to increasing proximity to human settlements. Only 20% of lions now reside in the 258 sq. km core area of Gir, while the majority live in the buffer zones and surrounding areas, where they prey on livestock or consume human-disposed carcasses.
- A 2025 study by the Wildlife Institute of India, Gujarat Forest Department, and partners found lion attacks on livestock have risen by 10% per year, with livestock losses per village increasing by 15% annually.

About Asiatic Lion:

- The Asiatic lion (*Panthera leo persica*) is a distinct subspecies found exclusively in Gir National Park, Gujarat. Smaller than the African lion, it is known for a distinct belly fold and a less prominent mane. It is the only wild population of this species in the world, making its conservation a global

priority.

- **Conservation Status and Legal Protection:** Asiatic lions are classified as Endangered on the IUCN Red List, listed in CITES Appendix I, and protected under Schedule I of the Wildlife (Protection) Act, 1972. These classifications reflect their vulnerability and the need for strict conservation.
- **Conservation Efforts and Habitat Expansion:** India's focused efforts under Project Lion and the Asiatic Lion Conservation Project aim to strengthen habitat, prevent disease, and expand the population. Lions have moved beyond Gir into Barda Wildlife Sanctuary and surrounding areas, with their population monitored through regular censuses.

Conclusion:

The significant growth of India's Asiatic lion population is a testament to the country's dedication to wildlife conservation. With continued efforts under Project Lion and the Gujarat government's leadership, the future of this majestic species looks promising. However, addressing the challenges of human-lion conflict and ensuring sustainable coexistence will be crucial for the long-term survival and prosperity of the Asiatic lion.

Survey on Salt Water Crocodile

Context:

A recent 2025 survey by the West Bengal Forest Department has found a substantial increase in the population of saltwater crocodiles (*Crocodylus porosus*) in the Sundarban Biosphere Reserve compared to 2024. The State government's consistent efforts over the decades under the Bhagabatpur Crocodile Project have been credited with this positive trend.

Key Findings:

- **Population Estimates (2025):**
 - » Estimated Range: 220 – 242 crocodiles
 - » Direct Sightings: 213 individuals
 - **Adults:** 125

- **Juveniles:** 88
- **Hatchlings:** 23
- **Comparison with 2024:**
 - » **Adults:** 71 (2024) → 125 (2025)
 - » **Juveniles:** 41 → 88
 - » **Hatchlings:** 2 → 23
- This is a significant increase in all demographic categories.

About saltwater crocodile :

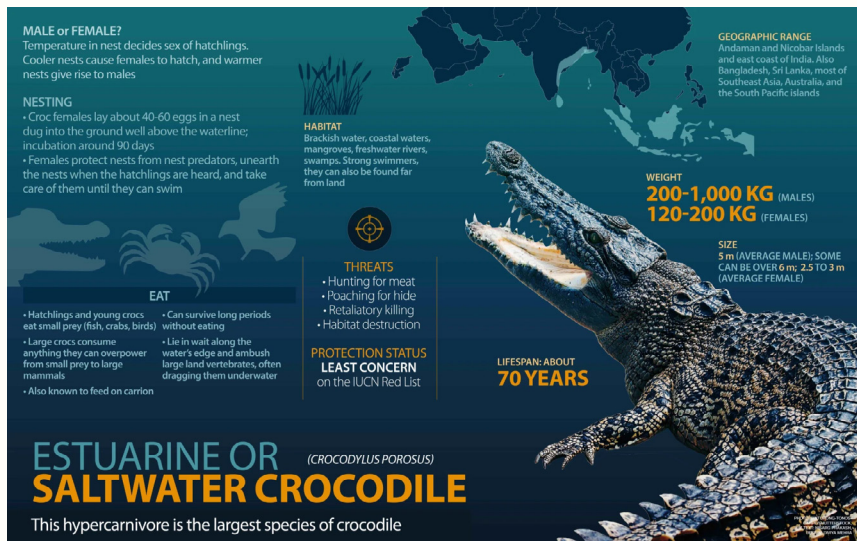
- The saltwater crocodile (*Crocodylus porosus*) is the largest of all crocodilians and the largest reptile in the world, often exceeding 6 meters in length. Found across coastal India, Southeast Asia, and northern Australia, it inhabits estuaries, rivers, mangroves, and coastal wetlands. In India, key habitats include Bhitarkanika National Park (Odisha), Sundarbans (West Bengal), and the Andaman and Nicobar Islands.

- » **Ecological Significance and Threats:** As an apex predator, the saltwater crocodile helps maintain ecological balance by controlling prey populations and cleaning water bodies by scavenging carcasses. Major threats include habitat loss, illegal hunting, and increasing human-wildlife conflict, particularly in fishing communities near mangroves.
- » **Conservation Measures** Listed as 'Least Concern' by the IUCN, conservation efforts are ongoing in India. The Crocodile Conservation Project (1975) and Bhagabatpur Crocodile Project (West Bengal) have aided population recovery.

About Sundarbans Biosphere Reserve:

- The Sundarbans Biosphere Reserve, established in 1989, is a vital ecosystem in West Bengal, forming part of the world's largest delta created by the Ganges, Brahmaputra, and Meghna rivers. It is

home to the world's largest tidal halophytic mangrove forest and is bordered by the Muriganga River (west) and the Harinbanga and Raimangal Rivers (east).



Ecological Significance:

- The Sundarbans is the only mangrove forest inhabited by the Royal Bengal tiger. It is a UNESCO World Heritage Site and a Ramsar Site, underlining its global ecological importance.
- The area supports diverse wildlife, including saltwater crocodiles, dolphins, turtles, and numerous bird species. It also serves as a natural barrier against cyclones and coastal erosion, and acts as a carbon sink, helping mitigate climate change.

Conclusion:

The thriving population of saltwater crocodiles in the Sundarbans is a testament to the success of conservation efforts. However, continued vigilance and protection of their habitat are necessary to ensure the long-term sustainability of this iconic species.

Feral Horses at Risk in Dibru-Saikhowa National Park

Context:

A recent study has raised alarm over the shrinking grasslands of Dibru-Saikhowa National Park (DSNP) in Assam, India — the only known habitat of feral horses in the country. The park's delicate ecosystem is now under serious threat from both invasive and native plant species, leading to habitat degradation and loss of biodiversity.

Native and Invasive Plants:

- An invasive plant is a non-native species that spreads rapidly and aggressively in a new environment, often outcompeting native plants. It disrupts local ecosystems, reduces biodiversity, and can cause environmental and economic harm.
- The study identified two native plants, *Bombax ceiba* (Simalu) and *Lagerstroemia speciosa* (Ajar), which are contributing to the changes in the park's ecosystem.
- These native species, along with invasive species like *Chromolaena odorata*, *Ageratum conyzoides*, *Parthenium hysterophorus*, and *Mikania micrantha*, are altering the park's grassland-dominated landscape.



Impact on Biodiversity:

- The study found that the changes in the park's landscape pose a serious threat to the survival of grassland-obligate faunal species, many of which are already globally threatened due to ongoing habitat loss.
- Some notable species that are rapidly decreasing include the Bengal florican, hog deer, and swamp grass babbler.

Concerns about Feral Horses:

- Dibru-Saikhowa National Park in Assam is home to India's only population of feral horses. Unlike wild animals, they lack legal

protection under the Wildlife Protection Act, 1972, making them vulnerable to multiple threats.

- These horses face serious threats from habitat loss, floods, competition with livestock, and illegal capture.

About Dibru-Saikhowa National Park:

- Located in Assam's Dibrugarh and Tinsukia districts, Dibru-Saikhowa National Park spans 765 sq. km, with a core area of 340 sq. km.
- Surrounded by the Brahmaputra, Lohit, and Dibru rivers, it boasts a tropical monsoon climate and is India's largest salix swamp forest, supporting rich flora and fauna.
- Declared a Reserved Forest in 1890, it became a Wildlife Sanctuary in 1995, a Biosphere Reserve in 1997, and a National Park in 1999.
- The park hosts over 36 mammal species, including Bengal tigers, elephants, and feral horses, and is a haven for over 500 bird species like the white-winged wood duck and Bengal florican.
- It features semi-evergreen forests, grasslands, and wetlands, with rich orchid flora and diverse fish and reptile populations, making it a vital biodiversity hotspot.

Conclusion:

Researchers recommend targeted grassland restoration, stricter control of invasive species, and community-based conservation initiatives. Without immediate intervention, the feral horses of Dibru-Saikhowa may soon lose their last refuge.



Science & Technology



Atmanirbhar Bharat 2.0: Need to Reform Governance and Regulation for the Deep-Tech era

Context:

On the 79th Independence Day, PM Narendra Modi laid out a futuristic vision for India's technological self-reliance (Atmanirbharta) in deep-tech areas such as artificial intelligence, semiconductors, space, quantum computing, and bioengineering. However, this vision demands not only technological innovation but also structural reforms in governance.

About Deep tech:

❖ Deep tech refers to innovative technologies built upon significant scientific discoveries or complex engineering, aiming to solve major societal and environmental challenges. Unlike shallow tech, which involves incremental digital upgrades, deep tech startups focus on breakthrough innovations in fields like AI, biotechnology, quantum computing, and advanced materials. These ventures require substantial, long-term investment for research and development and can take decades to mature and reach

market readiness.

Why deep tech matter for India:

- ❖ Deep tech is vital for India's transformation into a knowledge-driven economy. It powers innovation in advanced sectors like artificial intelligence, biotechnology, and the Internet of Things (IoT), creating new markets and boosting industrial productivity. This shift not only enhances economic efficiency but also lays the foundation for future industries, enabling India to move beyond traditional manufacturing-led growth.
- ❖ Deep tech also fosters entrepreneurship by enabling startups to pursue long-term, high-impact innovations, attracting global talent and investment. These ventures contribute to rising exports, job creation, and a strong innovation ecosystem.
- ❖ Deep tech addresses grand societal challenges—ranging from climate change and energy access to public health and cybersecurity. It strengthens national

security by promoting indigenous technologies in defence, navigation, and critical infrastructure, aligning with the vision of Aatmanirbhar Bharat. Technologies like AI and quantum computing also enhance decision-making in governance and development sectors.

Current State of India's Tech Ecosystem:

- ❖ India has made significant strides in digital technology, particularly in public digital infrastructure. Platforms like UPI, Aadhaar, CoWIN, and DigiLocker have revolutionized service delivery, financial inclusion, and digital governance. India now leads the world in per capita mobile data consumption, and cities like Bengaluru and Hyderabad have emerged as global tech hubs.
- ❖ Moreover, India's skilled workforce plays a pivotal role in global innovation, with companies like Nvidia and IBM running major R&D centers in the country.
- ❖ However, these achievements are mostly concentrated in low-tech and mid-tech sectors, such as IT services, fintech, and social media. In contrast, India's deep-tech ecosystem—involving AI, quantum computing, semiconductors, etc.—remains underdeveloped and import-dependent. There is also limited synergy between academia, industry, and government, which hinders research translation and innovation scale-up.

Colonial Bureaucracy issues for deep tech:

- ❖ India's bureaucratic structure is a legacy of the colonial Indian Civil Service (ICS), originally designed to administer control, not to drive innovation. Post-independence, India retained the Westminster model with minimal structural reforms.
- ❖ Today, this results in several governance challenges:
 - » Generalist dominance continues,

with IAS officers often heading highly specialized departments (e.g., in AI or biotechnology).

- » Lateral entry and domain expertise remain limited at senior levels.
- » Red tape, a risk-averse culture, and internal promotions hinder accountability and innovation.
- ❖ The Veerappa Moily Administrative Reforms Commission (2005) highlighted these issues and recommended:
 - » Lateral entry of experts
 - » Performance-based evaluations
 - » A code of ethics and accountability mechanisms



- ❖ However, implementation has been piecemeal. Without reforming this outdated system, India's ambition to lead in deep-tech will remain constrained.

Regulatory Bottlenecks for Deep Tech:

India's regulatory environment remains a significant constraint on its deep-tech ambitions. While regulation is necessary for public interest and stability, excessive and outdated frameworks can stifle innovation and

investment.

❖ **Problem Areas:**

- » **Multiple and overlapping regulators:** Many sectors—like digital finance, data protection, and biotech—are governed by multiple authorities, leading to confusion, delays, and inefficiencies.
- » **Regulatory overreach:** In emerging sectors such as cryptocurrency, biotech, and AI, unclear or restrictive regulations create uncertainty, discouraging startups and investors from entering the space.
- » **Absence of innovation sandboxes:** India lacks sufficient regulatory sandboxes or innovation zones, which are essential for controlled experimentation and piloting of new technologies.
- » **Colonial-era compliance burdens:** Many business regulations are still based on outdated laws from the colonial period, resulting in excessive paperwork and procedural delays.

International Comparisons:

To strengthen its deep-tech ecosystem, India can draw valuable lessons from global leaders:

❖ **United States**

- » Independent regulatory bodies (e.g., FTC, FCC) ensure transparency, competition, and innovation.
- » Massive public R&D funding through agencies like DARPA and initiatives like the CHIPS Act support foundational research in emerging technologies.
- » A flexible bureaucracy enables domain experts to lead key institutions, allowing for more specialized and responsive governance.

❖ **China**

- » Adopts centralized planning with a clear national vision for deep-tech dominance.
- » Strong state-industry collaboration accelerates innovation pipelines.
- » Focus on long-term R&D investment and quick decision-making has helped China leapfrog in critical technologies like AI, 5G, and semiconductors.

Roadmap for Reform:

To realize India's deep-tech potential and become a developed nation by 2047, institutional transformation is as crucial as technological advancement.

❖ **Immediate Priorities**

- » Reform UPSC to create fast-track recruitment paths for domain specialists.
- » Promote lateral entry and encourage collaboration between bureaucracy, academia, and industry.
- » Develop agile regulatory mechanisms, like regulatory sandboxes, to support innovation in emerging sectors.
- » Modernize the judiciary through digital platforms and tech-specialized fast-track courts.
- » Introduce performance-linked accountability in bureaucracy to align it with national innovation goals.

❖ **Long-Term Goals**

- » Build indigenous capabilities in critical deep-tech areas to reduce import dependence.
- » Cultivate a culture of collaborative governance, breaking silos between institutions.
- » Redesign institutional frameworks to match the scale and speed required for a tech-driven economy.

Conclusion:

India's deep-tech ambitions reflect a bold national vision, but their realization hinges not only on technology development but also on deep institutional reform. As PM Modi rightly stated, self-reliance is about capability, not just trade balance. To build that capability, India must move beyond Digital India and invest in an Institutionally Modern India—where governance structures are agile, accountable, and innovation-ready. Only then can India lead not just in adoption, but in the creation of cutting-edge technologies and emerge as a global deep-tech power by 2047.

Short Issues

WHO Classifies Hepatitis D as Carcinogenic

Context:

The World Health Organization (WHO) has officially classified the Hepatitis D virus (HDV) as carcinogenic, meaning it has the potential to cause cancer, particularly liver cancer. The WHO's announcement stems from the International Agency for Research on Cancer's (IARC) reclassification of hepatitis D as carcinogenic, supported by data from a study published in 'The Lancet Oncology.'

About Hepatitis D and why is it dangerous?

- Hepatitis D is a serious liver infection caused by the HDV. However, HDV is a defective virus—it cannot infect on its own and requires the Hepatitis B virus (HBV) for replication. Therefore, Hepatitis D only affects individuals already infected with Hepatitis B. This co-infection is highly dangerous.
- HDV spreads similarly to HBV and Hepatitis C—through blood transfusions, unsafe injections, sexual contact, and mother-to-child transmission. Diagnosis is done via HDV-RNA blood tests that detect specific antibodies.
- Studies show that patients with both HBV and HDV are 2 to 6 times more likely to develop liver cancer than those with HBV alone. Additionally, about 75% of HDV-infected patients may develop liver cirrhosis within 15 years.

Why the Hepatitis B Vaccine is Crucial:

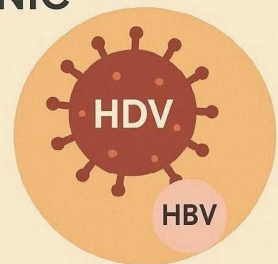
- Since HDV requires HBV to replicate, preventing HBV through vaccination also prevents HDV. The Hepatitis B vaccine, included in India's national immunisation programme, is key. Unfortunately, the coverage rate is only 50%, leaving many vulnerable.
- The vaccine is administered in three doses: at birth, 1 month, and 6 months. Catch-up vaccination is also possible for adults, especially those at high risk.

About Viral hepatitis:

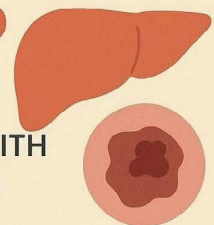
- Viral hepatitis is liver inflammation caused by viruses, with five main types: A, B, C, D, and E. Hepatitis A and E spread via the fecal-oral route, usually through contaminated food or water, and are typically acute infections.
 - » Hepatitis B and C are transmitted through infected blood or body fluids and can become chronic, leading to cirrhosis or liver cancer. Hepatitis D occurs only in people with hepatitis B and worsens liver disease.
 - » Vaccines are available for hepatitis A and B, and B vaccination also prevents hepatitis D. Hepatitis C lacks a vaccine but has effective treatments. Hepatitis E prevention depends on sanitation.

HEPATITIS D CLASSIFIED AS CARCINOGENIC TO HUMANS

Hepatitis D
occurs only in
individuals
infected with
hepatitis B



AND IS ASSOCIATED WITH A
2-TO 6-FOLD
HIGHER RISK OF
DEVELOPING LIVER
CANCER COMPARED WITH
HEPATITIS B INFECTION
ALONE



Conclusion:

WHO's classification of Hepatitis D as carcinogenic highlights the urgent need for increased Hepatitis B vaccination, especially

in vulnerable populations. It will likely lead to enhanced global surveillance, research funding, and public health initiatives aimed at reducing liver cancer cases caused by HBV-HDV co-infection through prevention, early detection, and safer healthcare practices.

AI-Designed Proteins Boost T Cell Production

Context:

A team of scientists from Harvard, including Indian-origin researcher Dr. Rubul Mout, has successfully used AI-designed proteins to stimulate the production of T cells, a key component of the immune system. Their research, published in *Cell*, focuses on activating the Notch signalling pathway, essential for transforming progenitor cells into T cells.

The Science behind AI-Designed Proteins:

- The researchers engineered synthetic protein activators that are safe and effective for use within the human body. The AI-designed proteins activate Notch signaling, a cell-to-cell communication system guiding cell development.
- This pathway is essential for forming T cells, which fight infections and cancers. By leveraging AI-based protein design technologies, researchers can now generate highly specific protein binders that recognize evasive disease markers for targeted cell killing.

Key Benefits of AI-Designed Proteins

- **Mass T Cell Generation:** Meets clinical needs for CAR T cell therapy, enabling large-scale production of T cells for cancer treatment.
- **Vaccine Support:** Boosts memory T cells, improving long-term immunity and vaccine efficacy.
- **Cancer Therapy:** Helps fight immune-suppressive tumor environments, potentially leading to more effective cancer treatments.
- **Scalable and Soluble:** Works in humans,

not just in lab dishes, making it a promising solution for immunotherapy.

About T Cells:

- T cells, or T lymphocytes, are vital white blood cells involved in cell-mediated immunity. Unlike B cells, which produce antibodies, T cells directly identify and destroy infected or cancerous cells.
- They are of several types:
 - » Helper T cells assist other immune cells
 - » Cytotoxic (Killer) T cells eliminate infected cells
 - » Regulatory T cells prevent autoimmunity.
- T cells recognize antigens only when presented on other cells. They are produced in the bone marrow and mature in the thymus, where they learn to distinguish between self and foreign antigens.

Conclusion:

The development of AI-designed proteins marks a significant milestone in immunotherapy. With further research and development, this technology could lead to new treatments for various diseases, including cancer and viral infections.

Kavach 4.0

Context:

Indian Railways recently commissioned Kavach 4.0, an indigenously developed Automatic Train Protection (ATP) system, on the Mathura-Kota section of the high-density Delhi-Mumbai route.

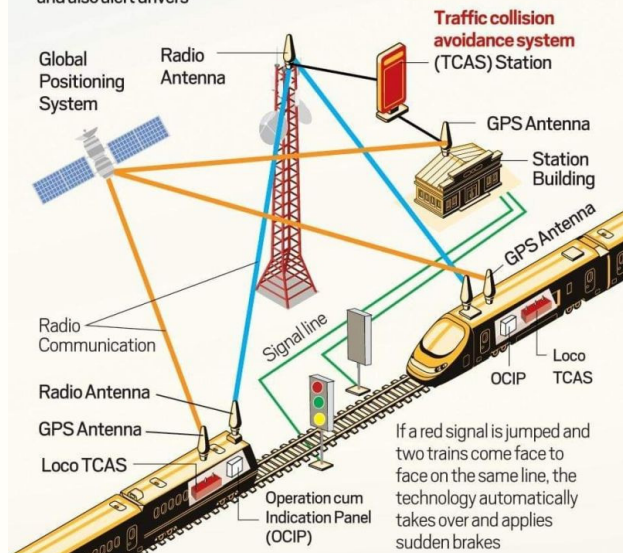
About Kavach:

- Kavach is an indigenously developed cab signaling train control system with anti-collision features, designed by the Research Design and Standards Organisation (RDSO) in collaboration with three Indian vendors.
- It has been adopted as India's National Automatic Train Protection (ATP) system and conforms to Safety Integrity Level-4 (SIL-4), the highest safety certification for railway systems.
- The system began development in 2015 and was first rolled out on the South Central

Railway in 2018. Kavach 4.0, approved in 2025, now supports speeds up to 160 kmph and is manufactured entirely in India.

HOW RAILWAYS' KAVACH PROTECTION SYSTEM WORKS

KPS is a set of electronic and radio frequency devices installed in locomotives, in the signalling system as well the tracks, that talk to each other using ultra-high radio frequencies to control the brakes of trains and also alert drivers



Kavach enhances railway safety by:

- Acting as a vigilant layer over the existing signaling system, alerting the loco pilot when approaching a danger signal (e.g., red signal).
- Automatically applying brakes if the driver fails to respond, thereby preventing signal overshooting and potential collisions.
- Ensuring safe train speeds in real time, especially in low visibility conditions like fog.
- Facilitating centralized live monitoring of train movement via the Network Monitor System.
- Broadcasting SoS (emergency) messages across the system in crisis situations.
- By integrating train communication, monitoring, and control systems, Kavach substantially reduces the risk of human error and strengthens accident prevention mechanisms.

Technology Behind Kavach:

- The complexity of Kavach is comparable to setting up a telecom network. The system comprises:
 - » RFID Tags placed every kilometre along tracks to relay train locations.
 - » Telecom Towers and optical fibre cable networks for real-time data exchange.
 - » Loco Kavach and Station Kavach units to control braking and ensure signal compliance.
 - » Signal integration, enabling loco pilots to receive live updates inside the cab—even in foggy conditions.

Major challenges in deploying Kavach:

- Despite its proven benefits, the widespread implementation of Kavach faces several significant challenges:
 - » **High Deployment Cost:** The system costs approximately Rs.50 lakh per kilometer. Given the vast expanse of Indian Railways—over 68,000 km—scaling up Kavach nationwide requires substantial financial outlay.
 - » **Infrastructure Complexity:** Setting up Kavach is equivalent to establishing a small telecom network. It involves installing RFID tags, radio towers, OFC cables, station and locomotive modules all without disrupting existing railway operations.
 - » **Skilled Workforce Requirements:** Operating and maintaining Kavach needs specialized training. To meet this need, Indian Railways has partnered with institutions through IRISSET to build a trained workforce, but upscaling this effort remains a logistical challenge.

Conclusion:

Indian Railways plans to commission Kavach 4.0 nationwide within six years—an ambitious timeline that showcases India's commitment to passenger safety and technological self-reliance.

Haemophilia and its Burden in India

Context:

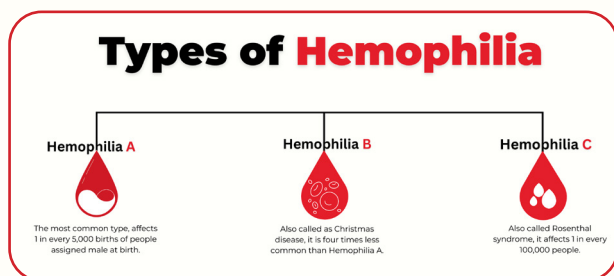
Haemophilia has long posed significant health and socio-economic challenges in India due to underdiagnoses, limited access to treatment, and reliance on reactive care. Recent advancements in treatment, including regular clotting factor replacement and newer non-factor therapies, have made it possible to prevent bleeds entirely, drastically improving patient outcomes.

About Hemophilia:

- Hemophilia is a genetic bleeding disorder where blood doesn't clot properly.
- Caused by deficiency of clotting factors, leading to prolonged or spontaneous bleeding.
- Primarily affects males; females are usually carriers.
- Inherited, though some cases arise from new genetic mutations.
- Clotting factor deficiency: Body lacks essential proteins for clotting.

Types of Hemophilia:

- » **Hemophilia A:** Factor VIII deficiency (most common).
- » **Hemophilia B:** Factor IX deficiency.
- » **Hemophilia C:** Factor XI deficiency; rare and affects both genders.
- Bleeding can occur in joints, muscles, or brain, requiring prompt treatment.



Shift from Reactive to Preventive Care:

- Traditionally, haemophilia management in India relied on on-demand therapy, where treatment is given after a bleed occurs. This approach often fails to prevent long-term joint damage and disability. In recent years, however, the focus has shifted

toward prophylaxis, or regular replacement therapy, aimed at preventing bleeds before they happen.

- This marks a paradigm shift from merely treating haemophilia to envisioning a future of "zero bleeds". Newer therapies are also moving beyond simple replacement, aiming to rebalance or restore the body's clotting system entirely, giving patients a chance at a near-normal life.
- However, despite an estimated 1 to 1.5 lakh haemophilia cases in India, only around 29,000 patients are officially diagnosed, highlighting a serious gap in awareness and healthcare access.

Benefits of Prophylactic Treatment:

- Prophylaxis is globally regarded as the gold standard in haemophilia care. Its key benefits include:
 - » **Preventing joint damage:** Regular replacement keeps clotting factor levels stable, reducing spontaneous bleeds and long-term deformities.
 - » **Improving quality of life:** Children can attend school and play, adults can work and socialize, leading to better physical and mental well-being.
 - » **Reducing healthcare burden:** Fewer emergency hospital visits and long-term complications reduce overall treatment costs.
- Developed nations report 90% of haemophilia patients on prophylaxis, achieving near-normal life expectancy. In India, however, the adoption remains low, though some states have begun offering prophylaxis to children under 10.

The Way Forward:

- To fully realize the benefits of prophylaxis, India must:
 - » Expand diagnostic facilities at the grassroots.
 - » Ensure affordable access to clotting factor therapies.
 - » Promote policy-level support and public awareness.

NISAR satellite

Context:

The NASA-ISRO Synthetic Aperture Radar (NISAR) satellite was successfully launched on July 30, 2025 from the Satish Dhawan Space Centre at Sriharikota in Andhra Pradesh. The satellite was launched by Geosynchronous Satellite Launch Vehicle (GSLV)-F16 rocket.

About NISAR satellite:

- The NISAR satellite, short for NASA-ISRO Synthetic Aperture Radar satellite, is a Earth observation satellite. Weighing 2,392 kg, the satellite is designed to operate in a sun-synchronous orbit with a mission life of 5 years.
- It is the first satellite jointly developed by the ISRO and the U.S.'s National Aeronautics and Space Administration (NASA).
- Further it is the world's first Earth observation satellite equipped with dual-frequency SAR, comprising NASA's L-band and ISRO's S-band radars. This enables the satellite to capture high-resolution images of the Earth's surface, regardless of weather conditions or time of day.
- Additionally, it has 12-meter unfurlable mesh reflector antenna, allows the satellite to capture high-quality radar data. This antenna is built by NASA and deployed using a multistage boom. It will be used to study various Earth phenomena, such as tectonic movements, glacier dynamics, and ecosystem changes.

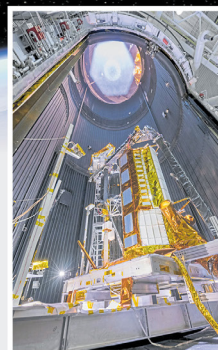
Objectives and Applications:

- NISAR will provide day-and-night, all-weather imaging of the Earth every 12 days, with a swathe of 242 km, using advanced SweepSAR technology.
- **The key applications include:**
 - » **Disaster Management:** Real-time data for tracking earthquakes, floods, landslides.
 - » **Environmental Monitoring:** Changes in vegetation, soil moisture, ice sheet dynamics, and ground deformation.
 - » **Climate Studies:** Monitoring of sea ice, storm patterns, and shoreline changes.

- » **Agriculture:** Mapping farmland to enhance crop productivity.
- » **Infrastructure Monitoring:** Surveillance of critical infrastructure for early warnings and resilience planning.

NASA-ISRO Synthetic Aperture Radar satellite

The most sophisticated and costliest Earth observation satellite, with a price tag of **\$1.5 billion** (over Rs 12,978 crore)



• ISRO contributed around **Rs 470 crore** and will also bear the launch cost

Launch scheduled on **July 30, 2025**, from **Satish Dhawan Space Centre**, Sriharikota, Andhra Pradesh

• GSLV-F16 will inject the NISAR satellite into a **743 km Sun-synchronous orbit**

• The **2392-kg NISAR** is the first satellite to observe the Earth with a **dual-frequency Synthetic Aperture Radar**

• NISAR's **L-band** radar with a **25-cm wavelength** was made by NASA's Jet Propulsion Laboratory

• The **S-band** system with a **10-cm wavelength** was made by ISRO's Space Application Centre

• Both will use NASA's 12-metre unfurlable mesh reflector antenna

• NASA provided the deployable boom, a high-rate communication subsystem for science data, GPS receivers, a solid-state recorder, and a payload data subsystem.

• ISRO is providing satellite bus, launch vehicle, and launch services

NISAR has a mission life of 3 years

What will the NISAR do?

- 1 Provide a 3D view of Earth's land and ice, and help monitor ecosystems around the world
- 2 Help governments plan for natural and human-caused hazards.
- 3 Help map crops and monitor them through the growing season.
- 4 NISAR will generate about 80 terabytes of data products daily – enough to fill about 150 512-gigabyte hard drives and more than any previous Earth satellite from either agency.



How will NISAR work?

• NISAR will observe the Earth's land and ice-covered surfaces with 12-day regularity on ascending and descending passes, sampling Earth on average every 6 days, helping scientists with the most accurate pictures of physical changes happening on the planet

• The satellite will measure even tiny changes on the Earth roughly every week, with each pixel capturing an area about half the size of a tennis court.

COMPILED BY KALYAN RAY, DHNS

PHOTOS: JPL NASA

Contributions:

- **NASA:** L-band radar, deployable boom, reflector antenna, GPS, solid-state recorder, and telecom system.
- **ISRO:** S-band radar, satellite bus (I-3K), GSLV-F16 launcher, solar arrays, data handling, and ground control.
- **Mission Management:** Jointly executed via NASA's JPL and ISRO's multiple centers (SAC, URSC, VSSC, NRSC).

Why is NISAR Important for India?

- **Strategic Advantage:** Enhances India's

capability in Earth observation and disaster preparedness.

- **Soft Power & Diplomacy:** Reinforces the strength of the Indo-US strategic partnership in science and technology.
- **Atmanirbhar Bharat:** Showcases India's capability to co-develop and launch cutting-edge satellites with global agencies.

Conclusion:

The launch of NISAR is not just a technological feat but also a strategic and scientific leap. It exemplifies the intersection of science and international cooperation, while underlining the growing importance of space technology in governance, climate resilience, and sustainable development.

Kenya Declared Free of Sleeping Sickness

Context:

Recently, the World Health Organization (WHO) officially certified Kenya as having eliminated Human African Trypanosomiasis (HAT), commonly known as sleeping sickness, as a public health problem. This marks a significant victory in the global fight against neglected tropical diseases (NTDs).

Background:

- With this declaration, Kenya becomes the 10th country globally and one of several African nations to eliminate sleeping sickness as a public health problem. Other countries include Togo, Côte d'Ivoire, and Uganda.
- Previously, in 2018, Kenya certified free of Guinea worm disease. The WHO's 2030 NTD Roadmap aims to eliminate at least one NTD in 100 countries by 2030.

About Sleeping Sickness:

- Sleeping sickness, or human African trypanosomiasis, is a parasitic disease caused by protozoa of the genus *Trypanosoma*. It is transmitted to humans through the bite of infected tsetse flies,

which are endemic to sub-Saharan Africa.

- **Symptoms and Impact:**
 - » **Early stage:** Fever, headaches, joint pains, and itching.
 - » **Late stage:** Neurological symptoms including confusion, altered sleep cycles, and behavioral changes.
 - » Without treatment, the disease is almost always fatal.
- **There are two forms of the disease:**
 - » *Trypanosoma brucei gambiense* (West and Central Africa – chronic form)
 - » *Trypanosoma brucei rhodesiense* (East and Southern Africa – acute form)



About Neglected Tropical Diseases:

- Neglected Tropical Diseases (NTDs) are a group of 21 infectious diseases identified by the WHO. They mainly affect impoverished populations in tropical and subtropical regions with poor access to sanitation and healthcare.
- Caused by a variety of pathogens—viruses, bacteria, parasites, fungi, and toxins—NTDs lead to chronic suffering, disability, and even death, reinforcing poverty cycles.
- **Common NTDs:**
 - » Some of the most widespread NTDs include Chagas disease, dengue, leprosy, lymphatic filariasis, onchocerciasis,

rabies, schistosomiasis, soil-transmitted helminthiasis, trachoma, and yaws.

- » These diseases thrive in conditions of inadequate hygiene and limited healthcare access, disproportionately affecting marginalized communities.

Control and Elimination Strategies:

- NTD control is among the most cost-effective global health interventions. Measures include mass drug administration, improved sanitation, vector control, and health education. The WHO aims to eliminate at least one NTD in 100 countries by 2030, with 56 countries achieving this as of May 2025.

Challenges Ahead:

- Key obstacles include funding cuts, particularly in Official Development Assistance (ODA), and the complex transmission cycles of many NTDs. Poverty, poor infrastructure, and environmental factors further hinder eradication efforts, making multi-sectoral and sustained action essential.

Conclusion:

Kenya's elimination of sleeping sickness is a public health milestone that demonstrates the power of sustained effort, community engagement, and global cooperation. It reinforces the idea that neglected tropical diseases, long considered endemic in many parts of Africa, can be eliminated with the right strategies.

Amoebic Meningoencephalitis Alert in Kozhikode

Context:

The Health Department in Kozhikode, Kerala, has issued an alert regarding Primary Amoebic Meningoencephalitis (PAM), a rare but often fatal brain infection caused by the *Naegleria fowleri* amoeba.

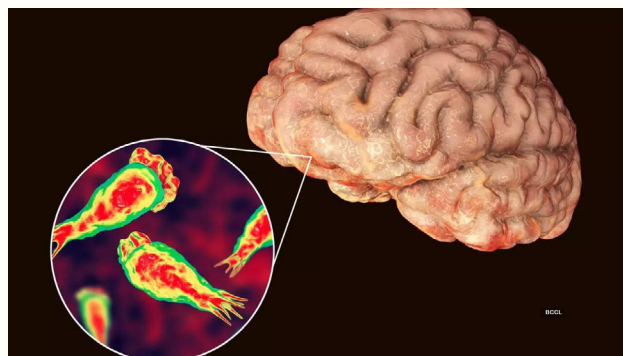
What is PAM?

- Primary Amoebic Meningoencephalitis

(PAM) is a rare but nearly always fatal brain infection caused by *Naegleria fowleri*, commonly known as the "brain-eating amoeba." This condition affects the central nervous system, particularly the brain and surrounding membranes.

Cause and Mode of Infection:

- *Naegleria fowleri* is a free-living amoeba found in warm freshwater bodies like lakes, ponds, rivers, and hot springs.
- Infection occurs when contaminated water enters the nose, usually during swimming or bathing.
- From there, the amoeba travels along the olfactory nerve to the brain, where it causes rapid and devastating tissue damage.



Symptoms and Risk Factors:

- Symptoms appear within 5–10 days and include headache, fever, nausea, vomiting, stiff neck, and light sensitivity.
- As the condition worsens, patients may experience epilepsy, fainting, and memory loss.
- Children may show changes in behavior, such as refusing food or remaining motionless.

Treatment and Prevention:

- Amphotericin B and other anti-amoebic drugs have been used, with very few survivors.
- **Prevention is key:** Avoid swimming in warm stagnant water, especially during summer, and use nose clips if exposure is unavoidable.

About Brain Infections:

- Brain infections, or Central Nervous System (CNS) infections, occur when pathogens like bacteria, viruses, fungi, or parasites invade the brain or its protective structures. These infections lead to inflammation and damage, affecting brain function and overall health.

Types of Brain Infections:

- Meningitis:** Inflammation of the meninges, caused by viruses, bacteria, fungi, or parasites. Bacterial meningitis is a medical emergency.
- Encephalitis:** Inflammation of brain tissue, usually viral or autoimmune.
- Brain Abscess:** Localized pus-filled infection, often bacterial or fungal.
- Subdural Empyema:** Infection with pus between dura mater and brain.
- Tuberculomas:** Tuberculosis-caused granulomas in the brain.
- Localized Infections:** Cysts from fungi, protozoa, or parasites.
- Autoimmune Encephalitis:** Immune system attacks brain cells.
- Others:** Ventriculitis, cerebritis, NMOSD, prion diseases (TSEs), toxoplasmosis.

Conclusion:

The recent cases of amoebic meningoencephalitis in Kozhikode serve as a stark reminder of the importance of water safety and hygiene. As the health department works to contain the spread of the infection, it is crucial for individuals to take precautions to protect themselves and their loved ones.

Samudrayaan Mission

Context:

Recently, two Indian aquanauts, Commander (Retd) Jatinder Pal Singh and R Ramesh completed the deepest-ever underwater dives, reaching depths of 5,002 metres and 4,025 metres in the Atlantic Ocean. These dives were conducted aboard the French submersible Nautilie as part of training for India's upcoming Samudrayaan Mission, the country's first manned deep-sea expedition.

About Samudrayaan Mission:

- Samudrayaan is India's first manned deep-ocean mission, launched under the Ministry of Earth Sciences (MoES). The mission aims to develop a self-propelled submersible capable of carrying three crew members to a depth of 6,000 metres.
- This initiative seeks to explore deep-sea resources and conduct biodiversity assessments without disturbing the marine ecosystem.
- It aligns with the government's Blue Economy policy, promoting sustainable use of ocean resources.



MATSYA 6000:

- At the core of Samudrayaan is MATSYA 6000, an indigenously developed manned submersible by the National Institute of Ocean Technology (NIOT), Chennai.
- It will allow scientists to directly observe unexplored regions of the ocean.
- MATSYA 6000 has an operational endurance of 12 hours, extendable to 96 hours in emergencies.
- Once launched, likely by 2027, India will become only the sixth country after the US, Russia, France, Japan, and China to achieve such a feat.

Deep Ocean Mission:

- Samudrayaan is a key component of the Deep Ocean Mission, a multi-ministerial, multi-disciplinary initiative supporting the Blue Economy. The mission has a budget of Rs. 4,077 crore over five years (2021–26) and consists of six components:
 - » Technologies for deep-sea mining and

- robotics
- » Ocean climate advisory services
- » Biodiversity exploration and conservation
- » Deep-ocean survey and exploration
- » Ocean-based energy and freshwater
- » Advanced marine biology stations

About NIOT:

- Established in 1993, the National Institute of Ocean Technology (NIOT) is an autonomous body under MoES.
- Its mission is to develop indigenous marine technologies for sustainable exploration of India's Exclusive Economic Zone (EEZ).
- NIOT plays a central role in enabling India's leap into deep-sea exploration through Samudrayaan.

Conclusion:

The record-breaking dives have demonstrated the capabilities of the Indian aquanauts and the country's growing expertise in deep-sea exploration. The success of the Samudrayaan Mission will not only enhance India's scientific knowledge of the ocean but also open up new avenues for the exploration and exploitation of marine resources.

New Study on Dengue

Context:

A recent study published in Science Translational Medicine has identified a specific type of antibody, known as Envelope Dimer Epitope (EDE)-like antibodies, as crucial for protection against dengue virus.

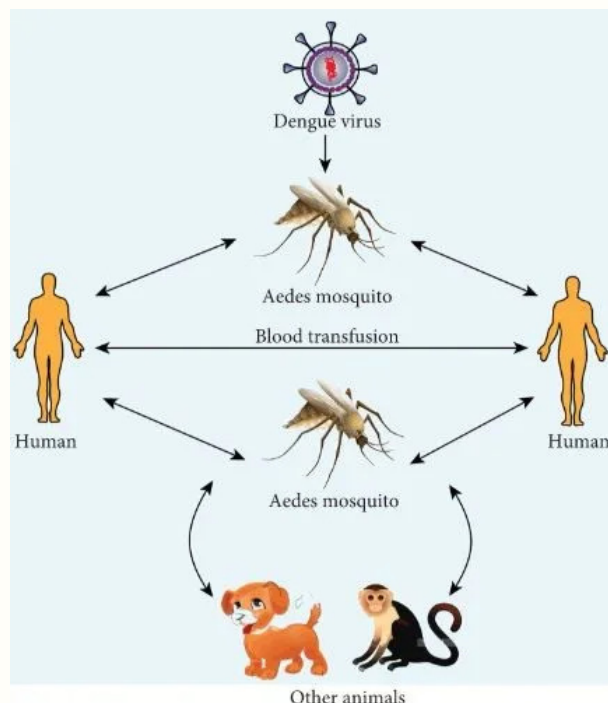
Key Findings of the Study:

- The study tracked 2,996 Filipino children, some of whom were vaccinated and some unvaccinated. During a major dengue outbreak, researchers measured different types of antibodies, including EDE-like, neutralising, and binding antibodies. They found:
- EDE-like antibodies were highly prevalent (over 80%) in those with secondary immunity (exposed to at least two serotypes).

- These antibodies were associated with broad protection against multiple serotypes.
- Although they did not prevent infection, they significantly reduced the risk of symptomatic and severe dengue.
- Statistically, EDE-like antibodies explained over 40%–70% of the protective effect previously attributed to other antibodies.

Implications of the Findings:

- This discovery could transform dengue vaccine development. A vaccine targeting EDE-like antibodies could offer broad, cross-serotype protection without triggering ADE, making it suitable for dengue-naïve individuals.
- It also strengthens global efforts in serological surveillance, vaccine evaluation, and public health preparedness, especially in countries like India, where dengue is endemic.



Current Dengue Treatments:

- Two primary dengue vaccines are currently licensed: Dengvaxia and QDenga. These vaccines are most effective for individuals who have already been exposed to dengue

at least once before vaccination.

- Laboratory confirmation of a previous dengue infection is required for vaccination with Dengvaxia. EDE-targeting vaccines could potentially be used in dengue-naïve individuals.

About the Dengue Virus:

- Dengue is a mosquito-borne viral disease caused by four distinct serotypes (DENV-1 to DENV-4) of the dengue virus. It affects nearly half the global population, particularly in tropical and subtropical regions like India.
- A key challenge in dengue immunology is antibody-dependent enhancement (ADE), where antibodies from a prior infection can worsen a second infection with a different serotype, often leading to severe disease and hospitalisation.

Conclusion:

The study marks a significant advance in understanding dengue immunity and could lead to the development of more effective therapeutics. Further research is essential to explore the potential of EDE-like antibodies in dengue vaccine development and to improve our understanding of the complex immune mechanisms involved in dengue infection.

New World Screwworm

Context:

Recently, the United States has reported its first confirmed human case of New World screwworm infestation in decades.

About New World Screwworm:

- The New World screwworm (*Cochliomyia hominivorax*) is a parasitic fly belonging to the blowfly family, typically found in South America and the Caribbean.
- It is known for its flesh-eating larvae, which burrow into the tissue of warm-blooded animals—and occasionally, humans.
- These parasites are named after their screw-like motion as they bore into living flesh.
- The female screwworm fly is especially

dangerous, as she lays eggs in open wounds or natural openings such as the nose, mouth, or ears.

- A single female can lay up to 300 eggs at a time, totaling 3,000 eggs over her 10–30-day lifespan.



What Are the Symptoms of Infestation?

- Infestations can be extremely painful and potentially life-threatening if not treated promptly. Key symptoms include:
 - » Persistent, non-healing wounds or sores
 - » Bleeding from the affected area
 - » Sensation of movement within the wound
 - » Foul-smelling discharge from the site
- If left untreated, the infestation can spread to vital tissues, causing sepsis or even death. Early diagnosis and removal of larvae are critical.

Common Parasitic Diseases:

- **Lymphatic Filariasis (Elephantiasis):** Caused by *Wuchereria bancrofti* and *Brugia malayi*, transmitted by mosquitoes, leading to swelling and disability.
- **Malaria:** Caused by *Plasmodium* species, transmitted by female *Anopheles* mosquitoes. Symptoms range from fever to severe complications like seizures.
- **Toxoplasmosis:** Caused by *Toxoplasma gondii*, often transmitted through undercooked meat; dangerous for immunocompromised individuals.
- **Amoebiasis:** Caused by *Entamoeba histolytica*, spreads via contaminated

water, causing diarrhea and potentially fatal complications.

- **Giardiasis:** An intestinal infection from *Giardia lamblia*, often spread through unclean water.
- **Schistosomiasis:** Caused by blood flukes, spread through contact with contaminated freshwater.
- **Leishmaniasis:** Spread by sandfly bites, affecting skin or internal organs.

ISRO's Heaviest Rocket: LMLV

Context:

On August 23, 2025, ISRO Chairman V. Narayanan announced that the space agency is building its heaviest rocket ever, the Lunar Module Launch Vehicle (LMLV).

About Lunar Module Launch Vehicle (LMLV):

- The Lunar Module Launch Vehicle (LMLV) is India's most ambitious rocket under development by ISRO, set to be operational by 2035.
- It is designed to support crewed lunar missions by 2040 and to launch heavy components of India's planned Bharatiya Antariksh Station (BAS).
- With a payload capacity of 80 tonnes to Low Earth Orbit (LEO) and 27 tonnes to the Moon, LMLV will be ISRO's most powerful rocket, far surpassing the existing LVM3.

Design and Capabilities:

- The LMLV is a three-stage rocket:
 - » **First two stages:** Liquid propulsion.
 - » **Third stage:** Advanced cryogenic engine.
- Its first stage alone will use 27 engines across a core and two strap-on boosters. The rocket is expected to be as tall as a 40-storey building, with individual strap-ons taller than the current LVM3.
- Originally conceptualised from the Next Generation Launch Vehicle (NGLV) project, the LMLV will consolidate NGLV features and replace it entirely.

Strategic and Scientific Significance:

- The LMLV enables crewed lunar landings, carrying heavy, human-rated spacecraft with life-support systems. It is also crucial for future deep space exploration beyond the Moon. The project will advance India's cryogenic, human-rating, and high-thrust propulsion technologies, placing ISRO among elite spacefaring nations.



Comparison with LVM3

Feature	LVM3 (Current)	LMLV (Upcoming)
LEO Payload	~10 tonnes	80 tonnes
Lunar Payload	~4 tonnes	27 tonnes
Human Missions	Gaganyaan (LEO)	Crewed lunar flight
Status	Operational	Under development

Evolution of Indian Launch Vehicles:

- **SLV-3 (1980):** India's first indigenously developed rocket, led by Dr A.P.J. Abdul Kalam. Successfully launched Rohini satellite, placing India among space-faring nations.
- **PSLV (1994):** The workhorse of ISRO, launched Chandrayaan-1 and Mangalyaan. Noted for its high reliability and versatility in launching satellites to different orbits.
- **GSLV and GSLV Mk-III (LVM-3):** Enabled launches to Geostationary Transfer Orbit (GTO) and carried heavier payloads, including Chandrayaan-2 and Chandrayaan-3.
- **LMLV (Upcoming):** Marks the transition to super heavy-lift capability, enabling ISRO's foray into long-duration crewed missions and lunar logistics.

Challenges Ahead:

- **Technological Complexity:** Developing a vehicle of this scale requires advanced propulsion systems, thermal shielding, and navigation technologies.
- **Human-Rating Certification:** A significant milestone for manned missions, ensuring safety, redundancy, and fail-safe systems.
- **Budget and Time Constraints:** A long gestation period (10+ years) and sustained funding will be essential.
- **Global Competition:** SpaceX's Starship, NASA's SLS, and China's Long March 9 are progressing fast in this domain.

Conclusion:

The LMLV is not just a technological marvel, but a symbol of India's scientific ambition, strategic foresight, and commitment to Atmanirbhar Bharat in space technology. As ISRO sets its sights on the Moon and beyond, the LMLV will be a key enabler in ensuring that India becomes a leading space power in the 21st century.

ISRO's Air Drop Test for Gaganyaan

Context:

The Indian Space Research Organisation (ISRO) successfully conducted the Integrated Air Drop Test (IADT-01) for the Gaganyaan mission on August 24, 2025, at the Satish Dhawan Space Centre in Sriharikota. This test is a significant milestone in the development of the parachute-based deceleration system for the Gaganyaan human spaceflight mission.

Key Highlights of the Test:

- **Simulated Crew Module:** A 4.8-tonne simulated Crew Module was dropped from an altitude of 3 km using the Indian Air Force's Chinook heavy-lift helicopter.
- **Parachute System:** The module was equipped with 10 parachutes, including two Apex Cover Separation (ACS) parachutes, two Drogue parachutes, three Pilot parachutes, and three Main parachutes, each with a diameter of 25 meters.
- **Deceleration Process:** The parachutes deployed in a precise sequence to gradually decrease the velocity of the Crew Module, reducing its terminal velocity to about 8 m/s for safe touchdown.
- **Recovery:** The simulated Crew Module was successfully recovered and ferried back to Chennai port on INS Anvesha after splashdown.

Significance of the Test:

- The successful air drop test demonstrates the effectiveness of the parachute-based deceleration system, a critical component of the Gaganyaan mission.
- This system will be used to slow down the Crew Module during re-entry and ensure a safe landing on sea.
- The test also simulated a possible abort scenario on the launch pad, validating the system's performance in emergency situations.

About the Gaganyaan Mission:

- The Gaganyaan Mission is India's first human spaceflight programme, aimed at demonstrating indigenous capability to send humans to space.
- The primary objective is to launch a three-

member crew into Low Earth Orbit (LEO) at 400 km altitude for a 3-day mission and return them safely to Earth with a controlled splashdown in Indian sea waters.

- This mission is a major step in India's space ambitions and self-reliance in advanced space technologies.

Launch Vehicle: LVM-3:

- The mission will use the Launch Vehicle Mark-3 (LVM-3), formerly known as GSLV Mk-III, a reliable heavy-lift rocket developed by ISRO. It consists of:
 - » **First stage:** Two solid-fuel boosters.
 - » **Second stage:** Twin liquid-fuelled Vikas 2 engines.
 - » **Third stage:** Indigenous CE-20 cryogenic engine using liquid hydrogen and oxygen.

Orbital Module:

- The Orbital Module weighs 8.2 tonnes and comprises two parts:
 - » **Crew Module:** Holds up to 3 astronauts, has parachutes for re-entry, ECLSS for life support, and a crew escape system for emergencies.
 - » **Service Module:** Provides orbital propulsion and deorbit burn for safe Earth return.

Conclusion:

The air drop test marks a major milestone for crew safety validation. With the first crewed Gaganyaan flight planned in 2027, such tests ensure that all recovery systems perform reliably. ISRO continues to advance through uncrewed missions (G-1, G-2, G-3) and infrastructure development to meet this ambitious human spaceflight goal.



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Economy



Connecting India, Empowering Bharat: The Civil Aviation Push

In its World Air Transport Statistics (WATS) 2024, International Air Transport Association (IATA) ranked India fifth globally in terms of total air passengers handled, with 211 million passengers. Complementing this, ICAO acknowledged India's improved air safety and regulatory performance, awarding an Effective Implementation (EI) score of 85.65%, a sharp rise from 69.95% in 2018. India's civil aviation sector is undergoing a rapid and far-reaching transformation. In 2024, the country handled over 350 million air passengers, making it the third-largest aviation market in the world. What began as a push to connect remote regions and democratize air travel has now evolved into a robust aviation ecosystem backed by legislative reforms, massive infrastructure expansion, and strategic investments in safety and technology.

❖ Global aviation bodies such as the International Air Transport Association (IATA) and the International Civil Aviation Organization (ICAO) have recognised India's growing importance. While IATA's World Air Transport Statistics (WATS) for

2024 ranked India fifth globally in terms of total passengers handled (211 million), ICAO acknowledged India's improved regulatory performance with an Effective Implementation score of 85.65%—a major jump from 69.95% in 2018.

The Significance of India's Aviation Industry

- ❖ **A Rapidly Expanding Market:** India is projected to become the third-largest aviation market by 2030, surpassing the US and China in passenger volume. This puts India at the centre of attention for global airlines, aircraft manufacturers, and service providers.
- ❖ **Balanced Economic Development:** Air connectivity acts as a geographic equaliser. The North-Eastern states, in particular, have witnessed stronger integration with national economic networks due to enhanced airline connectivity.
- ❖ **Boost to Tourism and Infrastructure:** Improved air access has boosted tourism and allied sectors such as hospitality and transport, driving both direct and indirect

employment across various regions.

- ❖ **Growth in Manufacturing and MRO:** India's aviation expansion is stimulating demand for domestic Maintenance, Repair, and Overhaul (MRO) services and aerospace manufacturing—critical to becoming self-reliant in aviation technology.
- ❖ **FDI-Led Infrastructure Expansion:** With nearly \$3 billion in FDI, India is upgrading key airports (Delhi, Bengaluru) and building new greenfield airports in Navi Mumbai and Jewar (Noida).
- ❖ **Job Creation:** As per IATA, Indian airlines will need over 10,900 new pilots by FY30, in addition to thousands of cabin crew, ground staff, and engineers.

Laws Regulating the Aviation Sector:

To align with global practices and support its aviation ambitions, India has introduced two major legislative reforms:

- ❖ **Protection of Interest in Aircraft Objects Bill, 2025**
 - » Aligns India with the Cape Town Convention, 2001.
 - » Aims to reduce aircraft leasing and financing costs.
 - » Lowers lease premiums, previously 8–10% higher than global norms.
 - » Offers legal clarity to attract aircraft leasing hubs.
- ❖ **Bharatiya Vayuyan Adhiniyam, 2024**
 - » Replaces the colonial Aircraft Act, 1934; effective from 1 January 2025.
 - » Modernises regulations in line with ICAO and the Chicago Convention.
 - » Promotes 'Make in India' by easing licensing and boosting transparency.

Key Challenges in India's Aviation Sector:

- ❖ **Operational and Safety Deficits**
 - » **Human Resource Shortages:** India faces acute deficits in trained pilots, aircraft engineers, ground crew, and air traffic controllers. Long duty hours and fatigue-related issues increase safety risks. The Aon 2025 APAC report identifies major workforce gaps.
- » **Maintenance Lapses:** DGCA inspections have revealed critical safety violations, such as unserviceable onboard systems and missing emergency equipment. Many regional airports lack modern infrastructure and adequate emergency response capacity.
- » **Grounded Aircraft:** Over 160 aircraft are grounded, mainly due to financial stress and delays in maintenance—severely impacting operational capacity. Insolvency issues in airlines like Go First and SpiceJet have compounded the problem.
- ❖ **Supply Chain and Infrastructure Constraints**
 - » **Supply Chain Bottlenecks:** Disruptions in the global supply chain and delays from original equipment manufacturers (OEMs) have hampered fleet expansion, despite rising passenger demand.
 - » **Inadequate Rural Connectivity:** The UDAN scheme's promise remains under-fulfilled as many tier-2 and tier-3 cities lack viable airport infrastructure, making regional routes commercially unviable.
- ❖ **Market Structure and Financial Viability**
 - » **Market Concentration:** IndiGo and Tata Group airlines together command 80% of the market share—creating a near-duopoly that raises concerns over fare competition, innovation, and service quality.
 - » **Persistent Financial Losses:** Indian airlines are expected to post a collective loss of \$1.6 to \$1.8 billion in FY24, driven by poor cost management, high fuel costs, and low returns on added capacity.
 - » **Overestimated Growth Projections:** The collapse of Kingfisher, Jet Airways, and Go First highlights how unrealistic expansion plans—unmatched by financial and infrastructural readiness—lead to systemic fragility.
- ❖ **Regulatory and Legal Hurdles**
 - » **Regulatory Gaps:** The Directorate General of Civil Aviation (DGCA) is operating

with 53% staff vacancy, limiting effective oversight. Its regulation is often reactive rather than preventive.

- » **Complex and Onerous Compliance:** High taxes on Aviation Turbine Fuel (ATF), non-transparent airport slot allocation, and compliance burdens deter new entrants. State-run airport monopolies further hinder operational efficiency.
- » **Outdated Legal Framework:** The Aircraft Act (1934) and Aircraft Rules (1937) have not kept pace with modern technologies or business models—adding to legal ambiguity and operational complexity.

❖ **Sustainability and Environmental Compliance**

- » **Rising Green Compliance Costs:** India is a signatory to global frameworks like CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation), which mandates emission reductions. While necessary, this imposes additional financial and planning burdens on airlines already under stress

Framework and Governance for Aviation:

❖ **Directorate General of Civil Aviation (DGCA)**

- » Regulates safety, licensing, and flight operations.
- » Coordinates with ICAO and ensures Safety Management Systems.

❖ **Airports Authority of India (AAI)**

- » Manages airport development and air traffic control across India.
- » Aircraft Accident Investigation Bureau (AAIB)
- » Independent body under ICAO rules.
- » Notably decoded black box data in the Air India Flight 171 case.

❖ **Bureau of Civil Aviation Security (BCAS)**

- » Responsible for aviation security and compliance with ICAO protocols.

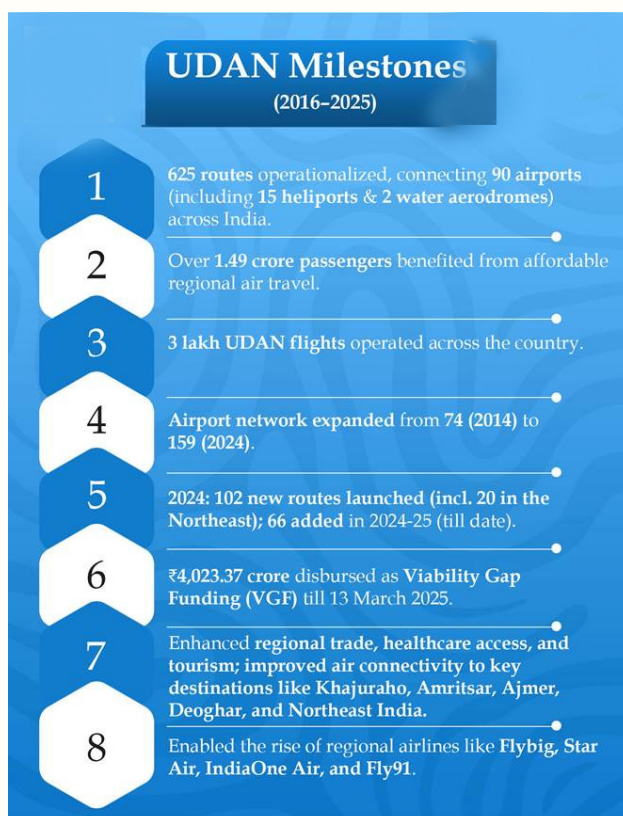
Growth, Reforms, and Future Outlook:

❖ **Infrastructure Development and Capital Investment**

- » Airport Expansion
- » New terminal foundations laid in Varanasi, Agra, Darbhanga, and Bagdogra.
- » Since 2014, 12 of the 21 approved greenfield airports have become operational (e.g., Mopa, Kushinagar, Shivamogga).
- » Jewar and Navi Mumbai airports to go live by FY 2025–26.

❖ **National Infrastructure Pipeline (NIP)**

- » Rs.91,000 crore allocated (FY20–FY25), Rs.82,600 crore utilised by November 2024.
- » **Target:** 50 new airports in five years and 120 new destinations by 2035.



UDAN Scheme and Regional Connectivity

❖ **Achievements So Far**

- » 619 routes and 88 airports made operational since 2016.
- » 102 new UDAN routes added in 2024 alone—20 in the Northeast.
- » Over 1.5 crore passengers served; 4

crore more targeted in the next decade.

- » Focus remains on tribal, hilly, and aspirational districts.

❖ **UDAN Yatri Café**

- » Offers affordable food at airports: tea at Rs.10, samosa at Rs.20.
- » Successful rollouts in Kolkata and Chennai are now being scaled nationally.

Safety, Digital Infrastructure, and Seaplanes

❖ **Aviation Safety Enhancements**

- » New Digital Flight Data Recorder (DFDR) and Cockpit Voice Recorder (CVR) lab launched at AAIB, New Delhi.
- » Developed with HAL at a cost of Rs.9 crore.

❖ **Seamless Travel via Digi Yatra**

- » Enabled at 24 airports.
- » Over 80 lakh downloads; 4 crore+ journeys completed.
- » Allows contactless, secure boarding and travel.

❖ **Seaplane Operations**

- » New guidelines released in August 2024.
- » UDAN 5.5 includes 50+ water bodies for seaplane connectivity.

Strategic Reforms and International Engagement:

- ❖ **MRO Boost:** 5% IGST on aircraft

parts implemented to encourage local maintenance hubs.

- ❖ **Gender Inclusion:** Women form 13–18% of pilots—among the world’s highest. DGCA aims for 25% female aviation workforce by 2025.

- ❖ **Air Cargo Expansion:** 8 million metric tonnes handled in FY24; 10% YoY growth; reforms in warehousing and customs underway.

- ❖ **Diplomatic Push:** Hosted the 2nd Asia-Pacific Ministerial Conference on Civil Aviation; culminated in the Delhi Declaration.

Conclusion:

Under the visionary leadership of the Ministry of Civil Aviation, India’s aviation sector is set to play a crucial role in the nation’s growth story. From expanding global connectivity and regional access to fostering digital transformation and sustainability, India is steadily building the foundation of a world-class aviation ecosystem. These initiatives do more than connect cities—they generate employment, boost tourism, strengthen economic growth, and promote national integration. With clear policy direction and robust implementation, India’s aviation sector is ready to take flight on the journey to Viksit Bharat @2047.

India’s Vocational Training System: The Need for Employment-Oriented Reconstruction

Introduction:

India is home to the world’s largest young population. In the coming years, this workforce can play a decisive role in making India a global economic powerhouse. However, this is possible only if the youth are not just educated but also proficient in employment-oriented skills. Currently, India’s vocational education and training (VET) system faces serious challenges.

Recently, on August 15, the Prime Minister, announced economic reforms

aimed at boosting domestic consumption and investment. In this context, the imbalance between the traditional education system and industry expectations highlights the need to redefine India’s vocational training system.

Background:

- ❖ The roots of vocational training in India date back to the pre-independence era, but it acquired an institutional form in the 1950s with the establishment of Industrial Training Institutes (ITIs) and polytechnic institutions.

Later, the creation of the National Skill Development Corporation (NSDC) in 2009 and the launch of the Skill India Mission in 2015 placed skill development at the center of national policy.

- ❖ Yet, according to reports from the World Economic Forum (WEF) and the International Labour Organization (ILO), India faces a skill gap of 60–70%. This means there is a significant mismatch between the skills required by industry and those provided by training institutions. This is why unemployment remains high even among graduates and diploma holders.
- ❖ While over 65% of India's population is of working age, only 4% of the workforce is formally trained, compared to 70–90% in countries like Germany, Singapore, and Canada.
- ❖ India has over 14,000 ITIs with approximately 2.5 million approved seats. However, in 2022, only 1.2 million students enrolled, utilizing just 48% of the available capacity.
- ❖ In 2018, the employment rate for ITI graduates was 63%, whereas in Germany and Singapore it was 80–90%, reflecting the weak employment outcomes of India's VET system.
- ❖ These figures indicate that India's vocational education and training system is neither attractive nor effective for its youth.

Key Challenges of India's Vocational Education and Training System:

- ❖ **Delayed Integration in Education System**
 - » In countries like Germany, VET is integrated with education at the higher secondary level.
 - » In India, vocational education and training is only available as an option after high school, reducing the duration of practical training.
- ❖ **Lack of Pathways to Higher Education**
 - » Singapore and Germany provide clear academic progression from vocational education to traditional universities.
 - » India lacks both a credit transfer system

and formal pathways from vocational education to higher education.

❖ **Issues of Quality and Perception**

- » Vocational education in India is often considered “second-tier education.”
- » Over one-third of ITI instructor positions are vacant.
- » Curricula are outdated and misaligned with industry needs.
- » Quality monitoring and trainee feedback systems are weak.

❖ **Lack of Public-Private Partnership**

RECENT GOVERNMENT POLICIES IN INDIA'S VOCATIONAL TRAINING SYSTEM

1. Employment Linked Incentive (ELI) Scheme

- Incentives for newly EPFO-registered employees.
- **Part A:** Up to ₹15,000 for workers.
- **Part B:** ₹3,000 per month for employers per new hire.
- **Limitation:** Encourages formal employment but lacks a skill component.

2. PM Internship Scheme

- One-year internships for youth in top companies.
- **Limitation:** No guarantee of permanent employment.

3. ITI Upgradation Initiative

- Modernization of 1,000 government ITIs in partnership with industry.
- **Limitation:** No concrete plan to improve training quality.

4. National Education Policy (NEP) 2020

- Provision for integration of vocational education at school level.
- **Limitation:** Progress is slow, and implementation across states is uneven.

- » In Germany, Singapore, and Canada, employers not only pay trainees but also participate in course design.
- » In India, private sector participation is minimal, and ITIs largely depend on government funding.

❖ **Insufficient Financial Allocation**

- » India spends only 3% of education expenditure on vocational education

and training, while Germany, Singapore, and Canada invest 10–13%.

Lessons from International Experiences:

- » **Germany's Dual System:** An integrated model of school education and paid apprenticeship.
- » **Singapore's SkillsFuture Programme:** Government-subsidized, industry-led programs for lifelong skill enhancement.
- » **Canada's Apprenticeship Model:** Partnership between government and employers, with shared industry costs.
- ❖ These examples show that early integration of vocational education, industry–education partnerships, and lifelong skill enhancement improves employment outcomes.

Recent Policy Initiatives in India:

- ❖ **Employment Linked Incentive (ELI) Scheme**
 - » Incentives for newly EPFO-registered employees.
 - » **Part A:** Up to Rs.15,000 for workers.
 - » **Part B:** Rs.3,000 per month for employers per new hire.
 - » **Limitation:** Encourages formal employment but lacks a skill component.
- ❖ **Prime Minister Internship Scheme (PM Internship Scheme)**
 - » One-year internships for youth in top companies.
 - » **Limitation:** No guarantee of permanent employment.
- ❖ **ITI Upgradation Initiative**
 - » Modernization of 1,000 government ITIs in partnership with industry.
 - » **Limitation:** No concrete plan to improve training quality.
- ❖ **National Education Policy (NEP) 2020**
 - » Provision for integration of vocational education at school level.
 - » **Limitation:** Progress is slow, and implementation across states is uneven.
 - » It is evident that past policies have improved marginal aspects rather than transforming the core structure.

Way Forward:

- ❖ **Early Integration**
 - » Rapidly implement NEP 2020 provisions to make VET part of education from the higher secondary level.
- ❖ **Credit and Progression Pathways**
 - » Implement the National Credit Framework to enable formal pathways from vocational education to higher education.
- ❖ **Quality Improvement and Instructor Recruitment**
 - » Expand National Skill Training Institutes (NSTIs) and fill vacant instructor positions.
 - » Include trainee feedback in regular ITI grading.
- ❖ **Industry–Education Partnership**
 - » Actively involve MSMEs and leverage Corporate Social Responsibility (CSR) funding.
 - » Empower Sector Skill Councils at the state level.
- ❖ **Digital and Lifelong Education**
 - » Use AR/VR-based training and online learning platforms.
 - » Make reskilling and upskilling part of employment processes.
- ❖ **Increased Financial Investment**
 - » Raise VET expenditure to at least 8–10% of education spending.
 - » Grant ITIs autonomy to generate revenue and adopt performance-based funding.
- ❖ **Changing Social Perception**
 - » Promote vocational training as “career-oriented education” through media and policy initiatives.

Conclusion:

The current state of India's vocational education and training system neither meets the aspirations of the youth nor the requirements of industry. If it continues to operate within the existing framework, India's “demographic dividend” could quickly turn into a “demographic burden.” Therefore, it is imperative to reconstruct India's VET system by integrating vocational education from the early stages of schooling, ensuring active industry participation, adequate financial investment,

and quality enhancement. Such reforms will not only improve employability but also lay the

foundation for a developed India.

Short Issues

S&P Upgrades India's Sovereign Credit Rating to BBB

Context:

On August 16, 2025, Standard & Poor's (S&P) Global Ratings upgraded India's long-term sovereign credit rating from 'BBB-' to 'BBB' and its short-term rating from 'A-3' to 'A-2', maintaining a Stable Outlook. This marks the first sovereign upgrade by S&P in 18 years, the last being in 2007 when India was elevated to investment grade at BBB-. The upgrade reflects international confidence in India's strong economic fundamentals and fiscal prudence.

Key Factors behind the Upgrade

- **Fiscal Discipline:** After years of slippage under the Fiscal Responsibility and Budget Management Act (2003), the government has pursued aggressive fiscal consolidation since the pandemic. The fiscal deficit has narrowed from 9.2% of GDP in 2020–21 to a projected 4.4% in 2025–26. Long-term plans also aim to reduce the debt-to-GDP ratio from 57.1% to 49–51% by 2030–31.
- **Economic Growth:** Even with a moderation to 6.5% in 2024–25, India remains one of the fastest-growing large economies. Strong nominal GDP growth continues to support a declining debt burden, reinforcing fiscal sustainability.
- **Inflation Management:** S&P highlighted India's improved inflation control. Headline inflation fell to 1.55% in July 2025, the lowest since 2017. Stable, low inflation enhances investor confidence by safeguarding returns, supporting currency stability, and lowering social risks.
- **Overall Assessment:** These combined factors — fiscal consolidation, robust growth, and credible inflation management

— underscore India's economic resilience. They strengthen the country's macroeconomic credibility, providing the basis for the long-awaited ratings upgrade.

Impact of the Upgrade:

- **Lower Borrowing Costs:** The upgrade could lead to lower funding costs for Indian companies, making it easier for them to access international markets.
- **Increased Foreign Investment:** The upgrade is likely to attract stronger foreign portfolio inflows into the bond market, boosting investor confidence.
- **Improved Global Positioning:** India's position in the global emerging market investment landscape is expected to improve, offering better risk-adjusted returns and fresh opportunities for fixed-income investors.

S&P Raises India's Credit Rating

+18 Years Later



For India:
Cheaper capital,
stronger global
trust



For Industries:
Lower borrowing
cost, bigger
growth runway



For Investors:
Higher confidence,
stable returns

When a nation's credibility rises, its markets follow.

About Sovereign Credit Ratings (SCR):

- Sovereign Credit Ratings (SCR) are independent evaluations of a country's creditworthiness, assessing its ability to meet debt obligations. Major agencies include Standard & Poor's (S&P), Fitch, and Moody's.
- SCR broadly rates countries as either investment grade or speculative grade, with the latter projected to have a higher

likelihood of default on borrowings.

- The investment-grade rating ranges from BBB- to AAA for S&P and Fitch and Baa3 to Aaa for Moody's.
 - » **Significance:** When favourable, these can facilitate countries' access to global capital markets and foreign investment, and reduce borrowing costs.
 - » **Issues:** There are concerns over bias in rating processes, conflicts of interest, and rating ceiling.

Conclusion:

S&P's upgrade of India's sovereign credit rating to BBB is a milestone reflecting India's resilient economic growth, fiscal discipline, and improved macroeconomic stability. This recognition not only boosts India's credibility in global markets but also paves the way for enhanced foreign investment and lower borrowing costs, supporting sustained economic development in the years ahead.

RBI's Monetary Policy Committee Holds Repo Rate Steady at 5.5%

Context:

The Reserve Bank of India's (RBI) Monetary Policy Committee (MPC), in its 56th meeting held from August 4–6, 2025, has unanimously decided to maintain the repo rate at 5.5%, while continuing with a neutral monetary policy stance. The decision aims to balance price stability with economic growth, especially in a volatile global environment.

Key Highlights of meeting:

- **Repo Rate:** Held steady at 5.5%
- **GDP Growth Forecast:** Maintained at 6.5% for FY 2025-26, citing strong domestic demand and robust government spending
- **CPI Inflation Projection:** Revised down to 3.1% from 3.7% due to a fall in food inflation and better agricultural output
- **Monetary Policy Stance:** Neutral, offering flexibility to adjust in response to evolving macroeconomic conditions

Rationale behind the Decision

- **Benign Inflation Outlook:** CPI inflation dropped to a 77-month low of 2.1% in June 2025, supported by a good monsoon and supply-side measures
- **Steady Core Inflation:** Core inflation remains moderate around 4.4%, not requiring immediate tightening
- **Global Uncertainty:** Ongoing geopolitical tensions, trade policy shifts, and financial market volatility pose risks to India's external sector
- **Domestic Resilience:** Despite external headwinds, India's economy shows strong consumption, investment, and fiscal momentum

Economic Implications

- **Credit & Consumption:** Stable rates may encourage borrowing, especially during the festive season, boosting consumption and business investment
- **Housing Sector:** Home loan rates are likely to stay affordable, aiding real estate and construction sectors
- **Investor Confidence:** A cautious, data-driven policy reassures markets and strengthens macroeconomic stability

REPO RATE PAUSE: HOW BORROWERS HAVE GAINED SINCE FEB 2025

Previous rate cuts have slashed borrowers' interest outgo

	Jan 2025 (Original position)	March 2025 (Post Feb repo rate cut)	May 2025 (Post April repo rate cut)	August 2025 (Post June repo rate cut)
Rate of interest	8.50%	8.25%	8.00%	7.50%
Tenure (months)	240	230	221	206
Loan amount (Rs)	50 lakh	50 lakh	50 lakh	50 lakh
EMI (Rs)	43,391	43,391	43,391	43,391
Overall interest payable (Rs)	54.14 lakh	49.61 lakh	45.73 lakh	39.36 lakh
Tenure reduced by...	N.A.	10 months	19 months	34 months
Overall interest saved (Rs)		4.53 lakh	8.41 lakh	14.78 lakh

Assumptions: The borrower is servicing a Rs 50 lakh floating rate home loan with a 20 year tenure taken in Jan-2025, Keeping EMIs constant to reduce interest outgo and tenure.
 Source: Zenith Finserve

About Monetary Policy Committee (MPC):

- The Monetary Policy Committee (MPC) is a six-member body responsible for setting India's benchmark interest rates. It includes three RBI officials and three government-nominated external members. Chaired by the RBI Governor, decisions are made by majority vote, with the Governor holding a casting vote.
- Established in 2016 under the amended RBI Act, the MPC ensures transparency and accountability in monetary policy. Its current mandate is to maintain 4% inflation ($\pm 2\%$) till March 2026.
- Meeting at least quarterly, the MPC is supported by the RBI's Monetary Policy Department and publishes its policy decisions after each meeting. It replaced the earlier advisory model.

Conclusion:

The RBI's decision to hold the repo rate at 5.5% reflects a cautious yet balanced approach, aiming to support growth while keeping inflation within target. Amid global uncertainties and domestic resilience, the Monetary Policy Committee prioritizes stability, signalling confidence in India's economic fundamentals and room for future data-driven adjustments.

India's Export Performance (April–July 2025)

Context:

India's cumulative exports (merchandise and services) during April–July 2025 stood at US\$ 277.63 billion, reflecting a 5.23% growth compared to the same period in 2024.

India's Export and Import Performance (April–July 2025):

- **Merchandise Exports**
 - » **Key sectors driving growth (July 2025):**
 - **Engineering Goods:** +13.75% → US\$ 10.43 billion
 - **Electronic Goods:** +33.89% → US\$ 3.77 billion

- **Gems & Jewellery:** +28.95% → US\$ 2.39 billion
- » **Overall performance (April–July 2025):**
 - **Non-petroleum exports:** +7.70% → US\$ 127.46 billion
 - **Non-petroleum & non-gems & jewellery exports:** US\$ 118.40 billion → indicating diversification in India's export base
- **Services Exports**
 - » **April–July 2025:** US\$ 128.43 billion → growth of 7.86% year-on-year
 - » **Services trade surplus:** US\$ 63.53 billion, up from US\$ 54.34 billion in the same period last year
- **Top Export Markets (April–July 2025)**
 - » **USA:** +21.64%
 - » **China:** +19.97%
 - » **UAE:** +4.62%
 - » **Kenya:** +64.05% (notable rise)
 - » **Germany:** +14.37%
- **Major Import Sources (April–July 2025)**
 - » **China:** +13.06%
 - » **UAE:** +17.67%
 - » **Ireland:** +302.8% (exceptional increase)
 - » **USA:** +12.33%
 - » **Hong Kong:** +36.87%

Trade Deficit:

- Despite the export growth, India's trade deficit remains significant. Total imports during April–July 2025 were US\$ 308.91 billion, growing by 4.25%, resulting in a trade deficit of US\$ 31.28 billion.
- While service exports provided a buffer, merchandise imports—especially in electronics, petroleum, and gold—contributed to the imbalance. However, some import items like pulses (-51.62%) and coal (-20.93%) registered negative growth, indicating changing domestic demand and production trends.

Way Forward:

- The export performance reflects the benefits of recent initiatives such as PLI schemes, FTA negotiations, and Make in India. However, sustaining growth requires:
 - » Improved logistics and port

infrastructure

- » Widening export basket, especially in high-tech sectors
- » Addressing trade deficits through import substitution and domestic capacity-building
- The focus should be on supply chain resilience, market diversification, and bilateral trade deals to maintain export momentum and economic stability.

Conclusion:

India's export growth in 2025 is being driven by sectoral excellence, services strength, and market diversification. These drivers underscore the success of policies like PLI schemes, Foreign Trade Policy 2023, and a focus on ease of doing business and export infrastructure. However, persistent trade deficits and global headwinds require continued policy support, logistics enhancement, and market diversification to sustain momentum.

India Produces 239.30 Million Tonnes of Milk

Context:

India continues to lead as the world's largest milk producer, with total milk production touching 239.30 million tonnes in 2023–24. This data was presented in the Lok Sabha on August 12, 2025, by the Union Minister of State for Fisheries, Animal Husbandry and Dairying, S.P. Singh Baghel.

Key statistics about milk production:

- India's milk production has reached 239.30 million tonnes, with cows contributing 53.12% (127.11 million tonnes) and buffaloes accounting for 43.62% (104.39 million tonnes) of the total production.
- **The top milk-producing states are:**
 - » **Uttar Pradesh:** 37.46 million tonnes (13.11 million tonnes of cow milk and 24.35 million tonnes of buffalo milk)
 - » **Rajasthan:** 31.60 million tonnes (14.81 million tonnes of cow milk and 16.79 million tonnes of buffalo milk)

- » **Madhya Pradesh:** 20.28 million tonnes (10.09 million tonnes of cow milk and 10.20 million tonnes of buffalo milk)

- **Regional distribution:**

- » Northern and Western states (like UP, Rajasthan, MP) rely heavily on buffalo milk, which is preferred for its higher fat content, making it ideal for traditional dairy products like ghee, paneer, and khoa.
- » On the other hand, Southern states show a cow-dominant dairy model, due to differences in breed availability and consumption patterns.



Dairy Sector in the Indian Economy:

- **Major Economic Contributor:** The dairy sector is India's largest agricultural commodity, contributing 4–5% to the national GDP and about 25% to agricultural GDP. It plays a critical role in the rural economy, serving as a stable income source for over 8 crore farmers, many of whom are smallholders. This sector also contributes significantly to national food security and income generation.
- **Employment and Women Empowerment:** The dairy sector is a major employment generator, both directly and indirectly. It employs millions in cattle rearing, milk procurement, processing, and distribution. Notably, women constitute a large share of the dairy workforce, particularly in rural areas, enhancing their financial independence and

contributing to household stability.

Milk Production, Growth & Government Support:

- India is the world's largest milk producer, accounting for 24% of global output. With a 6% CAGR in milk production over the past decade, the sector shows consistent growth. Per capita milk availability in India exceeds global averages.
- Key programs such as Operation Flood, Rashtriya Gokul Mission, National Programme for Dairy Development (NPDD) and LHDCP have strengthened the sector through genetic improvement, health care, and infrastructure development.

Conclusion:

India's dairy sector remains a vital pillar of rural livelihoods and food security. With continued support through schemes like NLM and region-specific strategies, India is well-positioned to strengthen its leadership in the global dairy market while ensuring inclusive growth for millions of farmers.

RBI Releases Framework for Responsible and Ethical Enablement of AI in Financial Sector (FREE-AI)

Context:

The Reserve Bank of India (RBI) has released a comprehensive report on the Framework for Responsible and Ethical Enablement of Artificial Intelligence (FREE-AI) in the financial sector. This report is the outcome of a committee set up to promote innovation while safeguarding customer interest, ensuring fairness, accountability, and transparency in the use of AI by regulated entities.

About the FREE-AI Report:

- The Reserve Bank of India (RBI) constituted a dedicated committee to frame a comprehensive framework for the responsible and ethical use of Artificial

Intelligence (AI) in the financial sector.

- The committee was chaired by Dr. Pushpak Bhattacharyya, a leading AI expert.
- The mandate of the committee was to strike a balance between promoting innovation and safeguarding customer interests.

Why AI is Important in the Financial Sector:

- AI holds transformative potential in the financial sector due to its ability to drive efficiency and automation. It enhances the speed and accuracy of transactions, loan processing, fraud detection, and compliance monitoring.
 - Through data-driven decision-making, AI improves credit scoring, investment planning, and risk assessment. Furthermore, AI plays a vital role in fraud prevention by detecting anomalies instantly, thereby strengthening security.
 - It also supports regulatory compliance through automated monitoring and timely reporting aligned with RBI and SEBI norms.



RBI's 7 Sutras for Ethical AI Use:

- to guide the responsible adoption of AI, the RBI committee outlined seven key principles, or "sutras":
 - Trust is the Foundation:** AI systems must foster transparency and reliability to build stakeholder trust.

- » **People First:** AI should augment human decision-making, keeping customer interests at the center.
- » **Innovation over Restraint:** Encourage responsible innovation while avoiding overly restrictive regulations.
- » **Fairness and Equity:** Ensure AI outcomes are free of bias and promote equal treatment for all.
- » **Accountability:** Financial institutions must be fully accountable for the results and impacts of AI decisions.
- » **Understandable by Design:** AI systems should be explainable and user-friendly, avoiding complex “black box” models.
- » **Safety, Resilience, and Sustainability:** AI applications must be secure, capable of withstanding disruptions, and environmentally and socially sustainable.

Challenges in AI Adoption:

- Data Privacy & Security Risks
- Algorithmic Bias and Discrimination
- High Infrastructure and Talent Costs
- Lack of Clear Regulatory Frameworks
- Cybersecurity Vulnerabilities
- Limited Explainability of Complex Models

Conclusion:

The FREE-AI framework marks a transformative step in guiding India’s financial institutions toward ethical, inclusive, and innovative AI adoption. While AI holds immense promise to revolutionize finance, it must be deployed with fairness, accountability, and transparency at its core.

Indian GDP Growth in first quarter (April-June) 2025

Context:

India's economy grew by a 7.8% in the first quarter (April-June) of Financial Year 2025-26, exceeding the Reserve Bank of India's (RBI) forecast and market expectations, according to the Ministry of Statistics and Programme Implementation (MoSPI).

Sector-wise performance:

- **Services Sector:** The services sector led India’s Q1 FY26 economic growth with a 9.3% expansion, the highest in two years. Within this, trade, hotels, transport, and communication grew by 8.6%, financial, real estate, and professional services by 9.5%, and public administration, defense, and other services by 9.8%. The sector's strong momentum is reinforced by the HSBC Services PMI, which surged to a record high of 65.6 in August 2025, reflecting continued optimism.
- **Manufacturing and Construction sector:** Manufacturing and construction also contributed significantly to the growth, with manufacturing surging 7.7% and construction growing 7.6%.
- **Agriculture:** Agriculture posted a 3.7% growth, up from 1.5% a year ago. However, monsoon variability continues to pose a potential risk to future output.

Other Sectors and Expenditure Trends:

- On the expenditure side, private final consumption expenditure (PFCE) grew 7%, slightly below the previous year's 8.3% but an improvement over the 6% growth in January-March.
- Gross fixed capital formation (GFCF) increased 7.8%, indicating strong investment activity. Government final consumption expenditure (GFCE) rebounded with a 7.4% growth, recovering from a contraction of 1.8% in the previous quarter.
- However, the mining sector contracted due to heavy rainfall, and electricity, gas, and water supply grew only 0.5% due to reduced demand.

Significance of this growth:

- India’s 7.8% GDP growth in Q1 FY26 reflects strong resilience and macroeconomic stability, despite global challenges like US tariffs. It was driven by robust performances in manufacturing, services, and agriculture, with strong domestic demand and capital formation.
- This momentum boosts domestic and

foreign investor confidence and presents a timely opportunity to accelerate reforms, diversify exports, and further solidify India's position as the world's fastest-growing major economy.

Challenges despite High GDP Growth:

- **US Tariffs on Indian Exports (50%):** Risk of declining export competitiveness and strain on trade balance.
- **Geopolitical Tensions:** India's global trade relations may be affected by its strategic ties (e.g., with Russia).
- **Erratic Monsoons:** Agriculture remains highly dependent on monsoons; rainfall anomalies can disrupt rural incomes and food supply.
- **Environmental Risks:** Extreme weather events can affect mining, construction, and utilities.
- **Only 8.8% Nominal Growth:** Indicates potential deflationary trends or subdued price growth, which may affect fiscal revenue and corporate earnings.
- **Mining and Utilities Lagging:** These sectors saw contractions or minimal growth, pulling down overall industrial performance.
- **Informal Sector Weakness:** A large part of India's workforce remains in low-productivity informal jobs.
- **Skilling and Employment Mismatch:** Job creation may not match the skills and numbers of the growing working-age population.

Conclusion:

Sustaining reform momentum will be crucial to support private investment and domestic consumption. India must also diversify its trade partnerships to reduce dependence on the US and deepen engagement with regions like ASEAN, EFTA, and Africa. At the same time, the Reserve Bank of India must remain vigilant to balance growth with inflation and maintain macroeconomic stability in an uncertain global environment.

Pradhan Mantri Jan Dhan Yojana (PMJDY)

Context:

Pradhan Mantri Jan Dhan Yojana (PMJDY) recently crossed over 55 crore bank accounts opened, many of which belong to individuals who had never accessed formal banking systems before. This achievement marks a transformative step in India's financial inclusion journey.

Key Achievements:

- **Massive Outreach:**
 - » As of August 2025, over 55 crore Jan Dhan accounts have been opened.
 - » The initiative especially targeted the unbanked population, enabling millions to enter the formal financial system.
 - » Nearly 1 lakh Gram Panchayats have been covered under the ongoing KYC outreach campaign initiated in July 2025.
- **Women Empowerment:**
 - » According to RBI data, 56% of PMJDY accounts belong to women.
 - » This gender-focused inclusion has helped bridge the financial gender gap and promote women's autonomy in rural and semi-urban areas.
- **Geographical Penetration:**
 - » Approximately 66.6% of accounts are in rural and semi-urban areas, ensuring deeper financial access across India's hinterlands.
 - » Today, 99.95% of inhabited villages have banking access within a 5 km radius through multiple channels.
- **Economic Empowerment:**
 - » Total deposits in PMJDY accounts have crossed Rs.2.5 lakh crore as of May 21, 2025.
 - » The average bank balance has increased from Rs.1,065 (March 2015) to Rs.4,352, showing rising trust and usage.
 - » Around 80% of accounts are active, indicating widespread adoption and utility.

- **Role in Welfare Delivery:** PMJDY accounts have been pivotal in Direct Benefit Transfers (DBT) under schemes like:
 - » MGNREGA wages
 - » Ujjwala Yojana subsidies
 - » COVID-19 relief assistance

Benefits of Pradhan Mantri Jan Dhan Yojana



About Pradhan Mantri Jan Dhan Yojana:

- Launched on August 28, 2014, PMJDY was a flagship initiative under the government's mission to bring every citizen under the formal financial system. Initially, accounts could be opened with zero balance, making banking accessible to the poorest sections. Recognized by the Guinness World Records for the most bank accounts opened in a week: 18 million+ (Aug 23–29, 2014).
- **Key features include:**
 - » No minimum balance requirement (zero-balance account)
 - » RuPay debit card issuance
 - » Accidental insurance cover
 - » Life insurance (conditions apply)
 - » Access to overdraft facility (after 6 months of satisfactory operation)
 - » Eligibility for government subsidies and DBT directly into the bank account
 - » Any Indian citizen, including minors aged 10 years or above (with a guardian), can open a zero-balance account under PMJDY.

Conclusion:

The PMJDY has been instrumental in promoting financial inclusion, empowering women, and providing access to banking services for millions of Indians. With its continued success, the scheme is expected to play a vital role in

achieving the government's goal of financial inclusion and economic development.

Group of Ministers' Report on GST Overhaul

Context:

The Group of Ministers (GoM) constituted by the GST Council has accepted the Centre's proposal to overhaul India's GST rate structure, recommending the elimination of the 12% and 28% slabs. The proposal now heads to the GST Council for final approval.

Key Recommendations:

- **Two-Slab Structure:** Retain only 5% and 18% rates—merit and standard categories respectively.
- **Special 40% Slab:** For luxury or demerit items like tobacco and online gaming.
- **Slab Rationalisation:** Shift 99% of items in the 12% bracket to 5%, and 90% from 28% to 18%.

Strategic Implications:

- **Consumer Relief:** Lowers tax burden on daily essentials like packaged foods and household goods.
- **Economic Stimulus:** Expected to boost demand ahead of Diwali and help offset global headwinds.
- **Simplified Taxation:** Reduces compliance costs, classification disputes, and improves administrative efficiency.

GoM's Role & Functioning

- The Group of Ministers (GoM) is a specially constituted panel drawn from the GST Council, tasked with analyzing complex issues, consulting stakeholders, and recommending policy actions.
- The GoM on Rate Rationalisation, chaired by Bihar Deputy CM Samrat Choudhary, includes finance ministers from states like West Bengal, Karnataka, Kerala, UP, Rajasthan, and Goa.
- Recently, Finance Minister Nirmala Sitharaman briefed the panel on the Centre's

proposal for sweeping GST reforms.

About GST:

- GST is a comprehensive, multi-stage, destination-based indirect tax that is levied on the supply of goods and services across India.
- Launched on 1st July 2017, the Goods and Services Tax (GST) replaced multiple indirect taxes, aiming to simplify India's tax structure. It is a destination-based, value-added tax governed by a dual model (CGST + SGST/IGST), with rates decided by the GST Council. GST consolidated excise duty, VAT, and service tax into a unified system, promoting the concept of 'One Nation, One Tax'.
- **Constitutional Backing**
 - » Introduced through the 101st Constitutional Amendment Act, 2016
 - » Came into effect on 1st July 2017
 - » Empowered both the Centre and States to levy GST

Key Achievements:

- In FY 2024-25, GST recorded its highest-ever collection at Rs.22.08 lakh crore. Over 1.51 crore active taxpayers reflect increased formalisation.
- Digital tools like e-way bills, e-invoicing, and ICEGATE integration have improved compliance and refunds.
- For businesses, GST eliminated cascading taxes, reduced logistics costs, and streamlined supply chains.

Challenges:

- Despite gains, GST faces hurdles like complex tax slabs, inverted duty structures, and exclusion of petroleum and alcohol.

- The GST Appellate Tribunal (GSTAT) remains inactive in many states, delaying dispute resolution.
- Procedural ambiguities and frequent rule changes further affect compliance.

NEXT-GEN GST REFORM

for Ease of Living & to build *Aatmanirbhar Bharat*

From farmers to enterprises, from households to businesses, the Next-Gen GST brings happiness for all!

Save Big on Daily Essentials			Uplifting Farmers & Agriculture		
Items	From	To	Items	From	To
Hair Oil, Shampoo, Toothpaste, Toilet Soap Bar, Tooth Brushes, Shaving Cream	18%	5%	Tractor Tyres & Parts	18%	5%
Butter, Ghee, Cheese & Dairy Spreads	12%	5%	Tractors	12%	5%
Pre-packaged Namkeens, Bhuja & Mixtures	12%	5%	Specified Bio-Pesticides, Micro-Nutrients	12%	5%
Utensils	12%	5%	Drip Irrigation System & Sprinklers	12%	5%
Feeding Bottles, Nappkins for Babies & Clinical Diapers	12%	5%	Agricultural, Horticultural or Forestry Machines for Soil Preparation, Cultivation, Harvesting & Threshing	12%	5%
Sewing Machines & Parts	12%	5%			

Relief in Healthcare Sector			Automobiles made affordable		
Items	From	To	Items	From	To
Individual Health & Life Insurance	18%	Nil	Petrol & Petrol Hybrid, LPG, CNG Cars (not exceeding - 1200 cc & 4000mm)	28%	18%
Thermometer	18%	5%	Diesel & Diesel Hybrid Cars (not exceeding - 1500 cc & 4000mm)	28%	18%
Medical Grade Oxygen	12%	5%	3 Wheeled Vehicles	28%	18%
All Diagnostic Kits & Reagents	12%	5%	Motor Cycles (350 cc & below)	28%	18%
Glucometer & Test Strips	12%	5%	Motor Vehicles for transport of goods	28%	18%
Corrective Spectacles	12%	5%			

Affordable Education			Save on Electronic Appliances		
Items	From	To	Items	From	To
Maps, Charts & Globes	12%	Nil	Air Conditioners	28%	18%
Pencils, Sharpeners, Crayons & Pastels	12%	Nil	Television (above 32") (including LED & LCD TVs)	28%	18%
Exercise Books & Notebooks	12%	Nil	Monitors & Projectors	28%	18%
Eraser	5%	Nil	Dish Washing Machines	28%	18%

Registration

Automatic registration within 3 working days for applicants:

- Identified by the system based on data analysis
- Who determines that he would not pass Input Tax Credit exceeding ₹2.5 Lakh per month and opts for the Scheme

PROCESS REFORMS

Refund

Sanction of Provisional Refunds by proper officer, through system based risk evaluation for:

- Zero Rated Supplies
- Supplies with Inverted Duty Structure

Conclusion:

The GoM's report marks a pivotal shift toward "GST 2.0", featuring a simplified, growth-oriented tax regime. If approved by the GST Council, these reforms could significantly enhance affordability, ease of doing business, and contribute to a consumption-led economic revival under the banner of Atmanirbhar Bharat.



Internal Security



Apache Guardian

India's Military Power and the Challenge of Self-Reliance

Introduction:

On July 22, 2025, the Indian Army Aviation Corps received its first batch of AH-64E Apache Guardian attack helicopters from the United States. This event is being seen as an important milestone in India's long journey of military modernisation. The induction of the Apache strengthens India's rotary-wing combat capability and gives the Army a cutting-edge platform for precision strike and surveillance. But it also raises a serious question: can India afford to remain dependent on foreign platforms at a time when it is pushing for Aatmanirbhar Bharat in defence production?

The timing of this induction is also significant. It comes at a stage when tensions are rising along India's western and northern borders. Pakistan has inducted Chinese Z-10ME attack helicopters, while China has deployed a variety of advanced helicopters along the Line of Actual Control (LAC). Against this backdrop, India's decision to bring in the Apache reflects

its urgent need to fill existing gaps in air combat and surveillance.

Why the Apache is Important?

The AH-64 Apache is one of the most advanced and combat-tested attack helicopters in the world. It is operated by 17 countries and has a long history of battlefield use.

❖ **India's procurement story**

- » In 2020, India signed a deal with Boeing worth Rs.5,691 crore (about \$681 million) for six Apaches for the Indian Army.
- » Before this, in 2015, India had signed a \$2.5 billion agreement for 22 Apaches and 15 Chinook heavy-lift helicopters for the Indian Air Force (IAF).
- » Today, the IAF operates all 22 Apache helicopters, while the Army has inducted three. The remaining three will be delivered by November 2025.

❖ **Combat history:** The Apache is not just another advanced platform; it has been

battle-tested:

- » First deployed in 1989 during Operation Just Cause in Panama, where it provided night-time fire support.
- » Later, it was extensively used in the Global War on Terror, especially in Afghanistan and Iraq. Its ability to deliver precision strikes, operate in difficult terrain, and provide close air support made it indispensable.

Apache's Cutting-Edge Features:

- ❖ The AH-64E Apache Guardian comes with some of the most advanced systems available in any attack helicopter:
 - » **AN/APG-78 Longbow Fire-Control Radar:** Mounted above the rotor, it can detect, classify, and prioritise up to 256 targets at once.
 - » **Speed and Range:** Top speed of 293 km/h, with an operational range of more than 480 km.
 - » **Survivability:** Equipped with advanced avionics and counter-measures that allow it to survive in hostile environments.
 - » **All-weather Operations:** Can operate day and night, in deserts, plains, or high-altitude mountains like Ladakh and Kashmir.
 - » **Multi-role Capability:** Excels in close air support, suppression of enemy air defence (SEAD), ISR (Intelligence, Surveillance, Reconnaissance), and escort missions.
- ❖ The ADG PI-Indian Army highlighted that Apache strengthens not just firepower but also the combat intelligence cycle, making it a force multiplier in joint operations.

Doctrinal Significance for India:

- ❖ The decision to induct Apaches into the Army shows a doctrinal shift in India's military thinking.
 - » The Army wanted its own fleet of attack helicopters instead of depending solely on the Air Force.
 - » This aligns with the creation of Integrated Battle Groups (IBGs), where Army units

must have independent combat support.

- » The Apache fits into India's evolving Integrated Theatre Commands (ITC) strategy, which focuses on speed, mobility, and precision.
- ❖ In such a structure, Apaches will:
 - » Provide rapid escalation dominance during border conflicts.
 - » Support airborne assault operations.
 - » Neutralise enemy air defences in conventional war.

IAF'S NEW COMBAT MUSCLE APACHE AH-64E

IAF inducts 8 Apache AH-64E attack helicopters on Sept 3, 2019

Manufactured by Boeing; used by US Army and international defence forces

To replace old Russia-made Mi-35 attack helicopters

THE APACHE ADVANTAGE



Two high-performance turboshaft engines for maximum cruise speed of 284km/hr

World's most advanced multi-role combat helicopter

Advanced laser, infrared & target acquisition designation to attack targets

Laser guided precision Hellfire missiles, 70mm rockets, 30mm automatic cannon

Wing Span: **17.15 ft**

Height: **15.24 ft**

SPECIFICATIONS

Primary mission gross weight	6,838Kg
Vertical rate of climb	More than 2000ft per min
Maximum rate of climb	More than 2,800ft per min

Indigenous Alternatives: Rudra and Prachand:

- ❖ India has made notable progress in developing indigenous combat helicopters.
 - » **HAL Rudra:** Armed version of the Dhruv helicopter, already in limited service.
 - » **LCH Prachand:** Specially designed for high-altitude warfare, has entered IAF

and Army service.

- » **ALH Dhruv:** Utility helicopter platform with wide applications.
- ❖ However, there are challenges:
 - » **Engine Dependency:** India still uses imported engines like the Shakti (Turbomeca product).
 - » **Delays in R&D:** Projects often face bureaucratic and technical delays.
 - » **Combat History Gap:** Indigenous helicopters lack the battlefield record that makes foreign platforms attractive.

Regional Rotor Race: Pakistan and China:

- ❖ The importance of the Apache also becomes clear when seen against regional developments.
 - » Pakistan has inducted the Z-10ME, an upgraded Chinese attack helicopter. Earlier trials in 2021 were not very successful, but Pakistan still inducted the newer version. However, it lacks the Apache's combat record.
 - » China has deployed helicopters like the Z-19, Z-10, and Z-20 along the LAC. These are supported by rapid infrastructure building in Tibet and Xinjiang, which gives the PLA an edge in high-altitude mobility.
- ❖ India faces the challenge of a two-front scenario, and the Apache provides a proven, high-performance capability to strengthen deterrence.

Budgetary and Strategic Concerns:

- ❖ India's Defence Budget for 2025–26 is Rs.6.81 trillion, of which Rs.1.49 trillion is set aside for acquisitions. But the defence forces face competing demands:
 - » Infantry modernisation.
 - » Submarine and naval procurement.
 - » Fighter aircraft acquisitions (including the pending MRFA deal).
- ❖ Big-ticket items like the Apache put pressure on the budget, sometimes delaying indigenous procurements.
- ❖ According to SIPRI (2024), India remains the world's largest arms importer. The government's goal is to bring imports down

to below 30% of acquisitions by 2030. The tension, therefore, lies between strategic autonomy and operational readiness.

Way Forward:

- ❖ Experts suggest that in the next 3–4 years, the Army will need 11 more Apaches and Chinooks. However, future planning must focus on long-term self-reliance.
- ❖ The steps ahead include:
 - » Accelerating indigenous helicopter innovation.
 - » Developing Indian-made engines to cut foreign dependency.
 - » Public-Private Partnerships and Joint Ventures with foreign manufacturers.
 - » Procurement reforms to make R&D cycles faster and smoother.
 - » Building export potential by proving indigenous helicopters in combat roles.

Conclusion:

The induction of the AH-64E Apache Guardian shows India's commitment to strengthening its air combat power. The helicopter brings proven capabilities in high-altitude and multi-domain operations and gives India a combat advantage at a time of regional turbulence. At the same time, it highlights the gap in India's indigenous defence ecosystem. Platforms like Prachand and Rudra are promising but not yet at par with global benchmarks. This makes selective imports necessary in the short term. India's challenge is to maintain this delicate balance—ensuring today's readiness with platforms like the Apache while speeding up the journey to true Aatmanirbhar Bharat in defence. Until India's indigenous ecosystem matures fully, smart imports will remain a critical pillar of national security.

Short Issues

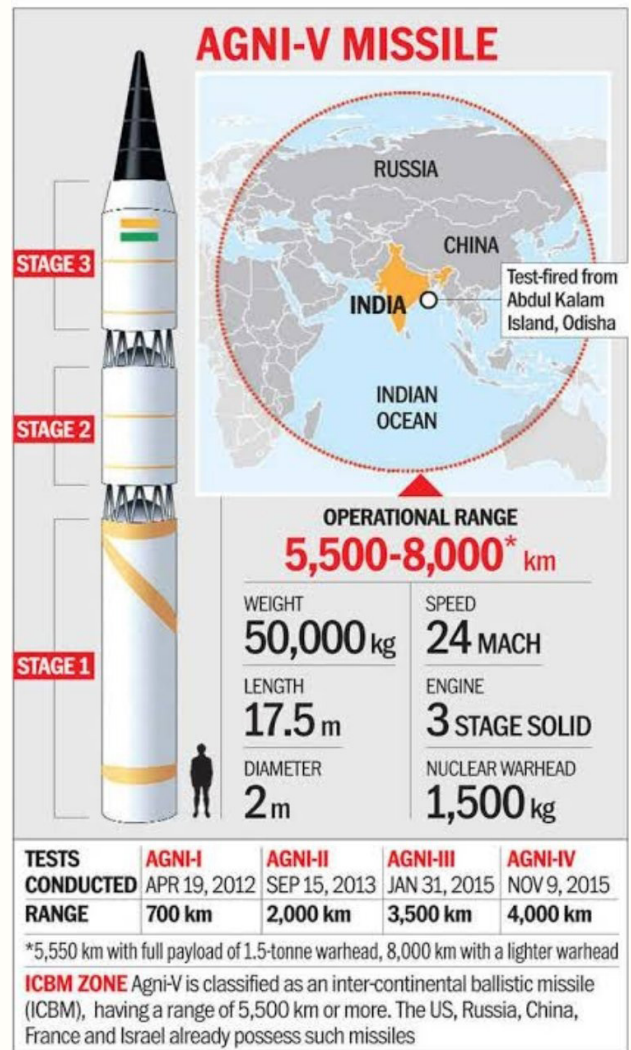
Agni-5 Ballistic Missile

Context:

Recently, India successfully test-fired the Agni-5 intermediate-range ballistic missile on August 20, 2025, from the Integrated Test Range in Chandipur, Odisha. The test, conducted under the Strategic Forces Command, confirmed that all operational and technical parameters were met. This launch involved a variant of the Agni-5, which is part of India's intercontinental ballistic missile (ICBM) program developed by DRDO, with a range of up to 5,000 km.

About Agni-V missile:

- Agni-V is India's most advanced intercontinental ballistic missile (ICBM), designed to strengthen the country's nuclear deterrence capabilities. Developed by the Defence Research and Development Organisation (DRDO), it represents a major leap in India's missile technology.
- **Key Features:**
 - » **Type:** Surface-to-surface intercontinental ballistic missile
 - » **Propulsion:** Three-stage, solid-fuelled rocket engine
 - » **Range:** Estimated between 5,000 to 5,500 km
 - » **Payload Capacity:** Capable of carrying a 1.5-tonne nuclear warhead
 - » **Technology:** Fire-and-forget system — once launched, it requires no further guidance
 - » **Mobility:** Can be launched from mobile platforms, enhancing its survivability
 - » **Navigation:** Equipped with high-accuracy ring laser gyroscopes and inertial navigation systems
- On March 11, 2024, India conducted the first MIRVed test launch of Agni-5 from Kalpakkam in Tamil Nadu, validating its ability to carry and release multiple warheads. Warhead capacity: The missile is capable of carrying and firing up to three nuclear warheads simultaneously.



Implications of Agni-5 Missile Test:

- The successful test reaffirms India's credible minimum nuclear deterrent, especially in the context of its No First Use (NFU) policy. With a range of up to 5,500 km, Agni-5 covers all of China, parts of Europe, and Asia, reinforcing deterrence against adversaries.
- The test validates India's capability to maintain and operate advanced three-stage solid-fuel ICBMs. Continuous testing demonstrates technological maturity, improved target accuracy, and integration of systems like MIRV (if deployed) in future versions.
- The launch sends a strong message

amid ongoing regional security tensions, particularly with China. It asserts India's position as a responsible nuclear power and a key player in Indo-Pacific security dynamics.

Development of Agni Missiles:

- The Agni missile series is one of India's most significant achievements in defence technology, evolving over decades to form the backbone of the country's strategic missile forces. The development began under the Integrated Guided Missile Development Program (IGMDP), launched in 1983 by the Defence Research and Development Organisation (DRDO).
- Over the past decade, India has developed various versions of Agni Missile, which range from short-range Agni-I to the intercontinental Agni-V, with work on Agni-VI already underway.

About IGMDP:

- The IGMDP, a visionary initiative by DRDO, aimed to achieve self-reliance in missile technology. It included five missile systems: Agni (surface-to-surface ballistic missile), Prithvi (short-range missile), Akash (surface-to-air missile), Nag (anti-tank missile), and Trishul (short-range surface-to-air missile).
- The Agni missile started as a technology demonstrator, primarily for testing re-entry vehicle (RV) technology, which is essential for delivering nuclear warheads over long distances.

Conclusion:

The successful test of the Agni-5 reinforces India's strategic deterrence capabilities and its commitment to maintaining a credible minimum nuclear deterrent. As regional and global security dynamics evolve, such trials demonstrate the technological maturity of India's missile programs and its focus on strengthening national defense preparedness.

Declassified Joint Doctrines Signal India's Evolving

Military Strategy

Context:

On 7 August 2025, Chief of Defence Staff (CDS) General Anil Chauhan, who also serves as Secretary of the Department of Military Affairs, released the declassified Joint Doctrine for Cyberspace Operations and Joint Doctrine for Amphibious Operations during a Chiefs of Staff Committee meeting in New Delhi. The move highlights India's growing emphasis on joint war-fighting capabilities, transparency, and integration in defence planning.

Features of the Joint Doctrine for Cyberspace Operations:

- The doctrine provides a cohesive national strategy to safeguard India's cyberspace interests. Key features include:
 - » Integration of offensive and defensive cyber capabilities across the Army, Navy, and Air Force.
 - » Emphasis on resilience in digital infrastructure.
 - » Real-time intelligence sharing among the services.
 - » Conduct of unified cyber operations for faster and more effective responses.

Need for Joint Doctrines:

- Modern warfare increasingly demands seamless coordination among all branches of the Armed Forces. The shift toward multi-domain battlefields, grey-zone threats, and persistent challenges in cyberspace has made a unified operational approach essential.
- **Joint doctrines:**
 - » Provide a common framework, language, and guiding principles for integrated operations.
 - » Enhance interoperability and reduce redundancies.
 - » Enable faster, coordinated responses to complex threats.
 - » Improve operational efficiency and strategic coherence.
- For India, which faces diverse security

challenges, these doctrines are crucial to strengthen national defence and create synergy between the Army, Navy, and Air Force.

Understanding Cyberspace:

- Cyberspace is the global domain of information and communication technology (ICT) systems that process, store, and transmit digital data, regardless of whether they are connected to the internet. It has become a critical operational domain for modern militaries, alongside land, air, sea, and space.
- **Military Advantages of Cyberspace Operations:**
 - » Real-time intelligence gathering for situational awareness.
 - » Enhanced communication and coordination between forces.
 - » Signal intelligence for intercepting and analysing data.
 - » Execution of offensive and defensive cyber operations to disrupt enemy networks or defend national systems.
 - » Support for faster decision-making at tactical, operational, and strategic levels.
- **Vulnerabilities in Cyberspace:**
 - » Cyber warfare can disable military and civilian networks.
 - » Disruption of critical services such as energy, transport, or healthcare.
 - » Theft or manipulation of classified data.
 - » Potential to cripple economic and financial systems, impacting overall national security.

Role of the Chief of Defence Staff (CDS):

- The post of CDS was created in 2019, following recommendations of the 2001 Group of Ministers based on the K. Subrahmanyam Committee Report. The CDS is a four-star General and:
 - » Heads the Department of Military Affairs.
 - » Acts as the Permanent Chairman of the Chiefs of Staff Committee.
 - » Advises the Ministry of Defence on tri-

service and nuclear matters.

- » Coordinates inter-service acquisitions and planning.
- » Does not exercise direct command over service chiefs.

Conclusion:

The declassification of the Joint Doctrine for Cyberspace Operations marks a significant step in modernising India's military thinking. As cyber threats grow in complexity and scale, the doctrine offers a structured and unified approach to defending national interests in the digital domain. By integrating cyber capabilities across the services and fostering interoperability, India is better positioned to safeguard its sovereignty and security in the information age.'

DRDO Air Defence System

Context:

On August 23, 2025, the Defence Research and Development Organisation (DRDO) successfully carried out the maiden flight-tests of the Indigenous Integrated Air Defence Weapon System (IADWS). The tests were conducted off the coast of Odisha and marked a major technological milestone for India's self-reliant air defence architecture.

What is the Integrated Air Defence Weapon System (IADWS)?

- The Integrated Air Defence Weapon System (IADWS) is a multi-layered, mobile, and indigenous air defence solution designed to counter aerial threats such as drones, UAVs, aircraft, and cruise missiles.
- It integrates three advanced components:
 - » Quick Reaction Surface-to-Air Missiles (QRSAMs)
 - » Very Short Range Air Defence System (VSHORADS) missiles
 - » Laser-based Directed Energy Weapon (DEW)
- These are managed through a Centralised Command and Control Centre developed by DRDL, Hyderabad.

Key Components of IADWS:

- **Quick Reaction Surface-to-Air Missile (QRSAM)**
 - » **Developer:** DRDO
 - » **Purpose:** Protects moving armoured formations from enemy air attacks
 - » **Range:** 3 – 30 km
 - » **Key Features:**
 - 360° surveillance and tracking
 - Mobile launchers and radars
 - "Shoot on the move" capability
- **Very Short Range Air Defence System (VSHORADS)**
 - » **Developer:** Research Centre Imarat (RCI), Hyderabad
 - » **Type:** 4th-generation MANPAD
 - » **Range:** 300 m – 6 km
 - » **Targets:** UAVs, helicopters, low-flying aircraft
 - » **Usage:** Army, Navy, Air Force
- **Directed Energy Weapon (DEW)**
 - » **Developer:** Centre for High Energy Systems and Sciences (CHESS), Hyderabad
 - » **System:** Laser DEW MK-II(A), vehicle-mounted
 - » **Range:** < 3 km
 - » **Demonstration:** Successfully neutralised UAVs and drone swarms via direct-energy targeting in April 2025
 - » **Significance:** India joins select nations with operational DEW technology

Strategic Significance:

- **Multi-Layered Defence Shield**
 - » Covers short, very short, and point-defence ranges.
 - » Provides flexible response to a wide range of aerial threats, including drones, cruise missiles, and aircraft.
- **Indigenous Capability**
 - » Entirely developed in India by DRDO and associated defence labs.
 - » Reduces reliance on foreign air defence systems, aligning with Aatmanirbhar Bharat.
- **National Security Strengthening**
 - » Enhances area defence for critical

installations and forward positions.

- » A major step toward Mission Sudarshan Chakra — India's comprehensive air defence network.

Mission Sudarshan Chakra

DRDO has successfully tested a new integrated air defence system expected to be a part of a bigger national security shield

THE SYSTEM'S 3 LAYERS

- | | | |
|--|---------------------------------------|--------------------------------------|
| 1 Quick reaction surface-to-air missiles | 2 Very short-range air defence system | 3 Laser-based directed energy weapon |
|--|---------------------------------------|--------------------------------------|

HOW TEST WAS CONDUCTED

During the test, 3 different targets, including two high-speed fixed wing unmanned aerial vehicle targets and a multi-copter drone were simultaneously engaged and destroyed completely by the three defence layers at different ranges and altitudes

MODI'S 10-YEAR DEADLINE
In his Independence Day address, Prime Minister Modi set a 10-year deadline for developing an indigenous air defence shield integrated with offensive weapons under Mission Sudarshan Chakra to thwart aerial attacks



About Mission Sudarshan Chakra:

- The IADWS is a critical component of Mission Sudarshan Chakra, an ambitious initiative announced by PM Modi to establish a fully integrated, layered defence system covering:
 - » Surveillance
 - » Cybersecurity
 - » Kinetic and non-kinetic air defence
- It aims to protect strategic assets and border areas from:
 - » Long-range missiles
 - » Drones and UAVs
 - » Enemy aircraft

Conclusion:

The successful test of the IADWS marks a historic milestone for Indian defence technology. Its deployment will greatly enhance India's ability to defend vital assets and respond swiftly to evolving aerial threats. It also reaffirms the government's commitment to indigenisation and strategic autonomy in national security.

INS Udaygiri and INS Himgiri

Context:

On August 26, 2025, the Indian Navy commissioned two Nilgiri-class stealth guided-missile frigates INS Udaygiri and INS Himgiri at Visakhapatnam. This is the first simultaneous

commissioning of two major warships constructed at different Indian shipyards.

About Project 17A and Nilgiri-Class:

- Both ships are part of Project 17A, which is the Nilgiri-class stealth frigate project. These ships are an improved version of the earlier Shivalik-class (Project 17).
 - » **INS Udaygiri:** Second ship of Project 17A, built by Mazagon Dock Shipbuilders Limited (MDL), Mumbai.
 - » **INS Himgiri:** First Project 17A ship built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata.
- INS Udaygiri is also the 100th ship designed by the Navy's Warship Design Bureau, showing the strength of India's own design capability.
- In total, there will be seven Nilgiri-class frigates: four (Nilgiri, Udaygiri, Taragiri, Mahendragiri) built by MDL and three (Himgiri, Dunagiri, Vindhyagiri) by GRSE.
- The Ministry of Defence has said that 75% of the equipment orders have gone to Indian companies, involving over 200 MSMEs, and generating about 4,000 direct and 10,000 indirect jobs.

Major Features of Nilgiri-class Frigates:

- Nilgiri-class frigates are designed for multiple roles and can operate in the open seas, facing both traditional and new security threats.
- **Surface-to-Air weapons:** Long Range Surface-to-Air Missiles (LRSAM), Barak 8 missiles.
 - » **Surface-to-Surface weapons:** Eight BrahMos supersonic cruise missiles (vertically launched).
 - » **Anti-Submarine Systems:** Lightweight torpedoes, Indigenous Rocket Launcher (IRL), Humsa (NG) sonar.
 - » **Artillery:** 127 mm main gun, two AK-630 rapid-fire guns.
 - » **Surveillance and Warfare:** Multi-Mission Surveillance Radar, Shakti Electronic Warfare Suite, airborne early warning radar, and surface surveillance radar.

Technical Details:

- **Length:** 149 metres
- **Displacement:** About 6,670 tonnes
- **Propulsion:** Combined Diesel or Gas (CODOG)
- **Speed:** 28 knots
- **Endurance:** 5,500 nautical miles (economical), 1,000 nautical miles (maximum speed)
- **Crew:** Around 225 personnel
- **Design:** 4.54% larger hull than the Shivalik-class, but with reduced radar signature for better stealth.

Legacy of the Names:

- The Nilgiri-class continues the names of older ships that served with honour.
 - » **INS Udaygiri:** Named after a mountain range in Andhra Pradesh. The earlier Udaygiri (1976–2007) took part in Op Pawan (1987), Op Dolphin and Op Cactus (1988), Op Madad (1991), and Op Castor (2005).
 - » **INS Himgiri:** Named after the snow-covered Himalayas. The earlier Himgiri (1974–2005) protected Bombay High Oil Fields, took part in Op Cactus (1988), and provided relief during the Gujarat earthquake (2001).
- The new INS Udaygiri will serve under the Eastern Naval Command, and INS Himgiri under the Western Naval Command. Their mottos are:
 - » **Udaygiri:** Sanyuktaha Paramojayaha ("In togetherness there is great victory")
 - » **Himgiri:** Adrushyam Ajayam ("Invisible and invincible").

Conclusion:

Three Nilgiri-class frigates have now been commissioned. The other four will join the Navy within the next one and a half years. Looking ahead, the Navy is planning Project 17 Bravo (P-17B), which will build seven even more advanced frigates with better weapons, control systems, and higher use of Indian technology.

Power Packed News

Goa to host FIDE World Cup 2025

- The International Chess Federation (FIDE) on August 26 announced that Goa, India will host the FIDE World Cup 2025. The prestigious tournament will be held from October 30 to November 27.
- 206 players from over 90 countries will participate in it and compete for a prize money of \$2 million (about Rs 17.5 crore). Also, three qualifying places in the 2026 Candidates Tournament will also be at stake.
- The top 50 players will start directly from the second round. Each match will have two classical games and rapid and blitz tie-breaks will be played when required.
- Goa has been chosen due to its natural beauty and cultural attractions, which will give a lively experience to the participants and spectators.
- India's growing global strength and popularity in chess further strengthened India's claim to host the event. The tournament will be among the most watched events in chess history.

Project Arohan

- The National Highways Authority of India (NHAI) has launched "Project Arohan" to promote education of children from families of toll plaza employees. The initiative focuses on ensuring access to quality education especially to students from low-income groups.
- Under the project, 500 students from class 11 to graduation level will be given an annual scholarship of Rs.12,000 in 2025-26. In addition, 50 outstanding students getting admission in postgraduate or higher education will get assistance of Rs.50,000 each.
- The application process will be completely online, for which students will have to submit academic certificates, income certificate, caste certificate and valid identity card.
- NHAI Chairman Santosh Kumar Yadav said that this initiative is an important step towards nurturing young talent and contributing to the development of the country.

Aneesh Dayal Singh appointed Deputy National Security Advisor

- Former CRPF and ITBP Director General Aneesh Dayal Singh has been appointed as Deputy National Security Advisor (NSA) with responsibility for internal affairs. He is a 1988 batch Manipur cadre IPS officer and retired in December 2024.
- In his long career, he served in the Intelligence Bureau for nearly three decades. Apart from this, he has also led the Indo-Tibetan Border Police (ITBP) and later the Central Reserve Police Force (CRPF).
- As Deputy NSA, his responsibility will be related to internal security matters, including Jammu and Kashmir, Naxalism and insurgency in the Northeast.
- He successfully led the security arrangements for the 2024 Lok Sabha and Jammu and Kashmir Assembly elections.
- Currently, former RAW chief Rajinder Khanna is the Additional NSA, while T.V. Ravichandran and Pawan Kapoor are also serving as Deputy NSA.

Kerala becomes India's first fully digitally literate state

- Kerala recently achieved a historic feat by becoming India's first fully digitally literate state. This success was made possible through the 'Digi Kerala' initiative launched in 2021 under the leadership of the Department of Local Self Government.
- So far, more than 21.87 lakh people have learned digital skills under this program, which aims to bridge the digital divide and enable citizens to use new technologies.
- Digital literacy is not just operating a smartphone or computer, but it includes accessing information from the Internet, communicating through email and video calls, online access to government services and schemes, digital payments, safe use of social media and cyber security awareness.
- Such competencies provide citizens with opportunities for more active participation in governance, education and economy. The Digi Kerala model started with Pullampara Panchayat, which became the country's first digitally literate local body.
- After this, this campaign was implemented across the state. The success of the program was based on community participation, active role of youth and door-to-door training. This initiative not only reduces the digital divide but is also an important step towards an inclusive and tech-driven society of the future.

Inga Ruginieni becomes Prime Minister of Lithuania

- The Parliament of Lithuania has confirmed Social Democratic Party leader Inga Ruginieni as the country's next Prime Minister. She is currently serving as the Minister of Social Security and Labor. Now she has 15 days to outline the cabinet in consultation with the President.
- After this, the new cabinet will have to get approval by voting in Parliament. His appointment will be formalized after the President signs the official order. Ruginieni was elected to the Lithuanian Parliament for the first time in 2024.
- Earlier she has been the President of the Lithuanian Trade Union Confederation. This appointment is being considered an important step towards increasing the participation of women in Lithuania's politics.
- The capital of Lithuania is Vilnius, located on the shores of the Baltic Sea and its currency is the euro.

Rajiv Ranjan becomes Vice President of NDB

- Indian economist Rajiv Ranjan has been appointed as the Vice President of the New Development Bank (NDB). He will hold this post for five years. He was appointed by the Board of Governors of NDB.
- NDB was established in 2015 by the BRICS countries with the aim of financing infrastructure and sustainable development projects. Dilma Rousseff is its current president. Rajiv Ranjan has over 35 years of experience in central banking.
- He started his career in the Reserve Bank of India (RBI) in 1989 and has been serving as Executive Director since May 2022. He has also been a member of the Monetary Policy Committee (MPC).
- Apart from this, from 2012 to 2015, he worked as an economic policy expert in the Central Bank of Oman. His experience will help NDB to strengthen development projects in emerging economies.

Mirabai Chanu wins gold at Commonwealth Weightlifting

Championships

- India's star weightlifter Mirabai Chanu performed brilliantly by winning the gold medal at the 2025 Commonwealth Weightlifting Championships held in Ahmedabad. She lifted a total of 193 kg, including 84 kg in snatch and 109 kg in clean and jerk.
- Both performances became championship records. This victory marks Mirabai's strong comeback to competitive weightlifting. With this, she also secured direct qualification for the 2026 Glasgow Commonwealth Games.
- Tokyo Olympics silver medalist Mirabai is counted among India's top weightlifters. Her success has not only strengthened India's medal hopes but also inspired young players. This achievement also reflects India's growing global status in the sport of weightlifting.

Ajay Kumar Bhalla sworn in as Governor of Nagaland

- Ajay Kumar Bhalla took oath as the 22nd Governor of Nagaland on 25 August 2025. He was administered the oath of office by Chief Justice of Guwahati High Court, Justice Ashutosh Kumar at Raj Bhavan in Kohima.
- Earlier, he was serving as the Governor of Manipur and was given additional charge of Nagaland after the demise of Governor La Ganesan on August 15.
- After the swearing-in, he was given a ceremonial guard of honour and also held his first meeting with the state cabinet.
- His appointment is expected to further strengthen the governance in Nagaland and establish better coordination between the Centre and the state.

Sharvari Shende wins gold at World Youth Archery

- India's Sharvari Somnath Shende won the gold medal in the Under-18 Women's Recurve Individual event at the World Youth Archery Championship 2025 held in Winnipeg, Canada. She achieved this feat by defeating Kim Yevon of South Korea 6-5 in the final.
- With this win, she became the third Indian to win a world title in this category, joining Deepika Kumari and Komalika Bari. India won a total of eight medals (four gold, two silver and two bronze) in this championship.
- The tournament, held from 17 to 24 August, was the 19th edition of the biennial competition held since 1991, in which 570 players from 63 countries participated. The next World Youth Archery Championship will be held in Antalya, Turkey in 2027.

CISF Launches First Women Commando Unit

- The Central Industrial Security Force (CISF) has formed its first full-fledged women commando unit. The initiative aims to promote gender inclusivity in the force. Currently, 30 women personnel are undergoing eight weeks of intensive training at the Regional Training Center in Barwaha, Madhya Pradesh.
- The training has special emphasis on physical endurance, weapon handling, ammunition practice, rappelling and survival skills. These women commandos will be deployed in special quick reaction teams at high-security establishments.
- In the initial phase, 100 women are being given this training. The force currently has 8% women representation, which is targeted to be increased to 10%.
- Next year, 2,400 additional women will join CISF. This move will take women participation in

the security forces to a new level.

Lord Swaraj Paul dies

- Prominent NRI industrialist and philanthropist Lord Swaraj Paul died in London at the age of 94. Prime Minister Narendra Modi condoled his death and praised his contribution to industry, charity and public service in the UK and underlined his role in strengthening India-UK relations.
- Born in Jalandhar, Punjab in 1931, Paul went to Britain in the 1960s for the treatment of his daughter. He made a name in the industry through the Caparo Group and later made philanthropy an important part of his identity.
- In 1996, he was made a life member of the House of Lords. Works like saving the London Zoo are examples of his philanthropic contribution. His death has caused irreparable loss to the Indian diaspora community and UK-India relations.

Jalalabad renamed as Parshurampuri

- The Union Home Ministry has approved the renaming of Jalalabad town in Shahjahanpur district of Uttar Pradesh as "Parshurampuri". The decision was taken on 20 August 2025.
- The town is known as the birthplace of Saint Parashuram and an ancient temple dedicated to him is also located here.
- The state government had requested the name change for historical and cultural reasons, which was also passed by the Jalalabad Municipal Board.
- The Center has directed to register the new name in Devanagari, Roman and regional languages. The Parashurampuri naming is expected to promote local identity and religious significance.
- The decision also reflects the Uttar Pradesh government's policy to respect traditional heritage and religious faith.

Uranus's New Moon Discovered

- With the help of NASA's James Webb Space Telescope, scientists have discovered the 29th moon of Uranus, temporarily named S/2025 U1. The discovery was made by a team from the Southwest Research Institute (SwRI), Colorado, by analyzing long-exposure images on February 2, 2025.
- The newly discovered moon has a diameter of about 10 kilometers and is located in a nearly circular orbit 56,000 kilometers away from Uranus. It orbits between the orbits of the moons named Ophelia and Bianca.
- It was not visible when Voyager-2 passed in 1986. According to scientists, this moon is the 14th member of a complex system of small satellites that orbit the larger moons of Uranus.
- Its official name will be approved by the International Astronomical Union (IAU).

India's success in Asian Shooting Championship

- India's Rashmika Sehgal created history by winning the gold medal in the junior women's air pistol at the 16th Asian Shooting Championship held in Shymkent, Kazakhstan. She defeated Korea's Han Seunghyun with 241.9 points.
- Rashmika scored 582 points in the qualification round and also won the team gold medal with Vanshika Chaudhary and Mohini Singh.

- On the other hand, Manu Bhaker won the bronze medal in the women's 10 meter air pistol and also got the team bronze with Palak and Suruchi Phogat.
- India won a total of five gold, two silver and four bronze medals on the second day of the competition. This performance reflects the emerging level of Indian shooting and the potential of young players. The competition was held from 16 to 30 August 2025.

China-Pakistan Economic Corridor

- The second phase of the China-Pakistan Economic Corridor (CPEC), which was recently reviewed at the China-Pakistan Strategic Dialogue held in Islamabad, is deepening India's geopolitical concerns.
- The corridor, which began in 2013, connects Kashgar (China) to Gwadar (Pakistan) via Pakistan-occupied Jammu and Kashmir (PoJK). CPEC 2.0 includes digital infrastructure, energy corridor, special economic zones (SEZs) and the possibility of connecting Afghanistan.
- The estimated investment is around \$62 billion, which is linked to China's Belt and Road Initiative (BRI). For India, this is challenging at many levels. First, it violates its sovereignty as its route passes through Pakistan Occupied Kashmir.
- Second, China's potential naval presence at Gwadar port poses a strategic threat to India's west coast and can serve as a dual-use military infrastructure. Third, the involvement of Afghanistan can encircle India regionally and strengthen the China-Pakistan axis.
- India is facing these challenges with diplomatic and strategic measures. This includes opposition to BRI, development of Chabahar port and India-Middle East-Europe Corridor (IMEC). At the same time, India is trying to strike a regional balance by deepening cooperation with Russia, the US, Iran and Gulf countries.

Thayumanvar Thittam Scheme

- Recently, Tamil Nadu Chief Minister M.K. Stalin launched the 'Thayumanvar Thittam' scheme to deliver ration to the homes of more than 21.7 lakh elderly and disabled people under the Public Distribution System (PDS) scheme. The scheme aims to remove difficulties faced by senior citizens and disabled people in getting ration and promote convenience and accessibility.
- The scheme provides for the supply of rice, sugar and other essential commodities to the homes of beneficiaries.
- The scheme is expected to benefit about 20.4 lakh senior citizens and 1.3 lakh disabled people across the state.
- The scheme will be implemented by the Department of Cooperation, Food and Consumer Protection, under which ration distribution vehicles will visit the beneficiaries' homes on the second Saturday and Sunday of every month.
- Tamil Nadu PDS is a universal scheme that provides food grains at subsidized rates to all families, unlike the targeted systems of other states.
- Each family gets 20 kg of rice monthly, while under AAY families are given 35 kg of rice.
- Annapurna Yojana assists elderly persons without pension.
- Essential commodities such as wheat, sugar and kerosene are also distributed.
- Tamil Nadu Civil Supplies Corporation (TNCYCS) manages procurement, storage and distribution.

India's first animal stem cell biobank

- Recently, Union Minister Dr. Jitendra Singh inaugurated India's first state-of-the-art animal stem cell biobank and laboratory of its kind at the National Institute of Animal Biotechnology (NIAB) in Hyderabad.

About the Biobank:

- Developed at a cost of Rs. 1.85 crore and spread over 9,300 sq. ft., the facility will promote advanced research in Regenerative Medicine, Cell Therapy, Tissue Engineering, Reproductive Biotechnology and Livestock Disease Modelling.

Key Features:

- **Advanced Equipments** – The facility is equipped with state-of-the-art technology, including Stem Cell Culture Unit, 3D Bioprinter, Bacterial Culture Lab, Cryostorage, Autoclave Room and Uninterrupted Power Backup.
- **Research Centre** – The laboratory will strengthen research in Disease Modelling, Tissue Engineering and Reproductive Biotechnology, leading to improved livestock health and productivity.
- **Biobanking Capabilities** – In collaboration with the National Biopharmaceutical Mission (NBM) of Department of Biotechnology-BIRAC, the facility will enable biobanking of animal stem cells and their derivatives.

Dubai International Airport launches AI corridor

- Dubai International Airport has launched a new AI-powered corridor for passengers, which provides immigration clearance in just 14 seconds. Passengers do not have to show any documents or passports to pass through this corridor, but facial recognition technology verifies their identity based on pre-registered biometric data. 10 passengers can pass through this smart corridor simultaneously.
- This facility is currently available in the First and Business Class lounges of Terminal 3. The system is based on the smart tunnel technology introduced in 2020 and is part of the "Travel Without Borders" and "Unlimited Smart Travel" initiatives. To ensure safety, AI checks data before travel and conducts expert review if found suspicious. Dubai Airport, which has been the world's busiest airport for 11 consecutive years, is now introducing this innovation as a model for future air travel.

71st National Film Awards

- The 71st National Film Awards were announced on 1 August 2025, which are considered the highest honor of Indian cinema. The event honors outstanding contributions to films of diverse languages and genres made across the country.
- The Best Actor award was jointly presented to Shah Rukh Khan for his film Jawaan and Vikrant Massey for his powerful performance in 12th Fail. At the same time, Rani Mukerji received the Best Actress honor for her outstanding performance in Mrs. Chatterjee vs Norway.
- 12th Fail won the Best Film title, while Flowering Man directed by Soumyajit Ghosh Dastidar was declared the Best Non-Feature Film. Piyush Thakur was given the Best Director award. God Vulture and Human was selected in the documentary category.
- In the entertainment category, Karan Johar's Rocky Aur Rani Ki Prem Kahani won the Best Popular Film award, while Sam Bahadur was honored for promoting national, social and environmental values. In the music field, GV Prakash Kumar was awarded the Best Music

Direction award for the Tamil film Vaathi.

- In the playback singing category, Shilpa Rao was awarded Jawaan and PVNS Rohith for the Telugu film Baby. In the technical categories, Malayalam film Pookalam won Best Editing, Marathi film Naal 2 won Best Children's Film and The Kerala Story won Best Cinematography. Utpal Dutta received the Best Film Award as a film critic.

Lok Sabha passes IIM (Amendment) Bill 2025

- The Lok Sabha has approved the Indian Institute of Management (Amendment) Bill, 2025, which includes a provision to set up a new IIM in Guwahati, Assam by amending the 2017 law. The move will meet the long-standing regional demand.
- The central government has allocated Rs.550 crore for this. Currently, 21 IIMs are functioning across the country and now Guwahati will become its 22nd center. Along with this, India is preparing to expand IIMs globally. The first international IIM campus in Dubai will start from next month. India's management institutes are famous for their high standards and global recognition.
- The new IIM in Guwahati will not only become a new center of management education in the Northeast, but will also boost the economic and educational development of the region.

Manika Vishwakarma of Rajasthan became Miss Universe India 2025

- Manika Vishwakarma of Rajasthan won the title of Miss Universe India 2025 in the grand finale held in Jaipur. She was crowned by Miss Universe India 2024, Riya Sinha.
- Tanya Sharma of Uttar Pradesh was the first runner-up and Mehak Dhingra of Haryana was the second runner-up. Originally from Sriganganagar (Rajasthan), Manika is currently studying political science and economics while living in Delhi.
- Before the national title, she won the title of Miss Universe Rajasthan. She will now represent India at the 74th International Miss Universe pageant to be held in Thailand in November.
- India has a glorious history on this platform – Sushmita Sen (1994), Lara Dutta (2000) and Harnaaz Sandhu (2021) have won this title. With Manika's victory, the country's hopes of winning the Miss Universe trophy on the global stage have once again been raised.

Central Sector Scheme for NCDC

- The Union Cabinet chaired by the Prime Minister Narendra Modi has approved the Central Sector Scheme titled "Grant-in-Aid to National Cooperative Development Corporation (NCDC)". The scheme will be implemented for a period of four years from 2025-26 to 2028-29, with a total cost of Rs.2,000 crore, out of which Rs.500 crore will be allocated every year.
- Under this scheme, with the help of a grant of Rs.2,000 crore given by the Government of India, NCDC will be able to raise an amount of Rs.20,000 crore from the open market in the next four years.
- This amount raised will be given to cooperative societies working in various sectors, such as dairy production, fisheries, animal husbandry, sugar industry, food processing and textile industry. This assistance will be provided in the form of long-term project loan and working capital.
- The entire amount of Rs.2,000 crore will be provided from the budget of the Government

of India, hence it is called a “Central Sector Scheme”, i.e. the scheme is fully funded by the Central Government.

- **Implementation Strategy:** NCDC will act as the implementing agency, which will handle the disbursement, monitoring and recovery of loans. Based on compliance with NCDC funding norms and security norms, financing will be provided to eligible cooperatives either directly or through the State Governments.

Loans will be provided for:

- Establishment of new cooperative projects
- Modernization and expansion of existing units
- Technology upgradation
- Meeting working capital requirements

Key Expected Outcomes:

- Creation of income generating assets in rural India
- Credit availability at affordable rates to cooperatives
- Increase in employment opportunities, especially in rural and semi-urban areas
- Promotion of participation of women and underprivileged sections
- Development of infrastructure in the concerned areas, thereby benefiting the local economy

India's first indigenous Green Hydrogen Power Plant

- India has taken a historic step towards clean energy by setting up the country's first indigenous 1 MW capacity Green Hydrogen Power Plant (GHPP) at Kandla Port in Gujarat.
- Launched under the National Green Hydrogen Mission, the plant will be able to produce around 140 metric tonnes of green hydrogen per annum. It aims to make industrial sectors carbon free and lead India towards energy self-sufficiency.
- Green hydrogen is obtained by splitting water through the process of electrolysis. If the electricity used in this process comes from renewable sources such as solar and wind energy, then the hydrogen produced is called green. Its biggest advantage is that its use results in zero carbon emissions.
- Its use can bring revolutionary changes in various sectors. The use of green hydrogen instead of coal in the steel industry produces water vapor, which reduces pollution.
- It reduces dependence on fossil fuels in refineries and fertilizer manufacturing. In the transport sector, hydrogen fuel cell technology provides a zero-emission option to heavy vehicles. Also, it is helpful in energy storage and grid balancing.
- Green hydrogen will not only make industrial processes clean, but it will also move India towards the goal of sustainable development and carbon neutrality.

Ganeshotsav declared state festival in Maharashtra

- The Maharashtra government has issued a government resolution officially granting state festival status to Ganeshotsav. The initiative aims to give cultural and religious recognition to the festival at the national and international level.
- Under this, grants of up to Rs 5 crore will be provided to bhajan mandals. Also, programs like spiritual drama festival, drone show and statewide lecture series will be organized.
- A dedicated portal will be launched to ensure online broadcast of Ganesh temples and major public celebrations, while citizens will be able to share pictures of their domestic Ganeshotsav

on digital platforms.

- Awards will be given to the best Ganeshotsav mandals to encourage public participation. Apart from this, the festival will be made more inclusive and comprehensive through reel competition and other cultural activities. This initiative is considered to be an important step towards getting global recognition for the religious-cultural heritage of Maharashtra.

Nagaland Governor La Ganesan passes away

- Nagaland Governor La Ganesan died on 15 August in Chennai at the age of 80. La Ganesan Iyer was a senior leader of the Bharatiya Janata Party and held many important positions in a long political career.
- In February 2023, he was appointed Governor of Nagaland. Prior to this, he was the Governor of Manipur and also held additional charge of Governor of West Bengal for some time.
- La Ganesan was also a member of Rajya Sabha from Madhya Pradesh and he made a significant contribution in strengthening the BJP at the organizational level. His death has caused a wave of mourning in the political and social world.
- The leadership of both Nagaland and Manipur states remembered his contribution and said that he played an important role in making administrative work smooth and transparent. His death is considered a big loss for the politics of the north-eastern region and Indian democracy.

NHAI launches Fastag Annual Pass

- The National Highways Authority of India (NHAI) implemented the 'FASTag Annual Pass' facility at 1,150 toll plazas across the country on Independence Day. According to the Ministry of Road Transport and Highways, about 1.40 lakh users purchased and activated this pass on the first day itself till 7 pm and the same numbers of transactions were recorded.
- The facility is available on a one-time payment of Rs 3,000, eliminating the need for frequent recharges. The validity of the pass will be up to one year or 200 toll crossings. The facility is applicable only for non-commercial vehicles that have a valid Fastag.
- The government has appointed officials and nodal officers at each toll plaza to provide a smooth experience to the passengers. The move is being considered a major reform towards Digital India and seamless traffic system, which will save both time and fuel.

UNDP Equator Initiative Prize

- The BB Fatima Women's Self Help Group located in Tirtha village of Kundgol taluk in Dharwad district of Karnataka has received the 2025 UNDP Equator Initiative Prize, which is called the "Nobel Prize" of biodiversity conservation. The group is the only Indian organisation to receive this honour this year.
- The award was announced on August 9, the International Day of the World's Indigenous Peoples. This year's theme was - "Women and youth leadership for nature-based climate action".
- The group has revived millet-based mixed farming systems in more than 30 villages. For this, it adopts natural farming practices and runs a community seed bank to provide free seeds to farmers.
- The group manufactures millet products (such as roti, vermicelli) and organizes farmers' markets. These initiatives have strengthened the livelihoods and food security of small and

marginal farmer families, especially women.

India's milestone in solar photovoltaic (PV) module manufacturing

- India has achieved 100 GW of solar photovoltaic (PV) module manufacturing capacity. This milestone represents a sharp increase from just 2.3 GW in 2014. This progress was made possible under the Approved List of Models and Manufacturers (ALMM) scheme, launched by the Ministry of New and Renewable Energy in 2019.
- Prime Minister Narendra Modi called it a step towards self-reliance in clean energy, while Union Minister Pralhad Joshi attributed it to policy initiatives such as the production-based incentive scheme (PLI).
- Currently, 100 manufacturers and 123 units are operating in the sector, while only 21 companies were active in 2021.
- This growth is driven by both established companies and new ventures, which are adopting high-efficiency technologies and integrated production processes. This achievement provides a strong support to India's target of 500 GW of non-fossil energy by 2030.

Launch of "SHRESH" (State Health Regulatory Excellence Index)

- On 12th August, Union Health Secretary Smt. Punya Salila Shrivastava virtually launched the SHRESTHA Index in presence of Dr. Rajiv Singh Raghuvanshi, Drugs Controller General of India.
- This first-of-its-kind national initiative will standardize and strengthen state drug regulatory systems through a transparent, data-driven framework. States will be ranked with separate indices in two categories – Manufacturing States and Primary Distribution States.
- SHRESTHA will have 27 indices for manufacturing states on five key themes: human resources, infrastructure, licensing activities, monitoring activities and accountability, and 23 indices for primarily distributing states.
- States will submit data on predefined parameters to CDSCO, which will be collected by the 25th of every month. These parameters will be evaluated on the first of the next month and shared with all states and union territories. This index will promote mutual knowledge of best practices and strengthen regulatory processes across the country.

Election Commission Delisted Inactive Political Parties

- The Election Commission of India took a major action on 9 August 2025 and removed 334 registered unrecognized political parties (RUPPs) from its list. These parties had neither contested any election in the last six years nor did they have valid registered addresses. After this move, the number of RUPPs in India has come down from 2,854 to 2,520.
- The delisted parties will no longer be eligible for the benefits under Section 29B and 29C of the Representation of the People Act, 1951. Also, they will not get the benefit of the facilities available from the Income Tax Act and the Election Symbol (Reservation and Allotment) Order, 1968. However, the Commission has clarified that the affected parties can appeal within 30 days of the order.
- The process started with verification by the Chief Electoral Officers of the states and union territories in June 2025. The Commission has described it as part of its long-term strategy to

exclude inactive and irresponsible entities from the electoral system.

- At present, 6 national parties, 67 state-level parties and 2,520 RUPPs are registered in India. Since 2022, the Commission has removed 284 rule-violating parties and declared 253 inactive. This move is important towards electoral transparency and cleaning up the political landscape.

Moldova becomes 107th member of International Solar Alliance

- Moldova has been officially declared the 107th member of the International Solar Alliance (ISA), confirmed by the Ministry of External Affairs of India. Ambassador of Moldova Ana Taban handed over the letter of ratification to ISA Secretariat Chief P.S. Gangadhar at a formal meeting held in New Delhi.
- ISA was established by India and France during the Paris COP21 summit in 2015 and now has 124 member and signatory countries. Its main objective is to promote solar energy as a reliable, clean and affordable energy source and improve global energy access and security.
- ISA strives to reduce the cost of solar energy and increase investment in agriculture, healthcare and transport sectors. Under this, member countries are guided to improve policy, regulatory framework and financial access. Through the Ease of Doing Solar program, countries are assisted to make their laws and regulations solar energy friendly.
- On 6 December 2017, 15 countries signed and ratified the ISA Framework Agreement, making it the first international intergovernmental organization headquartered in India.
- ISA collaborates with multilateral development banks, development finance institutions and other partners to increase solar energy deployment in least developed countries (LDCs) and Small Island developing States (SIDS), ensuring sustainability and inclusiveness in the global solar energy sector.

M. S. Swaminathan Global Prize for Food and Peace

- Prime Minister Narendra Modi has instituted the “M. S. Swaminathan Global Prize for Food and Peace” in memory of Professor M. S. Swaminathan, the father of India’s Green Revolution. The award will recognize the contribution of scientists who have done significant work in the field of food security and peace in developing countries.
- The first award was presented to Nigerian scientist Dr. Erenare during the Swaminathan Centenary International Conference (7-9 August, 2025) held in New Delhi. The theme of the conference was “Evergreen Revolution, Path to Bio-Happiness”, which reflects Prof. Swaminathan’s lifelong efforts and vision to ensure food for all.
- Prof. Swaminathan, who died in September 2023, will be posthumously awarded the Bharat Ratna in 2024. Acknowledging his contributions, Prime Minister Modi said that he played a key role in making India self-sufficient in food production.
- Swaminathan also presented the visionary concept of 'bio-happiness' along with conservation of biodiversity, which guides towards sustainable development and food security. The award will inspire the scientific community and promote global food and peace efforts.

Goddess Sita Temple at Punaura Dham in Bihar

- On 8 August 2025, the construction of a grand temple dedicated to Goddess Sita at Punaura Dham in Sitamarhi, Bihar was inaugurated by Union Home Minister Amit Shah and Chief Minister Nitish Kumar. Saints, scholars and priests of Banaras and Mithila were present at the

Bhoomi Pujan and foundation stone laying ceremony. On the same occasion, the Sitamarhi-New Delhi Amrit Bharat Express train was flagged off through virtual medium, establishing direct rail connectivity between the state capital and the national capital.

- The temple will be built on 50 acres of land, at an estimated cost of about Rs. 883 crore and its design will be inspired by the architecture of the Ram Temple in Ayodhya. A trust called "Shri Janaki Janmabhoomi Punaaura Dham Mandir Nyas Samiti" has been formed for the management and development of the temple.
- The project aims to enhance religious and cultural significance, provide facilities to pilgrims and encourage tourism in the region.
- The project not only has religious significance but will also contribute to local employment, cultural tourism and regional development. Through the construction of the temple, Bihar will establish a major center for pilgrims and devotees while preserving its cultural heritage.

Senior tribal leader Shibu Soren dies

- Senior tribal leader Shibu Soren, who was the Chief Minister of Jharkhand thrice, died on 4 August 2025 at the age of 81 after a prolonged illness. His son and current Chief Minister Hemant Soren announced his demise and paid emotional tributes.
- Shibu Soren was born in 1944 in southern Bihar and emerged as the driving force behind the formation of Jharkhand state. In 1973, he founded the Jharkhand Mukti Morcha (JMM) and started a long political journey advocating tribal rights.
- Despite being the Chief Minister thrice, none of his tenure could be completed due to political instability in the state. Shibu Soren made significant contributions towards education, health, cultural preservation and rights for the tribal society of Jharkhand.
- His political life was a symbol of struggle and service, which deeply influenced the social and political structure of the state. Soren's legacy will always be remembered in Jharkhand's politics, tribal rights and regional leadership.

First Woman Director General of Railway Protection Force

- Ms Sonali Mishra, a 1993 batch IPS officer has been appointed as the Director General of Railway Protection Force (RPF). This appointment marks the first time in the 143-year history of the force that a woman officer has been appointed to the top post. Her appointment has been approved by the Appointments Committee of the Cabinet and will be valid till her retirement in October 2026.
- Ms Mishra has extensive experience of over 30 years, having served in key roles in the CBI, BSF and various State and Central Police Organisations.
- She also has international experience, having served under the United Nations Peacekeeping Mission in Kosovo. Her previous assignments include serving as Additional Director General at the Institute of Police Training and Research and Director at Madhya Pradesh Police Academy, Bhopal.
- In recognition of her contributions, she has been awarded the President's Police Medal for Distinguished Service and the Police Medal for Meritorious Service.
- Ms Mishra's appointment not only symbolises women empowerment but also sets a new precedent for leadership, experience and excellence in the Indian Police Service and the RPF. This move will encourage women to reach the highest positions in the security forces and promote diversity and inclusiveness in the organisation.

MCQs Based on Current Affairs

1. Consider the following statements about NCDC (National Cooperative Development Corporation):

1. It is a statutory body under the Ministry of Agriculture and Farmers' Welfare.
2. It was established in 1963.
3. Its mandate includes providing financial assistance to both individual farmers and cooperative institutions.

Which of the above statements is/are correct?

- A: 1 and 2 only
B: 2 and 3 only
C: 1 and 3 only
D: All three

2. Consider the following statements regarding the cooperative sector in India:

1. India is home to over 27% of the world's cooperatives.
2. Maharashtra has the largest number of cooperative societies in India.
3. Cooperatives in India are governed exclusively by the Multi-State Cooperative Societies Act, 2002.

Which of the above statements is/are correct?

- A: 1 and 2 only
B: 2 and 3 only
C: 1 and 3 only
D: All three

3. Consider the following statements about NISAR:

1. It is the first Earth observation satellite jointly developed by NASA and ISRO.
2. It carries a dual-frequency radar system using L-band and S-band SAR.
3. The satellite will orbit the Earth in a geostationary orbit.

Which of the statements given above is/are correct?

- A: 1 and 2 only
B: 2 and 3 only

- C: 1 and 3 only
D: All three

4. Consider the following statements regarding the Green Hydrogen Power Plant at Kandla Port:

1. It is India's first indigenously-built 1 MW green hydrogen facility.
2. It is capable of producing about 140 metric tonnes of green hydrogen annually.
3. It was developed by the Ministry of Power under the National Hydrogen Mission.

Which of the above statements is/are incorrect?

- A: 1 and 2 only
B: 2 and 3 only
C: Only 3
D: 1, 2, and 3

5. Consider the following statements about the National Green Hydrogen Mission:

1. It aims to make India a global hub for grey hydrogen production and export.
2. It targets 5 million metric tonnes of annual production by 2030.
3. It is implemented by the Ministry of Petroleum and Natural Gas.

Which of the above statements is/are correct?

- A: 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2 and 3

6. Consider the following statements About INS Himgiri?

1. It is part of Project 75 and belongs to the Nilgiri-class submarines.
2. It was built by Garden Reach Shipbuilders & Engineers (GRSE).

Which of the above statements are correct?

- A: Only 1
B: Only 2

C: Both
D: None

7. Consider the following statements regarding the 71st National Film Awards (2025):

1. Shah Rukh Khan and Vikrant Massey were both awarded Best Actor.
2. Rani Mukerji won Best Actress for her role in Kathal: A Jackfruit Mystery.
3. The Best Feature Film award went to 12th Fail.

Which of the statements given above is/are correct?

A: 1 and 2 only
B: 2 and 3 only
C: 1 and 3 only
D: 1, 2 and 3

8. Consider the following statements regarding the UNESCO World Heritage Convention:

1. The World Heritage Convention was adopted in 1972 and aims to preserve both cultural and natural heritage sites of global importance.
2. To qualify as a UNESCO World Heritage Site, a site must meet at least one of the ten criteria, including historical, cultural, and natural significance.
3. India ratified the World Heritage Convention in 1975.

Which of the statements given above is/are correct?

A: 1, 2, and 3
B: 1 and 2 only
C: 2 and 3 only
D: All of the above

9. Consider the following characteristics of the Asian Giant Tortoise (Manouria emys):

1. It is the largest land tortoise in mainland Asia.
2. Its diet includes leaves, fruits, mushrooms, and decaying plant matter.
3. It is a nocturnal species and prefers to live in dry forests.
4. The tortoise has a lifespan of 10-15 years.

Which of the above statements is/are correct?

A: 1, 2, and 3 only

B: 1 and 2 only
C: 1 and 4 only
D: 2 and 4 only

10. Consider the following statements regarding the INF Treaty:

1. The INF Treaty banned all ground-launched ballistic and cruise missiles with ranges between 500 and 5,500 kilometers.
2. The treaty was signed during the Cold War between the United States and the Soviet Union in 1987.
3. The treaty remained effective and fully implemented by all parties until 2025.

Which of the above statements is/are correct?

A: 1 and 2 only
B: 2 and 3 only
C: 1 and 3 only
D: 1, 2 and 3

11. Consider the following geographical features and their locations:

1. Luzon Strait – Separates the Philippines from Taiwan.
2. Mindoro Strait – Lies between Luzon and Mindoro Island.
3. Mayon Volcano – Located in southeastern Luzon.
4. Celebes Sea – Lies to the east of the Philippines.

Which of the above pairs are correctly matched?

A: 1, 2 and 3 only
B: 1 and 3 only
C: 2 and 4 only
D: 1, 3 and 4 only

12. With reference to transgender rights, consider the following statements:

1. The NALSA judgment of 2014 recognized transgender persons as a "third gender" in India.
2. The Transgender Persons (Protection of Rights) Act, 2019 allows unconditional self-identification of gender.
3. Tamil Nadu is the first Indian state to provide

reservation for transgender persons in higher education.

Which of the above statements is/are correct?

- A: 1 only
- B: 1 and 3 only
- C: 2 and 3 only
- D: 1, 2 and 3

13. Which of the following functions is/are performed by the National Council for Transgender Persons as per the 2019 Act?

1. Advise the Central Government on formulation of transgender welfare policies
2. Monitor and evaluate the implementation of laws related to transgender persons
3. Redress grievances of transgender persons directly through legal proceedings

Select the correct answer using the code below:

- A: 1 and 2 only
- B: 2 and 3 only
- C: 1 and 3 only
- D: 1, 2 and 3

14. Consider the following statements regarding the Indri lemur (Indri indri):

1. It is the largest living lemur species.
2. It is endemic to Madagascar.
3. It is listed as Critically Endangered on the IUCN Red List.

Which of the statements given above is/are correct?

- A: 1 and 2 only
- B: 2 only
- C: 3 only
- D: 1, 2 and 3

15. Consider the following statements regarding the RBI's Monetary Policy Committee (MPC):

1. It is a six-member committee with equal representation from the RBI and the Government of India.
2. The RBI Governor chairs the MPC and holds a casting

vote in case of a tie.

3. The MPC was established under the original RBI Act of 1934.

Which of the statements given above is/are correct?

- A: 1 and 2 only
- B: 2 only
- C: 3 only
- D: 1, 2 and 3

16. Consider the following statements regarding Mission Poshan 2.0:

1. It subsumes Anganwadi Services, Poshan Abhiyaan, and the Scheme for Adolescent Girls.
2. It is implemented by the Ministry of Health and Family Welfare.
3. It provides Take-Home Ration (THR) only to pregnant and lactating women.

Which of the above statements is/are correct?

- A: 1 only
- B: 1 and 2 only
- C: 2 and 3 only
- D: 1, 2 and 3

17. Consider the following statements about the Poshan Tracker:

1. It was launched in 2021 to monitor Anganwadi service delivery.
2. It includes features like growth monitoring, attendance, and THR delivery tracking.
3. Facial Recognition System (FRS) has been made mandatory since 2024 for ration delivery under poshan tracker.

Which of the above statements are correct?

- A: 1 and 2 only
- B: 2 and 3 only
- C: 1 and 3 only
- D: 1, 2 and 3

18. Consider the following statements about the conservation status of the Asiatic lion:

1. It is listed as Vulnerable on the IUCN Red List.

2. It is protected under both Schedule I and Schedule IV of the Wildlife Protection Act, 1972.
3. It is listed under Appendix II of CITES.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 3 only
 C: 2 only
 D: 1, 2 and 3

19. Consider the following statements about the “One Health” approach:

1. It integrates animal, human, and environmental health for holistic well-being.
2. It is essential for combating antimicrobial resistance (AMR) and zoonotic diseases.
3. It supports transdisciplinary collaboration across public health and agriculture.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: 1 and 3 only
 D: 1, 2 and 3

20. What is the “Trump Route for International Peace and Prosperity” mentioned in news?

- A: A pipeline corridor from Russia to the Black Sea
 B: A maritime route linking Europe and India via the Red Sea
 C: A land corridor linking mainland Azerbaijan to Nakhchivan exclave via Armenia
 D: A railway project connecting Armenia to China through Iran

21. Consider the following statements regarding India’s total trade in FY 2024–25:

1. India’s total exports (merchandise + services) was about US\$ 820 billion.
2. Services exports accounted for less than half of total exports.
3. Total imports (merchandise + services) exceeded US\$ 900 billion.

Which of the statements given above is/are correct?

- A: 1 only
 B: 1 and 3 only
 C: 2 and 3 only
 D: 1, 2 and 3

22. Consider the following statement regarding Alaska Summit 2025:

1. It was the first US-Russia summit held on American soil since 1988.
2. A ceasefire agreement between Russia and Ukraine was finalized.
3. It marked the first in-person meeting between US and Russian leaders since the Ukraine war began.
4. It led to the lifting of all US sanctions on Russia.

Which of the above statement are correct?

- A: 1 and 3 only
 B: 1, 2, and 4 only
 C: 2 and 4 only
 D: 1, 3, and 4 only

23. What is the primary legal basis for declaring Eco-Sensitive Areas (ESAs) in India?

- A: Biological Diversity Act, 2002
 B: Forest Rights Act, 2006
 C: Environment Protection Act, 1986
 D: Wildlife Protection Act, 1972

24. Consider the following statements regarding the Pradhan Mantri Viksit Bharat Rozgar Yojana (PM-VBRY):

1. The scheme targets the creation of 3.5 crore jobs over a period of five years.
2. It provides financial incentives to both first-time employees and employers.
3. It covers only those employees earning below ₹50,000 per month.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 2 only
 C: 2 and 3 only

D: 1 and 3 only

25. Consider the following statements regarding the Samudrayaan Mission:

1. Samudrayaan is India's first manned underwater project of India.
2. The mission aims to send a submersible with human crew up to a depth of 4,000 metres.
3. It is a part of the broader Deep Ocean Mission initiated by the Ministry of Earth Sciences.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: 1 and 3 only
 D: 1, 2, and 3

26. Consider the following statements about MATSYA 6000:

1. It is a manned submersible developed indigenously by the National Institute of Ocean Technology (NIOT).
2. Its normal operational endurance is 96 hours, extendable to 12 hours in emergencies.
3. It will place India among the top 10 nations with deep-sea manned submersible capabilities.

Which of the statements given above is/are correct?

- A: 1 only
 B: 1 and 2 only
 C: 1 and 3 only
 D: 1, 2, and 3

27. Consider the following components of India's Deep Ocean Mission:

1. Deep-sea mining and robotics
2. Underwater tourism promotion
3. Ocean-based energy and freshwater systems
4. Ocean climate advisory services
5. Arctic Ocean ice monitoring

Which of the above are part of the Deep Ocean Mission?

- A: 1, 2, 3, and 4 only

- B: 1, 3, and 4 only
 C: 1 and 2 only
 D: All of the above

28. Which of the following statements about the Indian Ports Bill, 2025 is/are correct?

1. It replaces the Indian Ports Act of 1908 to modernize maritime governance.
2. The Bill empowers Central Government to manage both major and non-major ports.
3. It mandates environmental compliance with international conventions like MARPOL.
4. A Maritime State Development Council (MSDC) will be created to coordinate between Centre and States through this bill.

Options:

- A: Only 1
 B: Only 1, 3 and 4
 C: Only 2 and 4
 D: All four

29. Which of the following provisions are correctly associated with the POCSO Act, 2012?

1. The Act mandates that trial must be completed within one month of reporting the offence.
2. The POCSO Rules, 2020 mandate appointment of support persons for child victims.
3. The Act provides for mandatory audio-visual recording of child victim statements in every case.

How many of the above statements are correct?

- A: Only 1
 B: Only 2
 C: All three
 D: None

30. Which of the following statements about the removal of the Chief Election Commissioner (CEC) of India is/are correct?

1. The CEC can be removed by the President on the recommendation of the Prime Minister.
2. The grounds for removal are proven misbehaviour

or incapacity, similar to a Supreme Court judge.

3. A judicial inquiry is mandatory before the CEC can be removed.
4. The removal requires a simple majority vote in both Houses of Parliament.

Options:

- A: 1 and 2 only
- B: 2 and 3 only
- C: Only 3 and 4
- D: Only 2, 3 and 4

31. With reference to the Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023, consider the following statements:

1. The Act follows the Supreme Court's Anoop Baranwal judgment by including the Chief Justice of India in the selection panel of Election Commissioners.
2. Election Commissioners are appointed by the President on the recommendation of a panel including the PM, LoP, and a Union Cabinet Minister.
3. The Act fixes the term of office for Election Commissioners as 6 years or until the age of 65, whichever is earlier.
4. Election Commissioners can be removed by the President only on the recommendation of the CEC.

How many of the above statements are correct?

- A: Only 1
- B: Only 2
- C: Only 3
- D: All four

32. With reference to the Saltwater Crocodile (*Crocodylus porosus*) and its conservation in India, consider the following statements:

- I. It is listed as a Critically Endangered species under the IUCN Red List.
- II. It is naturally found in both freshwater and marine habitats across India.
- III. The Bhagabatpur Crocodile Project is located within

the Sundarbans Biosphere Reserve.

- IV. The Crocodile Conservation Project (1975) was launched exclusively for the protection of saltwater crocodiles.

How many of the statements given above are correct?

- A: Only 1
- B: Only 2
- C: Only 3
- D: All four

33. Which of the following minerals are considered critical minerals?

1. Lithium
2. Cobalt
3. Nickel
4. Bauxite

Select the correct answer using the code below:

- A: 1, 2 only
- B: 1, 2 and 3 only
- C: 2, 3 only
- D: 1, 2, 3 and 4 only

34. Consider the following statements regarding the scope of the Online Gaming Bill, 2025:

1. The Bill applies only to games of chance involving real money.
2. It prohibits all online games involving any form of monetary stakes.
3. Social and skill-based games with no gambling elements are encouraged under the Bill.

Which of the statements given above are correct?

- A: 1 and 2 only
- B: 2 and 3 only
- C: Only 3
- D: 1, 2, and 3

35. Consider the following statements regarding the Constitution (130th Amendment) Bill, 2025:

1. It seeks to amend Articles 75, 164, and 239AA of the Constitution.

2. It mandates automatic removal of any Minister or Chief Minister upon being arrested for any criminal offence.
3. It applies to the Union, States, and the Government of NCT of Delhi.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 1 and 3 only
 C: Only 3
 D: 1, 2 and 3

36. With reference to the Joint Parliamentary Committee (JPC), consider the following statements:

1. It is a permanent committee under Article 105 of the Constitution.
2. It is formed by the Speaker of Lok Sabha and includes members from both Houses.
3. Its recommendations are binding on the Parliament in certain matters.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: Only 2
 C: Only 3
 D: 1, 2, and 3

37. Consider the following statements regarding Agni-5 missile:

1. It is a two-stage missile using a liquid propulsion system.
2. It has a range of over 5,000 km and can carry a nuclear warhead.
3. It is developed by the Defence Research and Development Organisation (DRDO).

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: Only 3
 D: 1, 2, and 3

38. Consider the following statements regarding Fortified Rice:

1. Fortified rice is regular rice infused with micronutrients like iron, folic acid, and vitamin B12.
2. Fortified rice is distributed only through the Mid-Day Meal Scheme.
3. The Universal Fortified Rice Scheme was initially launched in 2019 for up to 2024.
4. It is now extended till the year 2030.

How many statements given above is/are correct?

- A: Only 1
 B: Only 2
 C: Only 3
 D: All of the above

39. With reference to the legal framework for organ donation in India, consider the following statements:

1. The Transplantation of Human Organs Act, 1994 allows both live and brain-stem dead organ donations.
2. The Act permits commercial organ donation with regulatory approval.
3. The Act was amended in 2011 to include tissue donation.

Which of the statements is/are correct?

- A: 1 and 2 only
 B: 1 and 3 only
 C: 2 and 3 only
 D: All of the above

40. The National Council on India's Nutrition Challenges, which reviews nutrition-related convergence, is chaired by:

- A: Prime Minister of India
 B: Minister of Women and Child Development
 C: Vice-Chairman of NITI Aayog
 D: Cabinet Secretary

41. Consider the following statements about the Treaty of Sugauli (1816):

1. It was signed between Nepal and British East India Company.

2. It demarcated the Mahakali River as the western boundary of Nepal.
3. It recognized Lipu Lekh Pass as part of India.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 1 and 3 only
 C: 2 and 3 only
 D: 1, 2 and 3

42. Which Indian state has become the first to achieve total digital literacy?

- A: Tamil Nadu
 B: Karnataka
 C: Kerala
 D: Delhi

43. With reference to the World Health Organization (WHO), consider the following statements:

1. Only sovereign states are eligible to become members of WHO.
2. WHO's headquarters are located in Geneva, Switzerland, and it operates through 6 regional and 150 field offices worldwide.
3. WHO was founded by merging the League of Nations' Health Organization and the Office International d'Hygiène Publique.
4. The Director-General of WHO is elected by the UN General Assembly.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 1, 2 and 3 only
 C: 1, 3 and 4 only
 D: 2, 3 and 4 only

44. With reference to the World Meteorological Organization (WMO), consider the following statements:

1. The WMO was established in 1950.
2. WMO facilitates the unrestricted exchange of meteorological and hydrological data among member states.

3. The Secretary-General of the WMO is elected by the UN General Assembly for a non-renewable 5-year term.

4. WMO is a specialized agency under the United Nations Economic and Social Council (ECOSOC).

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 1, 2 and 4 only
 C: 1, 2 and 3 only
 D: 1, 3 and 4 only

45. Consider the following statements about the Integrated Air Defence Weapon System (IADWS):

1. It is capable of neutralising threats within a range of up to 10 km.
2. It includes both kinetic and non-kinetic air defence components.
3. It has been entirely developed indigenously by the DRDO.

Which of the above statements is/are correct?

- A: Only 1
 B: Only 2
 C: 2 and 3 only
 D: 1, 2, and 3

46. Which of the following correctly match the big cat with its IUCN Red List status?

- A: Tiger – Vulnerable
 B: Snow Leopard – Endangered
 C: Jaguar – Near Threatened
 D: Puma – Endangered

47. Which of the following rivers form the international boundary between India and Bangladesh near the Sundarbans Tiger Reserve?

- A: Ganga, Teesta, Matla
 B: Harinbanga, Raimangal, Kalindi
 C: Hooghly, Subarnarekha, Ichamati
 D: Brahmaputra, Barak, Matla

48. Consider the following statements:

1. The Information Technology (IT) Act, 2000 and IT Rules, 2021 are the primary frameworks regulating social media platforms in India.
2. The Digital India Act completely replaces the IT Act, 2000.
3. Currently, Social media platforms in India are considered intermediaries and enjoy “safe harbor” protection.

Which of the above statements is/are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: 1 and 3 only
 D: 1, 2 and 3

49. Consider the following statements regarding ISRO’s Lunar Module Launch Vehicle (LMLV):

1. LMLV will have a higher Low Earth Orbit (LEO) payload capacity than LVM3 by almost eight times.
2. The LMLV uses solid propulsion in its first two stages and a cryogenic third stage.
3. It is intended to support both crewed lunar missions and the launch of components for India’s planned

space station.

How many of the above statements are correct?

- A: Only 1
 B: Only 2
 C: All three
 D: None

50. Consider the following statements regarding the appointment of judges to the Supreme Court:

1. The President is bound by the advice of the Collegium in judicial appointments.
2. Article 124(2) of the Constitution provides the procedure for appointment of Supreme Court judges.
3. The Constitution explicitly mentions the Collegium system.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 2 only
 C: 2 and 3 only
 D: 1, 2 and 3

ANSWER

1	A
2	A
3	A
4	C
5	A
6	B
7	C
8	B
9	B
10	A

11	B
12	B
13	A
14	D
15	A
16	A
17	A
18	A
19	D
20	C

21	D
22	A
23	C
24	B
25	C
26	A
27	B
28	B
29	A
30	B

31	C
32	B
33	B
34	B
35	B
36	B
37	B
38	B
39	B
40	C

41	A
42	C
43	B
44	B
45	C
46	C
47	B
48	C
49	B
50	B



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