

PERFECT

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ANTI-DEFECTION LAW

Constitution • Political Stability
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- QS World University Rankings 2027
- Four New GI-Tagged Tribal Crops
- PM Family Care Tracker Project
- Supreme Court's verdict on DNA tests
- India-Oman Trade Deal
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- Indian PM Visit to Slovakia 2026
- India-Seychelles Relations
- Surha Tal
- Delhi Bird Atlas 2026
- Indore Declaration
- Ballista Spider
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- Mission Senehgori
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Prelims based MCQs

Editorial Article

Message



A civil servant with the right aptitude is the kind of officer the nation expects. Right aptitude does not mean possessing vast knowledge, but having relevant knowledge, a balanced perspective and the ability to implement that knowledge effectively.

When it comes to UPSC or PCS examinations, mere accumulation of knowledge is not enough; its effective expression is equally important. These examinations assess an aspirant's analytical ability, expression skills and balanced understanding of contemporary issues. The process of preparation is not limited to the examination alone; it also inspires individuals to develop a meaningful perspective on important national and social issues. Undoubtedly, this journey is challenging, yet equally inspiring and purposeful.

Perfect 7 magazine has been an integral medium in developing selected civil servants' understanding of current affairs. In accordance with changing examination patterns, syllabus requirements and the nature of contemporary issues, the magazine has continuously refined itself.

I hope that Perfect 7 magazine will remain a perfect companion in your preparation journey and continue to guide you throughout your Civil Services Examination journey.

With Best wishes.

Vinay Singh
Founder
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Indian Society & Art and Culture

Valuing Domestic Work: A Significant Step Towards Gender Justice

Context:

Recently, the Supreme Court of India delivered a landmark judgment by recognizing homemakers as "nation-builders" and directing that their notional monthly income be fixed at Rs.30,000 for the purpose of assessing compensation in motor accident cases. A bench comprising Justice Sanjay Karol and Justice N. Kotiswar Singh observed that the role of homemakers in family care, child-rearing, and the shaping of social values should be recognized not merely from an emotional perspective but also from an economic standpoint. This judgment is a significant development in Indian jurisprudence because it:

- Grants dignity and legal recognition to long-invisible and unpaid domestic labour.
- Affirms that household work, childcare, elderly care, and emotional support should be regarded as economically valuable contributions.
- Recognizes "Loss of Domestic Care" as a separate category for compensation.
- Establishes Rs.30,000 per month as the minimum value of a homemaker's contribution in motor accident compensation



claims.

Observations of the Supreme Court:

- The Supreme Court stated in its judgment that the contribution of homemakers is invaluable and cannot be underestimated merely because it is unpaid. The Court remarked that homemakers form the foundation of society and play a central role in shaping future generations. Therefore, describing them as "nation-builders" is not an exaggeration but an acknowledgment of social reality.
- Until now, the income of homemakers in motor accident claims was often assessed at very low amounts, resulting in inadequate compensation for their families. By fixing a notional income of ₹30,000 per month,

the Court has attempted to address this inconsistency.



Domestic Work: The Invisible Foundation of the Care Economy

- In India, as in most parts of the world, household work has traditionally been considered a natural responsibility of women. Activities such as cooking, childcare, elderly care, household cleaning, managing family affairs, and attending to the emotional needs of family members receive no direct financial remuneration. Consequently, such work is excluded from formal calculations of national income and

productive labour.

- However, if the market value of these services were assessed, it would become evident that homemakers perform multiple professional roles simultaneously. They act as cooks, teachers, caregivers, managers, counsellors, and nurturers. Without their labour, the economic and social structure of families and society could not function effectively.
- According to the Time Use Survey conducted by India's National Statistical Office (NSO):
 - » Women aged 15–59 spend an average of 315 minutes (approximately 5.25 hours) per day on unpaid domestic services.
 - » In contrast, men spend only 88 minutes (approximately 1.5 hours) per day on such activities.
- This demonstrates that women in India spend nearly 3.5 times more time on domestic work than men.

Changes in Compensation Assessment:

- Under the Motor Vehicles Act, compensation awarded to accident victims is generally based on the income of the deceased or injured person. While assessing the income of salaried individuals or businesspersons is relatively straightforward, determining the value of a homemaker's contribution has remained a challenge.
- Following this judgment, tribunals will be required to acknowledge that the services provided by homemakers possess real economic value. This will make compensation assessments more just and realistic. The judgment is not merely a technical legal adjustment but a significant step toward social justice.

Unpaid Care Work and Gender Inequality:

- Several reports by the United Nations and the International Labour Organization (ILO) indicate that women spend significantly more time on unpaid care work than men. According to UN Women, women globally spend 2.5 times more time on unpaid care work than men.
- Despite this, such labour remains invisible

in economic statistics. As a result, women's productivity is often undervalued, and their contributions receive insufficient recognition in policymaking. The Supreme Court's judgment challenges this invisibility and reflects the judiciary's sensitivity toward gender equality.

International Perspective:

- Globally, there has been increasing emphasis on the need to recognize and value domestic labour. The United Nations Development Programme (UNDP) and various international forums focused on women's empowerment have identified the care economy as a fundamental pillar of sustainable development.
- Several countries have attempted to provide indirect economic security to women engaged in domestic work through social security schemes, pension systems, and care services. In India as well, debates regarding the economic valuation of domestic labour and social security measures for homemakers have periodically emerged.

Broader Significance of the Judgment:

- This judgment is important on multiple levels. It acknowledges the dignity of women's unpaid labour. For a long time, there has been a prevailing perception that only income-generating work is productive. The Court has challenged this narrow viewpoint.
- The judgment also makes compensation jurisprudence more humane and sensitive. Families affected by accidents will now be able to receive more realistic financial assistance.
- Furthermore, it may encourage policymakers to pay greater attention to the care economy. It could initiate fresh discussions on issues such as social security, pensions, insurance, and the formal recognition of domestic labour for women.
- The decision also challenges entrenched gender stereotypes by conveying that labour performed within the home is just as important as paid work performed outside

it.

Challenges:

- Although this judgment is historic, certain challenges remain. The actual economic value of a homemaker's labour may vary according to social and geographical circumstances. The nature and cost of domestic work differ between rural and urban areas. Therefore, more scientific and standardized methods of valuation may be required in the future.
- Moreover, judicial recognition alone is not sufficient. It is equally important that care work receives adequate attention within the policymaking process. Regular time-use surveys, expansion of social security schemes, and measures promoting women's economic participation can play a crucial role in this regard.

Conclusion:

The Supreme Court's judgment signals a transformative shift in societal attitudes toward the role of homemakers in India. It recognizes that nation-building does not occur solely in offices, factories, and markets; it also takes place within homes, where women devote their labour, time, and care to nurturing families and shaping future generations. Recognizing homemakers as "nation-builders" is not merely a judicial observation but a call for social consciousness. It reminds us that the true foundation of economic development rests upon the invisible hands whose contributions have long been overlooked. This judgment marks a historic step toward ensuring dignity, recognition, and justice for homemakers in Indian society.

Short Issues

Student Suicides in India

Context:

The recent interim report of the Supreme Court-appointed National Task Force (NTF) on student mental health and suicides has stated that student suicides in India should not be viewed merely as a mental health issue but as a structural and institutional problem.

Background:

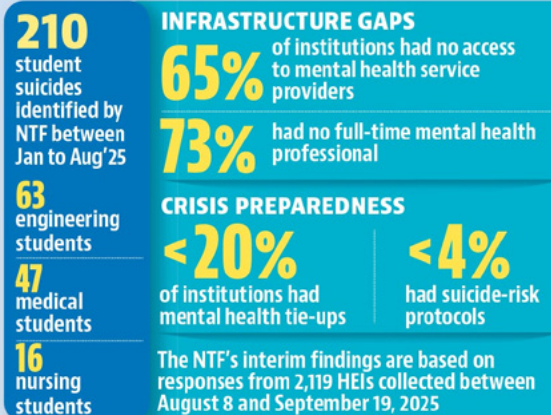
- According to the Supreme Court, over 13,000 student suicides were reported in 2022, accounting for 7.6% of all suicides in India and exceeding farmer suicides during the same year.
- Despite various UGC guidelines, counselling initiatives, and the National Suicide Prevention Strategy, student suicides continue to rise.
- To address these crises, The Task Force was constituted by the Supreme Court in *Amit Kumar & Ors. v. Union of India* (2026) amid rising student suicides across educational institutions.
- The NTF was tasked with examining the causes, reviewing existing legal and institutional mechanisms, and suggesting preventive measures.

Key Findings of the Report:

- The report argues that student suicides are often rooted in structural issues such as social discrimination, academic exclusion, financial distress, institutional neglect, and lack of support systems.
- **Key findings include:**
 - » India lacks a dedicated statutory framework for suicide prevention in higher educational institutions.
 - » Existing measures are largely advisory and reactive rather than preventive and enforceable.
 - » Over 13,600 SC, ST, and OBC students dropped out of Central Universities, IITs, and IIMs between 2018 and 2023.

- » Nearly 46% of surveyed students were first-generation learners facing academic, financial, and social challenges.
- » More than 70% of institutions lack full-time mental health professionals, while fewer than 4% have suicide-risk management protocols.
- » Students reported discrimination based on caste, language, socio-economic background, and inadequate scholarship support.

Student distress crisis



Judicial Interpretation:

- In *Sukdeb Saha v. State of Andhra Pradesh* (2025), the Supreme Court held that mental well-being is an integral part of the Right to Life under Article 21. The Court also noted the absence of a unified legal framework for student suicide prevention and issued interim guidelines for educational institutions until comprehensive legislation is enacted.

Key Recommendations:

- Fill faculty vacancies, including reserved-category posts, within a fixed timeframe.
- Establish round-the-clock medical and psychological support in residential institutions.
- Make reporting of student suicides

mandatory for educational institutions.

- Develop institutional suicide-risk management protocols.
- NCRB should separately record school and higher education student suicides.
- Create a legally enforceable framework for suicide prevention and student well-being.

Conclusion:

The NTF underscores that student suicides are not merely individual mental health failures but manifestations of deeper systemic inequities. Addressing the crisis requires legal reforms, inclusive campuses, effective support systems, and institutional accountability to ensure that higher education remains accessible, equitable, and safe for all students.

QS World University Rankings 2027

Context:

The QS World University Rankings 2027 were released recently, assessing over 1,500 global institutions on parameters such as academic reputation, research impact, employer reputation, and internationalisation. The rankings reflect the growing global presence of Indian higher education institutions, particularly IITs.

Key Highlights of the Rankings:

- IIT-Delhi ranked 118th globally, rising five places and becoming India's top institution.
- IIT-Bombay slipped to 134th position from 129 last year.
- IIT-Madras ranked 170th (improved from 180) and remained the only other Indian institute in the global top 200.
- Globally, MIT (USA) retained the top position for the 15th consecutive year, followed by Stanford University, Imperial College London, University of Oxford, and Harvard University.
- Other top Indian institutions include IIT-Kharagpur (205), IIT-Kanpur (221), IISc

Bengaluru (221), University of Delhi (322), IIT-Roorkee (335), and IIT-Guwahati (349).

Performance of Major Indian Institutions:

- The Indian Institutes of Technology (IITs) continue to dominate India's higher education landscape. However, performance differences are visible across institutions.
- IIT-Delhi improved due to strong scores in employer reputation, citations per faculty, and employment outcomes.
- IIT-Bombay remained strong in employer reputation but declined in citations per faculty and international engagement indicators.
- IISc Bengaluru, despite high research citations, continued its downward trend in rankings due to weaker employer reputation and employment outcomes.
- Private institutions also showed progress. Shoolini University entered India's top 10 list, reflecting improvements in research output and global engagement indicators.



India's Overall Position in QS Rankings:

- India has 52 universities ranked globally, slightly lower than 54 last year.
- India ranks 5th globally in number of institutions after the United States, United Kingdom, China, and Germany.
- Over the past decade, India's presence has increased by 271%, rising from 11

institutions in 2015 to 52 in 2027.

- Despite this growth, no Indian institution has entered the global top 100 overall, mainly due to weaker performance in academic reputation and internationalisation metrics.

Key Performance Indicators:

- QS Rankings are based on nine indicators, including academic reputation, employer reputation, faculty-student ratio, citations per faculty, and internationalisation.
 - » Indian institutes perform strongly in citations per faculty (research output).
 - » They also perform well in employer reputation, especially IITs.
 - » However, weak performance in international faculty ratio, student diversity, and global research collaboration continues to limit global ranking gains.
 - » No Indian institute features in the global top 100 for academic reputation, the most heavily weighted parameter.

Challenges for Indian Institutions:

- Low international faculty and student participation.
- High student intake pressures under NEP expansion goals.
- Limited global research collaboration compared to leading universities.
- Need for stronger global visibility and academic branding.

Global Context:

- QS noted that higher education systems in the US and Europe are facing relative decline due to shifting research and talent flows towards Asia. However, internationalisation remains a key advantage for top global universities.

Conclusion:

The QS 2027 rankings highlight India's improving global academic presence, led by IIT-Delhi. However, gaps in internationalisation and academic reputation continue to limit India's entry into the global top 100. Strengthening

global collaboration and research ecosystems will be a key for future progress.

Madhya Pradesh Gets Four New GI-Tagged Tribal Crops

Context:

Recently, four tribal crops of Madhya Pradesh, Sitahi Kutki, Nagdaman Kutki, Baigani Arhar (Dindori), and Mahakoshal Chhatriya Chawal (Jabalpur-Katni), received GI tags, highlighting the role of GI protection in promoting sustainable agriculture, tribal livelihoods, and biodiversity conservation.

What is a Geographical Indication (GI) Tag?

- A Geographical Indication (GI) is an intellectual property right used to identify products that possess qualities, reputation, or characteristics attributable to their geographical origin.
- **Legal Framework:**
 - » Governed by the Geographical Indications of Goods (Registration and Protection) Act, 1999
 - » Came into force in 2003
 - » Administered by the GI Registry, Chennai
 - » Valid for 10 years and renewable.
- **Objectives:**
 - » Protect traditional knowledge.
 - » Prevent unauthorized use.
 - » Promote rural livelihoods.
 - » Enhance export potential.
 - » Preserve cultural heritage.

About Newly GI-Tagged Tribal Crops of Madhya Pradesh:

- **About Sitahi Kutki & Nagdaman Kutki**
 - » These are traditional varieties of Little Millet.
 - » They are primarily cultivated in Dindori district by the Baiga and Gond tribes.
 - » They are naturally organic, drought-resistant, and well-suited for rain-fed

agriculture.

- » These are climate-resilient crops that can withstand changing climatic conditions.
- » They are rich in dietary fibre, complex carbohydrates, iron, potassium, magnesium, and antioxidants.
- » They have a low glycaemic index, making them beneficial for blood sugar management, digestive health, and overall nutritional security.



■ About Baigani Arhar:

- » It is a traditional variety of Pigeon Pea (Arhar) native to Dindori.
- » It is closely associated with the Baiga tribe.
- » It is cultivated entirely using traditional tribal organic farming practices.
- » The crop matures within 5–6 months.
- » Compared to commercial varieties, it contains higher levels of protein, dietary fibre, iron, calcium, and B-complex vitamins.
- » It has a naturally sweet taste, cooks faster, and retains more nutrients after cooking.

■ About Mahakoshal Chhatritya Chawal:

- » This traditional rice variety is cultivated in the fertile wetlands of Jabalpur and Katni in the Mahakoshal region.
- » It is a hardy variety that is well-adapted to local ecological conditions.
- » Unlike polished rice, it retains its nutrient-rich bran layer.
- » It is rich in Vitamin B1 (Thiamine), essential minerals, healthy fats, and balanced amino acids.
- » It is easily digestible and serves as a highly nutritious staple food.

Importance of GI Tag for Tribal Communities:

■ Economic Benefits:

- » Premium market prices.
- » Better branding.
- » Export opportunities.
- » Increased farmer income.

■ Social Benefits:

- » Recognition of tribal knowledge.
- » Preservation of indigenous farming.
- » Promotion of local identity.

■ Agricultural Benefits

- » Conservation of native seed varieties.
- » Encouragement of organic farming.
- » Climate-resilient agriculture.
- » Agrobiodiversity conservation.

Significance for India:

- **Supports Millet Mission:** The recognition complements India's efforts to promote:
 - » Nutri-cereals
 - » Climate-smart agriculture
 - » Sustainable food systems
- **Promotes Tribal Economy:** The GI tag provides market access to products traditionally grown by tribal communities.
- **Preserves Traditional Knowledge:** Encourages conservation of:
 - » Indigenous seeds
 - » Traditional farming techniques
 - » Cultural heritage
- **Enhances Export Potential:** GI branding

increases consumer confidence and international demand for authentic regional products.

Previous GI Products of Madhya Pradesh:

- Some well-known GI-tagged products include:
 - » Kadaknath Chicken
 - » Ratlami Sev
 - » Sharbati Wheat
 - » Chanderi Fabric
 - » Bagh Prints
 - » Maheshwari Saree

Conclusion:

GI tagging extends beyond intellectual property protection by preserving traditional agricultural heritage, empowering tribal communities, conserving biodiversity, and fostering inclusive rural development. The GI recognition of Madhya Pradesh's indigenous tribal crops demonstrates how legal protection can become a catalyst for sustainable economic growth and cultural preservation.

PM Family Care Tracker Project

Context:

Recently, Union Home Minister Amit Shah inaugurated the 'PM Family Care Tracker' pilot project in Gandhinagar on June 28, 2026. The pilot will be implemented in Gandhinagar Lok Sabha constituency and may later be scaled to Gujarat and other states. The initiative aims to strengthen real-time monitoring of maternal and child welfare delivery using an integrated digital platform.

What is the PM Family Care Tracker?

- The PM Family Care Tracker is an AI-enabled integrated governance platform designed to ensure that pregnant women, mothers, and children receive timely and end-to-end benefits of welfare schemes without gaps or duplication.
- It creates a life-cycle digital record by integrating:

- » Civil registration systems (birth and death records)
- » Health, nutrition, education, and social welfare databases
- » Aadhaar-linked beneficiary records (where applicable)
- » Scheme-specific databases across departments
- Each child is assigned a unique digital identity, enabling tracking from pregnancy to 18 years of age.



Objectives of the Platform:

- Ensure automatic inclusion in welfare schemes (proactive governance)
- Strengthen last-mile delivery of benefits
- Reduce exclusion and duplication errors in beneficiary databases
- Enable predictive monitoring of health and education risks
- Improve inter-departmental coordination and accountability
- Build a real-time social protection dashboard

How Does the System Work?

- The platform integrates around 16 flagship government schemes to provide a unified support system for mothers and children.

These include key programmes such as Pradhan Mantri Matru Vandana Yojana, Janani Suraksha Yojana, Janani Shishu Suraksha Karyakram, PM POSHAN, Mission Vatsalya, Rashtriya Bal Swasthya Karyakram, Sukanya Samriddhi Yojana, PM CARES for Children, and the National Child Labour Project.

- By bringing these schemes together, the system ensures that beneficiaries can be tracked and supported across multiple services in a coordinated manner.
- The system also works through an automated alert mechanism that combines rule-based triggers with AI-driven notifications. For example, if a child misses immunisation, an immediate alert is sent to the ANM or health officer. School dropout risks are flagged to teachers, education officers, and local authorities, while signs of malnutrition trigger ICDS intervention.
- High-risk pregnancies are escalated for medical supervision, and any delay in benefit delivery is highlighted at district or state dashboards. Each case remains active in the system until it is officially closed, ensuring proper follow-up and accountability.

Key Features of the project:

- Unique Child Digital ID linked to birth registration
- Real-time monitoring dashboard for officials at all levels
- Interoperable databases across ministries
- Geo-tagging of beneficiaries and service delivery points
- Performance indicators tracking maternal and child health outcomes
- Automated escalation workflow system
- Analytics-based risk prediction (e.g., malnutrition, dropout probability)

Significance of this project:

- Strengthens Digital Public Infrastructure (DPI) for social welfare
- Supports Direct Benefit Transfer (DBT) efficiency and transparency

- Enables proactive governance instead of reactive welfare delivery
- Helps reduce Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR)
- Enhances monitoring of Sustainable Development Goals (SDG 2, 3, and 4)
- Improves India's capacity for data-driven policy planning

Challenges:

- Data privacy, consent, and protection concerns
- Risk of exclusion due to incorrect or outdated data
- Digital divide and uneven internet access
- Integration issues across legacy government databases
- Cybersecurity risks in large-scale health-data platforms
- Dependence on frontline worker digital literacy

Conclusion:

The PM Family Care Tracker represents a shift towards predictive and integrated welfare governance in India. By combining real-time data, automated alerts, and inter-departmental coordination, it aims to ensure universal, timely, and accountable delivery of maternal and child welfare services, marking a significant step in India's digital governance ecosystem.

Polity & Governance

Anti-Defection Law: Relevance, Challenges, and the Need for Reforms

Context:

In 2026, following political realignments and incidents of defection across various political parties, the Anti-Defection Law has once again come into focus. Cases involving legislators and Members of Parliament associated with the Trinamool Congress (TMC) in West Bengal, Shiv Sena (UBT) in Maharashtra, and earlier the Aam Aadmi Party (AAP) have raised fresh questions regarding the effectiveness of the Tenth Schedule of the Constitution.

These developments indicate that political parties and elected representatives are increasingly using mechanisms such as mergers, factional splits, and procedural delays to avoid disqualification while formally remaining within the framework of the law. The widening gap between the spirit of the Anti-Defection Law and its actual implementation has reignited the debate on the need for reforms.

Background of the Anti-Defection Law:

- The Anti-Defection Law in India is incorporated under the Tenth Schedule of the Constitution, which was added through the 52nd Constitutional Amendment Act, 1985. Its primary objective was to ensure political stability by preventing unethical

defections motivated by the lure of office, personal gain, or other inducements.



- The law was introduced in response to the frequent instances of legislators changing political parties after the 1967 general elections, which led to the collapse of several governments. The famous phrase "Aaya Ram, Gaya Ram", associated with the politics of Haryana, became a symbol of this problem and highlighted the need for a legal framework to uphold party discipline and respect the electoral mandate.
- The law lays down specific grounds for the disqualification of Members of Parliament (MPs) and Members of Legislative Assemblies (MLAs). A member may be disqualified if they voluntarily give up the membership of their political party or vote, or abstain from

voting, contrary to the party whip without obtaining prior permission.

- The provisions also apply to independent members, who become disqualified if they join any political party after the election. Nominated members, however, are permitted to join a political party only within six months of taking their oath. These provisions aim to ensure party discipline in the functioning of legislatures.
- One of the significant features of the law is the merger provision, under which members are exempted from disqualification if at least two-thirds of the members of a legislative party agree to merge with another political party. This exception was further strengthened through the 91st Constitutional Amendment Act, 2003. The authority to decide questions relating to disqualification under the Anti-Defection Law has been vested in the Speaker or the Chairman of the House, although their decisions remain subject to judicial review.
- Overall, the Anti-Defection Law seeks to strike a balance between political stability and democratic accountability. However, it has also been criticized for strengthening the authority of party leadership at the cost of individual legislative freedom and democratic deliberation within political parties.

Challenges Associated with the Anti-Defection Law:

- **Misuse of the Merger Provision:** The provision allowing mergers with the support of two-thirds of the members has increasingly become a means to facilitate large-scale defections. Instead of genuine ideological integration, mergers are often strategically engineered to avoid disqualification through political realignment.
- **Speaker as the Decision-Making Authority:** The power to decide disqualification petitions rests with the Speaker. However, since the Speaker is generally associated with the ruling party, questions regarding the impartiality of the office continue to be

raised.

- **Absence of Time-Bound Decisions:** The law does not prescribe any fixed time limit for deciding disqualification cases. As a result, prolonged delays allow defecting legislators to continue in office and influence political equations during the pendency of proceedings.
- **Erosion of Legislative Independence:** The strict enforcement of the party whip on most issues restricts the independent judgment and decision-making ability of legislators, thereby affecting meaningful debate and deliberation in Parliament and State Legislatures.
- **Weak Internal Democracy within Political Parties:** The highly centralized structure of political parties leaves little room for dissent. Consequently, dissatisfied legislators often perceive defection as the only practical option.

Judicial Intervention:

- In *Kihoto Hollohan v. Zachillhu* (1992), the Supreme Court upheld the constitutional validity of the Tenth Schedule. At the same time, it clarified that the decisions of the Speaker would remain subject to judicial review, thereby ensuring constitutional oversight over the exercise of powers under the Anti-Defection Law.
- Another significant judgment came in *Nabam Rebia v. Deputy Speaker* (2016). The Supreme Court held that if a notice seeking the removal of the Speaker is pending, the Speaker cannot decide disqualification petitions under the Tenth Schedule. This judgment highlighted the potential conflict of interest arising from the Speaker's political position and the outcome of defection-related proceedings.
- In several cases, the Supreme Court has observed that undue delay in deciding defection cases adversely affects the democratic process and has emphasized that the Speaker should dispose of such matters without unnecessary delay.
- These judicial pronouncements underline

the need for a more impartial and credible mechanism for adjudicating matters related to defection.

Need for Reforms:

- Several expert committees and commissions have recommended reforms to address the limitations of the Anti-Defection Law:
 - » **Dinesh Goswami Committee (1990):** Recommended that the power to decide disqualification cases should be vested in the President or the Governor, acting on the advice of the Election Commission, instead of the Speaker.
 - » **Law Commission (170th Report, 1999):** Recommended the establishment of an independent authority to adjudicate disqualification cases.
 - » **National Commission to Review the Working of the Constitution (NCRWC), 2002:** Supported the creation of an independent tribunal for deciding defection-related matters.

Way Forward:

- **Establish an Independent Adjudicatory Mechanism:** The responsibility for deciding defection cases should be transferred from the Speaker or Chairman to the Election Commission or an independent tribunal to ensure greater impartiality and credibility in the decision-making process.
- **Ensure Time-Bound Decisions:** A fixed time limit should be prescribed in the Constitution or by law for the disposal of disqualification petitions. This would prevent political manipulation through procedural delays.
- **Rationalise the Use of the Party Whip:** The party whip should be confined only to matters affecting the survival of the government, such as confidence motions, no-confidence motions, and Money Bills. This would enable legislators to express independent views on other issues and improve the quality of legislative debate.
- **Promote Internal Democracy within Political Parties:** Political parties should adopt transparent decision-making processes,

conduct regular internal elections, and establish institutional mechanisms for accommodating dissent, thereby reducing the likelihood of defections.

- **Uphold the Sanctity of the Electoral Mandate:** If an elected representative wishes to change political parties, they should first resign from their seat and seek a fresh mandate from the electorate. This would preserve the trust of voters and uphold the sanctity of the democratic mandate.
- **Restrict Political Incentives:** Consideration should be given to prohibiting defecting legislators from holding ministerial positions or any office of profit during the remainder of the legislative term, thereby discouraging opportunistic defections.
- **Review the Merger Provision:** The exemption available under the two-thirds merger rule should be re-examined to ensure that it is not misused as a tool for political opportunism rather than genuine ideological integration.

Conclusion:

To make the Anti-Defection Law truly effective in accordance with its original spirit, merely strengthening its legal provisions will not be sufficient. Institutional reforms, along with the promotion of democratic practices within political parties, are equally essential. The objective of the law is not merely to protect governments but to safeguard the electoral mandate and uphold democratic morality. If the law fails to prevent political opportunism, its reimagining becomes imperative. Only through an independent adjudicatory mechanism, time-bound justice, and stronger internal party democracy can the Anti-Defection Law effectively fulfil its intended purpose.

Short Issues

Supreme Court's verdict on DNA tests

Context:

Recently, while upholding an order for a DNA test in a case, the Supreme Court observed that, under certain circumstances, a child's desire to know their biological identity may outweigh the alleged father's right to privacy under Article 21.

Background:

- For a long time in India, paternity disputes have been resolved primarily on the basis of Section 112 of the Indian Evidence Act, 1872 (now Section 116 of the Indian Evidence Act, 2023). According to this provision, a child born during marriage is considered legitimate unless proof of non-access i.e. non-cohabitation between the husband and wife is given.
- Its primary purpose was to:
 - » protect the child from social stigma,
 - » maintain family stability,
 - » protect the child from being declared an "illegitimate child."

About Court ruling:

- The Court held that the issue of paternity was directly and substantially in question in the present proceedings. It further noted that there was no other material or evidence on record capable of conclusively determining the question of parentage.
- In these circumstances, the Court found that scientific examination through DNA testing was necessary for an effective and just resolution of the dispute.
- The Court further observed that refusal to permit such testing could result in a situation where the claimant is permanently deprived of the opportunity to establish legally enforceable rights, including rights relating to identity and inheritance.
- Accordingly, the Court held that in appropriate cases, the interest of a child or

claimant in ascertaining biological origins may outweigh the privacy concerns of the alleged parent, particularly where no alternative evidence is available to resolve the dispute.



Legal Framework:

- Indian law strongly presumes legitimacy under Section 112 of the Indian Evidence Act, 1872, now Section 116 of the Bharatiya Sakshya Adhiniyam (BSA), 2023.
- It states that a child born during a valid marriage, or within 280 days of its dissolution, is presumed legitimate unless "non-access" between spouses is proven during the relevant period.
- This presumption reflects a legal intent to protect family stability and the dignity of the child.

Evolution of DNA Testing in Indian Law:

- When Section 112 was enacted in 1872, scientific paternity testing did not exist. DNA testing became commercially available globally only after the 1980s and gradually entered Indian legal proceedings in the 1990s.
- Early judicial recognition came in *Kunhiraman v. Manoj* (1991, Kerala High Court), which accepted DNA evidence in a non-marital dispute, signalling a shift toward scientific proof in family law.

Key Supreme Court Precedents:

- In *Goutam Kundu v. State of West Bengal* (1993), the Court rejected routine blood/DNA testing, holding that a strong prima facie case of non-access must first be shown.
- In *Banarsi Dass v. Teeku Dutta* (2005), the Court firmly held that DNA tests are not to be ordered as a matter of routine and cannot easily override Section 112's presumption.
- However, in *Nandlal Wasudeo Badwaik v. Lata* (2014), the Court accepted DNA evidence, holding that scientific truth may prevail over legal presumption when both conflict.
- This created a two-stage principle: presumption governs unless DNA evidence is ordered; once ordered, scientific results are treated as decisive.

Conclusion:

The ruling marks a shift from protecting legitimacy alone to a balanced rights-based approach. While privacy remains a key constitutional value after *Puttaswamy*, it is not absolute. In paternity disputes, courts now accept that where no other evidence exists, the right to know biological identity may, in exceptional cases, override privacy concerns.

The Ordinance Question before the Supreme Court

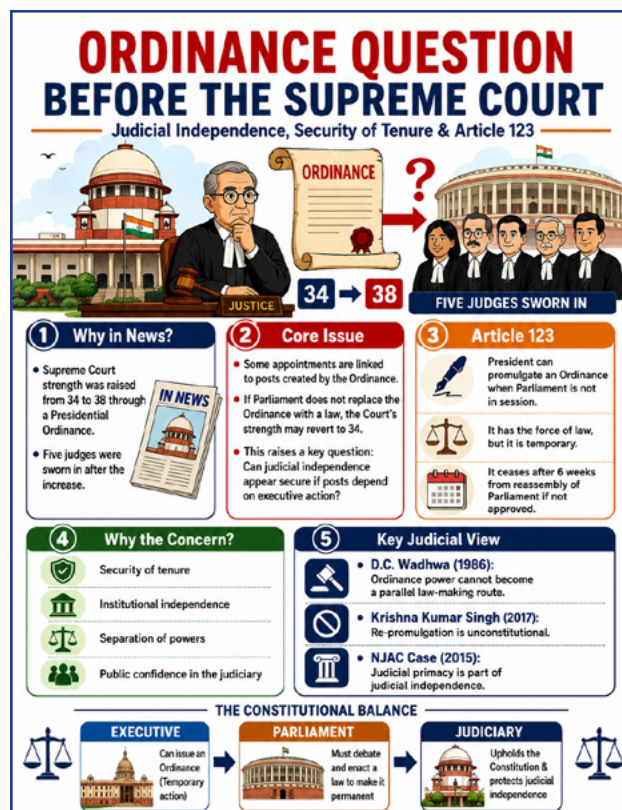
Context:

Recently, through the “The Supreme Court

(Number of Judges) Amendment Ordinance, 2026”, the sanctioned strength of judges in the Supreme Court has been increased from 34 to 38 (including the Chief Justice of India). Following this ordinance, the appointment of five new judges has triggered a renewed debate on judicial independence and the relationship between the judiciary and the executive.

Key Constitutional Provisions Related to the Ordinance:

- Article 124(1):** This provision states that there shall be a Supreme Court of India and gives Parliament full authority to determine the number of judges by law.
- Article 123:** It empowers the President to promulgate ordinances during the recess of Parliament. Such ordinances have the same force and effect as a law passed by Parliament, but are temporary in nature.



ORDINANCE QUESTION BEFORE THE SUPREME COURT
 Judicial Independence, Security of Tenure & Article 123

JUSTICE 34 → 38 **FIVE JUDGES SWORN IN**

- Why in News?**
 - Supreme Court strength was raised from 34 to 38 through a Presidential Ordinance.
 - Five judges were sworn in after the increase.
- Core Issue**
 - Some appointments are linked to posts created by the Ordinance.
 - If Parliament does not replace the Ordinance with a law, the Court's strength may revert to 34.
 - This raises a key question: Can judicial independence appear secure if posts depend on executive action?
- Article 123**
 - President can promulgate an Ordinance when Parliament is not in session.
 - It has the force of law, but it is temporary.
 - It ceases after 6 weeks from reassembly of Parliament if not approved.
- Why the Concern?**
 - Security of tenure
 - Institutional independence
 - Separation of powers
 - Public confidence in the judiciary
- Key Judicial View**
 - D.C. Wadhwa (1986):** Ordinance power cannot become a parallel law-making route.
 - Krishna Kumar Singh (2017):** Re-promulgation is unconstitutional.
 - NJAC Case (2015):** Judicial primacy is part of judicial independence.

THE CONSTITUTIONAL BALANCE

EXECUTIVE Can issue an Ordinance (Temporary action) → **PARLIAMENT** Must debate and enact a law to make it permanent → **JUDICIARY** Upholds the Constitution & protects judicial independence

Appointment Process and Its Implications:

- Existing Vacancies vs Ordinance-Created**

Posts: At the time the ordinance was issued, the Supreme Court had 32 serving judges against a sanctioned strength of 34, meaning two posts were already vacant. The ordinance increased the sanctioned strength, thereby creating additional judicial posts.

- **Temporary Nature of Appointments:** Out of the five new appointments:
 - » Two judges were appointed against existing vacancies, and
 - » Three judges were appointed against posts created by the ordinance.
- These three ordinance-created positions will continue to exist only as long as the ordinance remains in force or until it is replaced by a permanent Act of Parliament.

Key Concerns arise:

- **Judicial Independence:** The Supreme Court in *Supreme Court Advocates-on-Record Association v. Union of India* (2015) struck down the National Judicial Appointments Commission (NJAC), emphasizing judicial primacy in appointments as part of the Constitution's basic structure. Critics argue that accepting posts created through an Ordinance places judges in a position where their seats ultimately depend upon Parliament approving the Ordinance, creating at least a perception of dependence on the executive.
- **Security of Tenure:** If Parliament fails to replace the Ordinance with legislation, the sanctioned strength would revert to 34. This raises an unprecedented constitutional question regarding the status of judges appointed to Ordinance-created posts.
- **Appearance of Institutional Neutrality:** Judicial independence is not only about actual independence but also public confidence in impartiality. The possibility that judges may occupy positions awaiting legislative approval could create concerns regarding institutional detachment from the executive.

Background:

- The President promulgated an Ordinance on 16 May 2026 amending the Supreme Court (Number of Judges) Act, 1956, increasing the sanctioned strength of the Supreme Court from 34 judges to 38 judges (including the Chief Justice of India).

Why Was the Increase Necessary?

- **Rising Pendency:** As of April 2026, pending cases in the Supreme Court exceeded approx 92,000, highlighting the need for additional judicial capacity.
- **Constitutional Benches:** Under Article 145(3), constitutional matters require benches of at least five judges. Increasing judicial strength facilitates the formation of more Constitution Benches.
- **Improving Judicial Efficiency:** Supreme Court judges often hear dozens of matters daily. Additional judges can reduce workload pressures and improve the quality and speed of adjudication.

Conclusion:

The increase in the Supreme Court's strength aims to reduce pendency and improve efficiency. However, creating additional judicial posts through an Ordinance has raised concerns about judicial independence and tenure security. While Parliament may replace it with legislation, the episode highlights the need to preserve judicial credibility by maintaining clear separation from executive influence.

West Bengal Joins Ayushman Bharat PM-JAY Scheme

Context:

Recently, West Bengal has finally joined the flagship health insurance scheme Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) following the signing of an MoU between the state government and the National Health Authority.

About the Scheme:

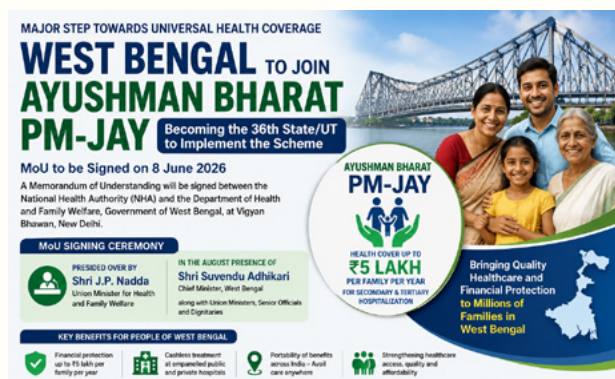
- Ayushman Bharat, launched in 2018 under the Ministry of Health and Family Welfare, is India's flagship initiative aimed at achieving Universal Health Coverage in line with National Health Policy 2017 and Sustainable Development Goal 3 (Good Health and Well-being). It follows a "continuum of care" approach through four integrated pillars.
- » **Ayushman Arogya Mandirs (AAM):** Strengthens primary healthcare by upgrading sub-centres and PHCs into Health and Wellness Centres. It provides free medicines, diagnostics, maternal care, and screening for non-communicable diseases like diabetes, hypertension, and cancer.
- » **AB-PMJAY Insurance Component:** Provides cashless and paperless health coverage of 5 lakh per family per year for secondary and tertiary care hospitalisation. It covers pre-existing diseases, has no restriction on family size, age, or gender, and is portable across India.
- » **PM-ABHIM:** The PM Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) focuses on strengthening public health infrastructure, diagnostic networks, and pandemic preparedness with a large financial outlay.
- » **Ayushman Bharat Digital Mission (ABDM):** Creates a digital health ecosystem through unique Health Account IDs enabling secure storage and exchange of medical records.

Key Highlights of West Bengal Inclusion:

- West Bengal becomes the last state to join AB-PMJAY, achieving full national coverage.
- Around 1.43 crore households in the state are expected to benefit.
- Includes coverage for 1.24 crore poor households, 15.95 lakh senior citizens above 70 years, and over 3 lakh frontline

workers.

- The Centre has released Rs.976 crore as initial funding support.
- Migrant workers will now get nationwide portability of health services.



Funding and Implementation:

- The scheme is a Centrally Sponsored Scheme implemented by the National Health Authority and State Health Agencies. Funding follows a 60:40 ratio for most states, 90:10 for northeastern and Himalayan states, and 100% central funding for Union Territories.

Significance of the Development:

- Ensures universal health coverage under AB-PMJAY across India.
- Reduces out-of-pocket expenditure and financial distress due to medical emergencies.
- Strengthens portability benefits for migrant workers.
- Enhances cooperative federalism between Centre and states.
- Expands equitable access to secondary and tertiary healthcare.

Conclusion:

The inclusion of West Bengal marks a major milestone in India's journey toward universal health coverage. While Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) has significantly reduced financial barriers to healthcare, its long-term success depends on strengthening public health systems, improving

implementation efficiency, and ensuring equitable access across regions.

compensation and restitution against responsible authorities.

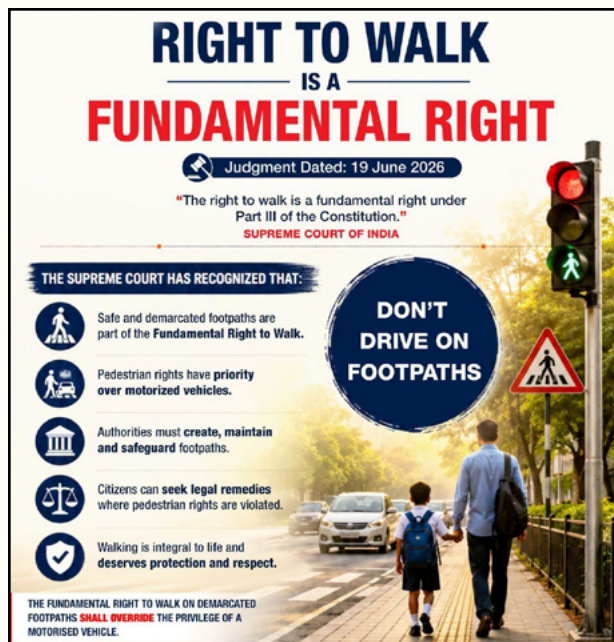
Right to Walk on Safe Footpaths a Fundamental Right

Context:

Recently, The Supreme Court, in a landmark judgment, declared that the right to walk on safe and demarcated footpaths is a Fundamental Right, deriving its constitutional basis from Article 19(1)(d) (freedom of movement) and Article 21 (right to life and dignity).

Key Highlights of the Judgment:

- **Right to Walk Recognized as a Fundamental Right:** The Court held that the right to walk is an integral component of the freedom of movement guaranteed under Article 19(1) (d) and is closely linked with the Right to Life under Article 21. It ruled that this right includes access to safe, well-maintained, and demarcated footpaths.
- **Pedestrian Rights Have Priority:** The judgment explicitly stated that pedestrian rights on footpaths shall have priority over the movement of motorized vehicles, recognizing walking as the most basic form of human mobility.
- **Duty of Authorities:** The Court observed that whenever a road exists, authorities have a corresponding duty to provide and maintain proper footpaths. This responsibility lies with urban development authorities, municipal corporations, municipalities, and panchayats.
- **Need for a Dedicated Law and Regulator:** The Court noted the absence of a dedicated legal framework governing pedestrian rights and recommended the creation of a statutory mechanism or regulator to ensure implementation, accountability, and grievance redressal.
- **Right to Remedies:** Citizens whose right to safe footpaths is violated can seek constitutional and legal remedies, including



Constitutional Significance:

- **Article 19(1)(d):**
 - » Guarantees freedom of movement throughout the territory of India.
 - » The Court interpreted walking as a fundamental aspect of this freedom.
- **Article 21:**
 - » Protects life and personal liberty.
 - » The Court linked safe pedestrian infrastructure to the right to live with dignity and safety.

Directive Principles and Inclusive Development:

- The judgment reinforces the constitutional vision of:
 - » Human-centric urban planning.
 - » Accessible infrastructure for persons with disabilities.
 - » Sustainable and inclusive mobility.

Background:

- In May 2025, the Supreme Court had already recognized the right to unobstructed and disabled-friendly footpaths as part of Article

21 and directed States and Union Territories to frame guidelines for pedestrian safety.

- The present judgment expands that reasoning by explicitly declaring the right to walk on safe footpaths as a Fundamental Right and calling for legislative action.

Significance for Urban Governance:

- **Benefits:**
 - » Enhances pedestrian safety.
 - » Reduces road accidents involving walkers.
 - » Promotes sustainable & non-motorized transport.
 - » Improves accessibility for elderly citizens and persons with disabilities.
 - » Encourages people-centric city planning.
- **Challenges:**
 - » Encroachment on footpaths.
 - » Poor urban planning and maintenance.
 - » Limited municipal resources.
 - » Weak enforcement mechanisms.

Conclusion:

The Supreme Court's recognition of the right to walk on safe footpaths transforms pedestrian safety into a constitutionally enforceable right, reshaping urban governance, strengthening accessibility, and deepening Article 21 jurisprudence. However, its real impact will depend on effective implementation by urban local bodies and sustained institutional enforcement, without which the judgment risks remaining symbolic rather than transformative.

Four New Digital Applications in Digital Policing

Context:

Recently, the Union Home Minister launched four revolutionary digital policing applications during the 26th All India Conference of Fingerprint Directors held in New Delhi. These applications are Abhigyan, Criminal Procedure Identification (CrPI), e-Prosecution 2.0 and e-Forensics 2.0. This initiative marks a significant milestone

in the effective implementation of India's new criminal laws (including the Bharatiya Nyaya Sanhita) and the modernization of the criminal justice system.

Key Features and Functions of the Applications:

- **Abhigyan**
 - » Abhigyan is a smartphone-based application designed to strengthen ground-level policing.
 - » It is integrated with the National Automated Fingerprint Identification System (NAFIS) database, which contains records of over 12.9 million criminals.
 - » Through this application, police personnel in the field can capture a suspect's fingerprints and access their criminal history within 35 seconds.
- **Criminal Procedure Identification:**
 - » CrPI is a platform that integrates multiple biometric technologies, including:
 - Fingerprint identification
 - Face recognition
 - Iris scanning
 - DNA profiling
 - » Its primary objective is to ensure accurate identification of repeat offenders through a multimodal biometric framework.
- **e-Forensics 2.0**
 - » e-Forensics 2.0 brings all Central and State Forensic Science Laboratories (FSLs) onto a common digital network.
 - » It digitally secures and tracks the chain of custody of evidence from the initial stage of investigation to the preparation of the final report.
 - » This ensures transparency and minimizes the possibility of evidence tampering.
- **e-Prosecution 2.0**
 - » This platform digitizes coordination and documentation among the police, prosecution agencies, and courts.
 - » It focuses on:

- Digital case management
- Transparent document sharing
- » The objective is to reduce delays in judicial proceedings and improve the conviction rate.

Integration with ICJS:

- All four applications operate under the Interoperable Criminal Justice System (ICJS) framework. This means that police databases (CCTNS/Cri-MAC), fingerprint records (NAFIS), forensic laboratories (e-Forensics), and courts (e-Courts) are now connected within a single digital ecosystem.

Significance of These Applications:

- **Faster and More Transparent Justice Delivery:** India's judicial system faces a significant backlog of pending cases. These tools can reduce investigation timelines and expedite the delivery of justice through the use of scientific evidence.
- **Strengthening Scientific Investigation:** e-Forensics 2.0 is expected to elevate forensic investigation standards in India to align with global best practices.
- **Data Security and Privacy Challenges:** The large-scale collection and integration of biometric data raise concerns regarding:
 - » The Right to Privacy
 - » Potential data breaches
 - » Misuse of personal information
- Therefore, robust cybersecurity measures, including two-factor authentication, encryption, and strict compliance with data protection laws, will be essential.

Conclusion:

These digital reforms represent more than just technological upgrades; they signify a transformative shift in India's law enforcement and criminal justice framework from a predominantly punitive approach to a more preventive, evidence-based, and citizen-centric model. They also contribute to the realization of the vision of e-Governance and SMART Policing, making law enforcement more efficient, transparent, and accountable.

FCRA Rules Amendment 2026

Context:

Recently, the Central Government has amended the Foreign Contribution (Regulation) Rules (FCRA). The amendments, notified by the Ministry of Home Affairs, aim to enhance transparency in the functioning of organizations receiving foreign funds and ensure effective monitoring of the utilization of such funds. In particular, the amendments provide a clearer definition of religious activities and impose stricter compliance requirements.

What is FCRA?

- The Foreign Contribution (Regulation) Act, 2010 (FCRA) is the primary legislation governing the receipt and utilization of foreign contributions and foreign hospitality in India.
- Its objective is to ensure that foreign funding is not used in a manner detrimental to national interest, sovereignty, democratic values, or public order. The Act primarily applies to non-governmental organizations (NGOs), trusts, societies, and other entities receiving foreign funds.

Key Features of the Recent Amendments

- **Clear Definition of Religious Activities:** For the first time, the amended rules provide a clear definition of activities that will be classified as "religious activities." According to the government, this will reduce ambiguity in the interpretation of the rules and facilitate better monitoring of the utilization of foreign funds.
- **Stricter Compliance Provisions:** Under the new rules, NGOs are now required to provide precise details of their area of operation (States/Union Territories) while applying for registration. Any addition of a new state or objective will require the payment of an additional fee. Existing registered organizations have been given one year to align themselves with the newly introduced classification of 105 activities. Furthermore,

to prevent inactive organizations from retaining FCRA registration, NGOs seeking license renewal must demonstrate that they have utilized at least Rs.10 lakh of foreign contributions during the previous two years.

- Additionally, NGOs operating under the “Prior Permission” category will be eligible to receive the next installment of foreign funds only after utilizing at least 75% of the previously received amount. The government may also conduct field-level verification of such expenditure.
- **Increased Monitoring of Foreign Fund Utilization:** The government seeks to ensure that foreign contributions are used strictly for approved purposes and are not misused. To achieve this objective, various administrative and regulatory mechanisms have been strengthened.
- **Restrictions on Foreign Functionaries:** Organizations with foreign nationals occupying key managerial or decision-making positions (except Persons of Indian Origin or PIOs) will no longer be eligible for FCRA registration.
- Further, NGOs will now be required to disclose complete details of their social media accounts, websites, and publications to the government.

Why Were These Amendments Necessary?

- Over the past few years, concerns have been raised regarding transparency, accountability, and national security in relation to organizations receiving foreign funding. The government has expressed concerns that some entities may have utilized foreign contributions for purposes other than those for which they were originally approved. Therefore, it became necessary to make the regulatory framework more explicit and effective.
- Moreover, the government aims to modernize the foreign contribution regulatory regime in line with contemporary requirements so that the flow and utilization of foreign funds can be monitored more effectively.

Potential Impact:

- These amendments are expected to enhance the accountability of NGOs and religious institutions receiving foreign financial assistance.
- Stronger monitoring of financial transactions may reduce the chances of misuse of funds.
- Greater transparency can be achieved in financial dealings between foreign donors and Indian recipient organizations.

Conclusion:

The recent amendments to the FCRA Rules represent an important step towards making the management of foreign contributions more transparent, accountable, and effective. While these reforms seek to strengthen national security and financial accountability, it is equally important to maintain a balance between regulatory oversight and the operational autonomy of civil society organizations. Ultimately, the success of these amendments will depend on how transparently, fairly, and practically they are implemented.

Passport is not proof of Citizenship: MEA

Context:

Recently, the Ministry of External Affairs (MEA) clarified that an Indian passport is merely a travel document and cannot be regarded as conclusive proof of Indian citizenship. On the occasion of the 14th Passport Seva Divas on 24 June, officials of the Ministry of External Affairs, citing Section 20 of the Passports Act, 1967, clarified that the Central Government may, in the public interest, issue passports even to non-citizens. Therefore, while a passport is a valid document for identity and international travel, it does not constitute definitive proof of citizenship. Earlier, the judiciary and the government had adopted a similar position regarding Aadhaar, PAN Card, and Voter ID.

What Constitutes Actual Proof of

Citizenship?

- Under Indian law, there is no universal "Citizenship Certificate" that serves as conclusive proof of citizenship for every individual. According to the Ministry of Home Affairs (MHA), a Certificate of Naturalisation or a Certificate of Registration, issued under the Citizenship Act, 1955, are the strongest documentary proofs of citizenship. These certificates are generally issued to individuals of foreign origin who acquire Indian citizenship.
- For ordinary citizens, a Birth Certificate serves as the primary basis for establishing citizenship. However, its legal validity depends on the year of birth:
 - » **Between 26 January 1950 and 1 July 1987:** Any person born in India is automatically an Indian citizen (a Birth Certificate alone is sufficient).
 - » **Between 1 July 1987 and 3 December 2004:** In addition to the Birth Certificate, at least one parent must be an Indian citizen.
 - » **After 3 December 2004:** Both parents must be Indian citizens, or one parent must be an Indian citizen while the other is not an illegal migrant.

Constitutional and Legal Framework

- **Constitutional Provisions:** Citizenship is dealt with under Part II (Articles 5 to 11) of the Constitution of India. Article 11 empowers Parliament to regulate matters relating to citizenship through legislation.
- **Legal Provisions:** Exercising this constitutional power, Parliament enacted the Citizenship Act, 1955, under which citizenship may be acquired by birth, descent, registration, naturalisation, or incorporation of territory.

What Do Different Documents Establish?

- **Passport:** Issued under the Passports Act, 1967. It primarily serves as a travel document for international travel and for establishing identity abroad.

- **Aadhaar Card:** According to the Unique Identification Authority of India (UIDAI), Aadhaar serves only as proof of identity and residence, not of citizenship.
- **Voter ID:** Under the Representation of the People Act, only Indian citizens are eligible to be included in the electoral roll. However, the Supreme Court has clarified that the mere deletion of a person's name from the electoral roll does not result in the loss of citizenship. Therefore, it is also not conclusive proof of citizenship.
- **PAN Card and Land Records:** According to a 2020 judgment of the Gauhati High Court, a PAN Card, bank documents, or land ownership records, by themselves, cannot establish Indian citizenship.

Conclusion:

To eliminate ambiguity regarding documents related to citizenship, the government needs to adopt a coherent national policy. In order to protect ordinary citizens from unnecessary legal disputes, the process of citizenship verification should be made simpler, more transparent, and digitally integrated, thereby clearly distinguishing between identity documents and proof of citizenship.

QR Code-Based Track and Trace System for Medicines

Context:

Recently, The Central Government has mandated that vaccines, antimicrobials, narcotics and addictive drugs, and anti-cancer medicines carry a unique QR code or barcode to enable end-to-end tracking of every vial or blister pack. The system will be implemented in phases by July 2027 (vaccines, narcotics, anti-cancer drugs) and July 2028 (antimicrobials) to strengthen drug safety and combat counterfeit medicines.

What is the QR Code-Based Track and Trace System?

- The Track and Trace System is a digital mechanism that assigns every medicine pack a unique identification code, enabling regulators and manufacturers to monitor its movement throughout the supply chain—from manufacturing to distribution and retail.
- Manufacturers of medicines listed under Schedule H2 of the Drugs Rules, 1945 are required to affix a QR code or barcode on the primary packaging (or secondary packaging where space is limited).
- The QR code contains details such as:
 - » Brand and generic name of the drug
 - » Manufacturer's name and address
 - » Batch number
 - » Manufacturing and expiry dates
 - » Manufacturing licence number
 - » Unique identification number for each unit
- Facilitates efficient recalls during quality failures.
- Supports India's pharmaceutical exports by improving global trust.

Challenges:

- High implementation costs for manufacturers, especially small pharmaceutical firms.
- Need for robust digital infrastructure across the supply chain.
- Risk of incorrect or delayed data entry affecting product verification.
- Requirement for coordination among manufacturers, distributors, retailers, and regulators.

Significance for Drug Regulation:

- The initiative will strengthen the functioning of the Central Drugs Standard Control Organisation (CDSCO) and improve India's pharmaceutical regulatory framework.
- Enhanced traceability aligns with the World Health Organization (WHO) Global Benchmarking Tool, helping India move towards Maturity Level 4, the highest regulatory standard.
- This would improve the international acceptance of Indian medicines and reinforce India's position as a global pharmaceutical hub.

Conclusion:

The QR code-based track and trace system marks a significant step towards ensuring safe, authentic, and quality-assured medicines. By enhancing transparency across the pharmaceutical supply chain, it will strengthen public health, improve regulatory efficiency, and help curb the growing menace of counterfeit drugs in India.

Why is the System Needed?

- The primary objective is to prevent counterfeit and substandard medicines, which pose serious risks to public health. The system helps:
 - » Detect fake or diluted medicines.
 - » Prevent reuse of genuine packaging for counterfeit drugs.
 - » Identify contamination or tampering in the supply chain.
 - » Enable rapid product recalls.
 - » Improve patient safety and regulatory transparency.
- The need has become more significant following incidents involving counterfeit high-value medicines, including expensive cancer drugs.

Benefits:

- Strengthens drug authentication and traceability.
- Enhances regulatory oversight by enabling real-time tracking.
- Reduces circulation of spurious medicines.
- Improves consumer confidence in pharmaceutical products.



International Relations

G7 Summit 2026: India's Expanding Role in a Changing World Order

Context:

Global politics is undergoing a period of rapid transformation, where the traditional balance of power is shifting significantly. Challenges such as the Russia-Ukraine war, the West Asia crisis, disruptions in global supply chains, the rapid expansion of Artificial Intelligence (AI), climate change, and economic protectionism have made international cooperation more essential than ever before. Against this backdrop, the 52nd G7 Summit, held in Évian-les-Bains, France, in June 2026, was not merely a meeting of developed countries but emerged as an important platform shaping the future direction of global governance. Although India is not a member of the G7, it participated for the eighth consecutive time as a special invitee. This is not merely a diplomatic formality but reflects the growing recognition that global challenges can no longer be effectively addressed without India's active participation.

What is the G7 (Group of Seven)?

- The G7 is an informal grouping of the world's seven major advanced economies "Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States". It was established in 1975 to address the global economic and oil crises. The European Union also participates in G7 meetings, although it is not a formal member.
- Although the G7 has no legal or binding institutional framework, it exerts considerable influence over global decisions

concerning the economy, finance, security, climate, technology, and geopolitics.

What is the G7 Summit?

The G7 Summit is an international, annual forum for the leaders of the Group of Seven member states. This year's meeting will be held in France from June 15 to 17.



COUNTRIES

7

COMBINED GDP

\$52.06 trillion

BEGAN

1975

GLOBAL NOMINAL GDP

44%

WORLD'S POPULATION

10%

NUMBER OF SUMMITS

52

Including 2026

Key Issues of the G7 Summit 2026:

- This year's summit was held at a time when the world was confronting multiple crises simultaneously. Consequently, discussions focused on several key issues:
 - » Russia-Ukraine war and European security
 - » West Asia and Iran-United States tensions
 - » Maritime security in the Strait of Hormuz

- » Global regulation of Artificial Intelligence (AI)
- » Climate change and energy transition
- » Global trade and supply chains
- » Illegal migration and human trafficking
- » Rebuilding international partnerships
- The joint statements issued at the conclusion of the summit placed particular emphasis on supporting Ukraine, ensuring the security of maritime routes, strengthening cooperation against human trafficking, and reinforcing global partnerships.

Significance of India's Participation:

- PM Modi addressed the summit's Outreach Session, where he stated that the world is currently experiencing a "shortage of trust" and emphasized that lasting partnerships can only be built on the foundations of mutual trust, dialogue, and cooperation. He further observed that international challenges can be resolved not through war but through diplomacy and dialogue.
- At the summit, India did not merely articulate its national interests but also projected itself as the collective voice of the Global South, representing the concerns of developing countries. This is why India's presence at forums such as the G7 is no longer viewed as a formality but as a necessity.

What Issues Did India Highlight?

- **A Trust-Based Global Order:** Prime Minister Modi emphasized that the greatest strategic asset in today's world is trust. If trust among nations erodes, global institutions themselves will gradually lose their effectiveness. This message came at a time when competition in global trade, technology, security, and geopolitics is steadily intensifying.
- **Security of the Strait of Hormuz:** India highlighted the growing tensions in the Strait of Hormuz and raised concerns over the deaths of Indian seafarers. The region is of critical importance for India, as a substantial share of the country's energy imports passes through this maritime route. Ensuring the security of maritime trade is

essential not only for India but also for the global economy.

- **Priorities of the Global South:** India emphasized the major challenges faced by developing countries, including climate finance, food security, digital inclusion, health security, and capacity building. India also made it clear that development cooperation should be based on the principle of partnership, rather than aid.

Importance of the G7 for India:

- Although India is not a member of the G7, its participation is significant from several perspectives.
 - » First, India is the world's fifth-largest economy and is on track to become the third-largest economy in the near future.
 - » Second, India is emerging as a major manufacturing hub in the restructuring of global supply chains.
 - » Third, India's experience in Digital Public Infrastructure (DPI) has become a model for many countries.
 - » Fourth, India is playing a leadership role in areas such as climate change, renewable energy, green hydrogen, and the International Solar Alliance.
 - » Fifth, India is an important partner in ensuring stability and maritime security in the Indo-Pacific region.
- For these reasons, the G7 increasingly views India not merely as a participating country but as a partner capable of providing solutions to global challenges.

Major Global Outcomes of the Summit:

- **Russia-Ukraine War:** The G7 countries reaffirmed their support for Ukraine's sovereignty and territorial integrity and reiterated their commitment to maintaining pressure on Russia.
- **West Asia Crisis:** The summit expressed deep concern over the Iran-United States tensions and the situation in the Strait of Hormuz, while emphasizing the need to ensure the uninterrupted security of maritime routes.

- **Artificial Intelligence (AI):** The summit advanced discussions aimed at achieving consensus on the development of responsible, safe, and human-centric AI, along with its global governance and regulation.
- **Migration and Human Trafficking:** The summit emphasized the need to curb illegal migration, dismantle human trafficking networks, and establish safe and dignified mechanisms for the return of migrants.

Relevance of the G7:

- Although the G7 remains an important platform in the global economy, its limitations are becoming increasingly evident. Today, global economic power is no longer confined to developed countries alone. India, China, Brazil, Indonesia, South Africa, and other emerging economies have become the new engines of global growth. Consequently, forums such as the G20, BRICS, and other multilateral platforms are gaining increasing significance. If the G7 wishes to remain relevant in the future, it must embrace a more inclusive and representative global order.

Opportunities and Challenges for India

- India's regular invitation to the G7 presents several important opportunities:
 - » Investment and technology cooperation
 - » Clean energy partnerships
 - » Semiconductor and advanced technology collaboration
 - » Greater role in global supply chains
 - » Defence and maritime security cooperation
 - » Leadership in reforming global institutions
- However, it also presents several challenges:
 - » Maintaining strategic balance amid the growing United States–China rivalry.
 - » Pursuing a balanced foreign policy between India's traditional relationship with Russia and its expanding cooperation with Western countries.
 - » Serving as a bridge between the aspirations of the Global South and the

interests of developed countries.

The Way Forward

Present, the world requires not only economic strength but also credible leadership. The G7 Summit 2026 clearly demonstrated that the future of global governance will depend on cooperation, trust, and inclusiveness. For India, the summit marked yet another significant diplomatic achievement. A decade ago, India was striving to become a participant in global decision-making; today, it is increasingly recognized as one of the countries shaping the global agenda. India's foreign policy is no longer confined to safeguarding national interests alone. Instead, it seeks to advance the aspirations of the Global South while providing new direction to maritime security, climate justice, digital inclusion, and multilateralism.

Short Issues

India-Oman Trade Deal Comes into Force

Context:

Recently, the India-Oman Comprehensive Economic Partnership Agreement (CEPA), signed in December 2025, has officially come into force from 1 June 2026. The agreement marks a major step in strengthening bilateral economic relations, trade integration, and strategic cooperation between India and Oman.

Background:

- The CEPA was signed on 18 December 2025 in Muscat in the presence of the Hon'ble Prime Minister of India and the Sultan of Oman. After completing all domestic approval processes, it has now been operationalised.
- » Oman is India's second-largest trading partner in the Gulf region
- » Bilateral trade stood at around USD 11.18 billion (FY 2025-26)
- » India exported \$4.06 billion worth of goods to Oman in 2024-25, while imports stood at \$6.5 billion
- » The agreement reflects India's strategy of building diversified, resilient, and strategic trade partnerships

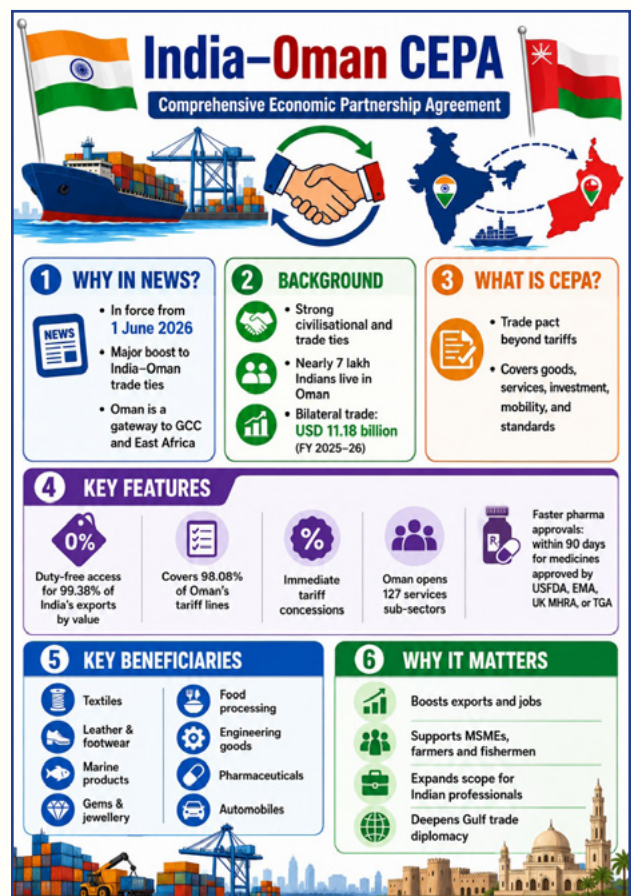
Key Features of the CEPA:

- **Trade Liberalisation and Duty-Free Access**
 - » Oman will provide India duty-free access to 98.08% of its tariff lines, covering 99.38% of India's exports to Oman
 - » India has offered liberalised tariffs on 77.79% of its tariff lines, covering 94.81% of imports from Oman
- **Sectoral and Services Benefits:**
 - » The agreement provides strong gains for India's services sector with emphasis on professional mobility and market access. However, certain sensitive products remain excluded, including:
 - Dairy products
 - Tea and coffee

- Rubber and tobacco
- Gold and silver bullion
- Jewellery
- Select footwear and sports goods

- **Enhanced Labour Mobility:**

- » Oman has significantly liberalised movement of skilled professionals under Mode 4 commitments:
- » Intra-Corporate Transferees (ICTs) quota increased from 20% to 50%
- » Contractual Service Suppliers allowed stay up to 2 years, extendable by 2 years
- » Easier entry and stay conditions for professionals in:
 - IT services
 - Healthcare
 - Engineering
 - Professional services



Economic and Strategic Significance:

- The CEPA provides India with a strategic gateway to the GCC region, as well as access to East Africa, Central Asia, and Eastern Europe
- It enhances trade diversification and global supply chain integration
- It marks:
- Oman's first bilateral trade agreement since its FTA with the United States (2006)
- India's second CEPA with a GCC country, after the India-UAE CEPA (2022)

Sectoral Gains for India:

- **Marine Products**
 - » Immediate duty-free access for seafood exports
 - » Strong export potential in coastal states like Tamil Nadu, Kerala, Andhra Pradesh, and Gujarat
- **Gems and Jewellery**
 - » Tariffs up to 5% eliminated
 - » Strong growth potential for hubs like Surat, Jaipur, Mumbai, and Kolkata
- **Agriculture and Food Products**
 - » Better access for basmati rice, onions, cashews, processed foods
 - » Strengthened position in Oman's meat and egg import market
- **Pharmaceuticals**
 - » Zero-duty access for medicines and APIs
 - » Fast-track approvals (up to 90 days) for globally regulated products
 - » Mutual recognition of standards improves ease of trade
- **Engineering and Electronics**
 - » Zero-duty access for machinery, steel, automobiles
 - » Expansion opportunity in Oman's electronics import market (~USD 1.7 billion)
 - » Boost to India's PLI manufacturing ecosystem

Services and Skilled Mobility:

- **Services Access:** Oman has opened 127 services sub-sectors, including:
 - » IT and computer services

- » Healthcare and engineering
- » Education and finance
- » Construction and tourism

▪ **Mobility Provisions**

- » Business visitors: up to 90 days
- » Professionals: up to 180 days
- » ICT transfers: up to 4 years

Why It Matters Beyond Trade:

- Oman holds strategic importance due to:
 - » Location outside the Strait of Hormuz chokepoint
 - » Operational ports like Salalah and Duqm during maritime disruptions
 - » Role as a stable logistics hub in West Asia
- This makes Oman a critical diversification partner amid geopolitical tensions affecting regional trade routes.

Conclusion:

The India-Oman CEPA represents a transformative milestone in India's economic diplomacy. By combining deep tariff liberalisation, services access, and labour mobility with strategic trade advantages, the agreement strengthens India's integration with the Gulf region. It is expected to boost exports, employment, innovation, and supply chain resilience, while aligning with India's vision of Viksit Bharat @2047.

India-Myanmar Summit 2026

Context:

Recently, Myanmar's military ruler-turned-President Min Aung Hlaing visited India during his first official foreign visit. On 1 June 2026, the President of Myanmar held high-level talks with Prime Minister Narendra Modi at Hyderabad House in New Delhi. This underscores the growing strategic significance of India-Myanmar relations.

Key Outcomes of the 2026 India-Myanmar Summit:

- **Connectivity Acceleration:** Both sides committed to fast-tracking key regional infrastructure projects:

- » Kaladan Multi-Modal Transit Transport Project
- » India–Myanmar–Thailand Trilateral Highway
- » These projects act as critical land bridges linking India to Southeast Asia and are strategically significant in countering China’s expanding infrastructure influence in the region.

- » **Significance:**

- Enhances access to ASEAN markets
- Reduces dependence on the Siliguri Corridor
- Strengthens integration of India’s Northeast with regional value chains

- **Security and Border Management:**

- » Myanmar assured India that its territory would not be used for activities hostile to India’s security interests.
- » Crucial for managing the 1,643-km porous border shared with Arunachal Pradesh, Nagaland, Manipur, and Mizoram
- » Helps curb insurgent groups operating in Northeast India
- » Strengthens cooperation against cross-border arms trafficking, narcotics, and cyber-enabled crimes
- » This dimension remains central to India’s internal security architecture.

- **Economic Cooperation:**

- » Discussions at the India–Myanmar Business Conclave focused on expanding local currency settlement mechanisms, reducing dependence on the US dollar.
- » Cooperation in critical minerals and rare earth elements was explored, especially for strategic sectors like electronics and EV manufacturing.

- » **Significance:**

- Strengthens supply chain resilience
- Promotes financial de-dollarisation in regional trade

- Enhances India’s energy transition and industrial capabilities

Strategic Significance for India:

- Myanmar is the only Southeast Asian country sharing a land boundary with India, making it indispensable for Act East Policy implementation.
- It serves as a gateway to ASEAN, linking South Asia with Southeast Asia.
- It is a key buffer in managing insurgency in India’s Northeast and ensuring border stability.
- Myanmar is strategically important in India’s broader MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions) maritime vision, linking land and sea connectivity frameworks.
- Cultural diplomacy initiatives, including India’s engagement through platforms like the International Big Cat Alliance, further deepen soft power outreach.

Challenges Ahead:

- Despite growing cooperation, several challenges persist:
 - » Political instability and fragmented governance in Myanmar
 - » Presence of insurgent and criminal networks along the border
 - » Emergence of cyber-scam and human trafficking syndicates
 - » Increasing strategic and economic influence of China in Myanmar
 - » India’s dilemma in balancing engagement with military authorities while supporting democratic aspirations

Way Forward:

- India needs a calibrated approach combining:
 - » Security cooperation for border stability
 - » Infrastructure development for regional integration
 - » Economic engagement through trade and critical minerals
 - » Continued diplomatic support for inclusive political dialogue in Myanmar

- Strengthening connectivity and stabilizing Myanmar will remain essential for India's long-term strategic interests in the Indo-Pacific.

Conclusion:

Myanmar is a linchpin in India's Act East Policy and Indo-Pacific strategy. Its geographical position, security relevance, and connectivity potential make it indispensable for India's regional ambitions. A stable, cooperative Myanmar is therefore crucial for ensuring India's security, economic growth, and geopolitical influence in Southeast Asia.

India–Nepal Boundary Dispute

Context:

Recently, Nepal's Prime Minister Balendra Shah, while raising the issue of the "India–Nepal border dispute" in the Nepali Parliament, called for the involvement of China and Britain to resolve it. In response, India firmly rejected any role for third parties, reiterating that the boundary issue is a bilateral matter to be resolved through existing diplomatic mechanisms between the two countries.

Historical Basis of the Dispute:

- The origins of the dispute can be traced to the Treaty of Sugauli signed in 1816 following the Anglo-Nepalese War. The treaty defined the boundary along the Mahakali (Kali) River, with Nepal retaining territory east of the river and British India controlling land to the west.
- The main source of disagreement is the lack of clarity regarding the river's exact origin. Nepal argues that the Mahakali River originates from Limpiyadhura, whereas India considers its source closer to the Kalapani–Lipulekh region. This differing interpretation has led to competing territorial claims over Kalapani, Lipulekh,

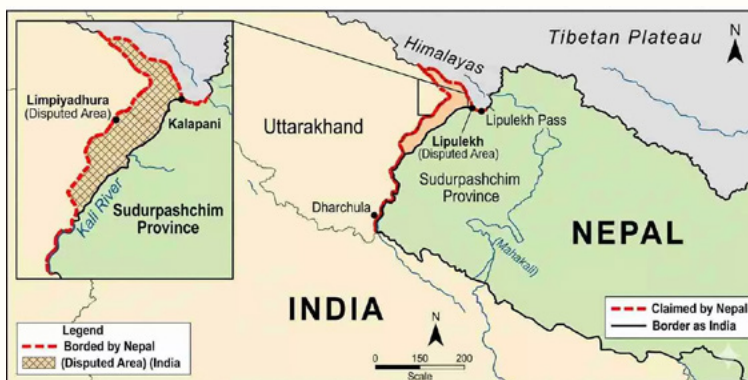
and Limpiyadhura.

Nepal's Stand:

- Nepal maintains that Kalapani, Lipulekh, and Limpiyadhura lie east of the Mahakali River and therefore belong to Nepal under the Treaty of Sugauli.
- It supports its claim through historical maps, administrative records, and hydrological interpretations.
- In 2020, Nepal released a revised political map incorporating these territories within its borders and later amended its Constitution to include the map.
- Nepal has also objected to infrastructure projects and India–China agreements concerning the Lipulekh route that were undertaken without its participation.

India's Stand:

- India considers the disputed region an integral part of Uttarakhand and points to its long-standing administrative control over the area.
- It highlights the use of the Lipulekh Pass route for the Kailash Mansarovar Yatra since 1954 as evidence of historical administration and connectivity.
- India has consistently maintained that the dispute should be resolved through bilateral dialogue and peaceful negotiations.



- It views Nepal's revised map as a unilateral action and continues to advocate existing diplomatic mechanisms for addressing boundary issues.

Strategic and Geopolitical Importance:

- The disputed region is strategically significant because it lies near the India–Nepal–China tri-junction. Control over the area has implications for border security, military logistics, and connectivity in the Himalayan region.
- The Lipulekh Pass also serves as an important route for the Kailash Mansarovar Yatra, making the region culturally and religiously significant. Additionally, increasing India–China cooperation on connectivity through this route has heightened Nepal's concerns regarding its strategic interests.

Why Does the Dispute Persist?

- The dispute continues due to multiple factors:
 - » Ambiguity regarding the exact source of the Mahakali River.
 - » Contradictory interpretations of colonial-era maps.
 - » Political nationalism and sovereignty concerns in Nepal.
 - » Strategic importance of the region for India and China.
 - » Infrastructure development and connectivity projects in the Himalayan border areas.
- These factors have complicated efforts to reach a mutually acceptable solution.

Way Forward:

- The India–Nepal Joint Boundary Working Group should be further empowered.
- The process of boundary demarcation should be expedited, based on GIS, satellite imagery, and scientific surveys.
- A Joint Survey Commission, comprising technical experts, should be constituted.
- Bilateral diplomatic dialogue should be sustained while refraining from unilateral actions.
- Confidence-building measures, people-to-people contacts, and political dialogues should be promoted.
- The dispute should be resolved at the

bilateral level, while limiting external interference.

- Mutual trust should be strengthened through cooperation in trade, connectivity, and water resources.

Conclusion:

A balanced approach combining historical evidence, scientific surveys, and diplomatic engagement offers the best path toward a durable and mutually acceptable settlement.

India-Australia Defence Dialogue

Context:

Recently, Raksha Mantri Shri Rajnath Singh and Australian Deputy Prime Minister & Defence Minister Richard Marles co-chaired the second India-Australia Defence Ministers' Dialogue at the Manekshaw Centre, New Delhi.

Key outcomes of the meeting:

- **Strengthening India–Australia Strategic Partnership**
 - » Both countries reaffirmed their Comprehensive Strategic Partnership, based on democratic values, shared economic interests, and a commitment to a free, open, and rules-based Indo-Pacific. They agreed to deepen cooperation under the Defence and Security Cooperation framework.
- **Maritime Security Cooperation**
 - » Maritime cooperation remained the central focus of the dialogue. The two countries agreed to advance Maritime Domain Awareness (MDA) through coordinated surveillance using maritime patrol aircraft and enhanced real-time data sharing.
 - » Both countries also agreed to explore Undersea Domain Awareness (UDA) to improve submarine detection and underwater surveillance capabilities. Cooperation between the Indian Coast

Guard and Australia's Maritime Border Command will be further strengthened, along with progress on the Joint Maritime Security Collaboration Roadmap.

- » These initiatives aim to improve security across the Indian Ocean Region and safeguard critical Sea Lines of Communication.



- **Commitment to Free and Open Indo-Pacific**
 - » Both sides reiterated support for a free, open, inclusive, and rules-based Indo-Pacific. They emphasized freedom of navigation, overflight, and lawful maritime trade, while reaffirming commitment to international law, particularly the United Nations (UNCLOS).
 - » India and Australia also expressed support for regional cooperation mechanisms to maintain maritime stability.
- **Defence Industrial Collaboration and Emerging Technologies**
 - » A major outcome was the decision to develop a Memorandum of Understanding on Defence Articles and Defence Services. This will strengthen joint defence production, technology

transfer, and supply chain integration.

- » Both countries emphasized collaboration in futuristic technologies such as sensor systems, maritime surveillance tools, and defence electronics. Australia also invited India to the 2026 Defence Science, Technology, and Research Summit, reflecting growing innovation partnerships.
- **Quad and Maritime Domain Awareness**
 - » Both countries reaffirmed cooperation under the Quadrilateral Security Dialogue framework. They supported the Quad Maritime Surveillance Initiative and India's Information Fusion Centre-Indian Ocean Region (IFC-IOR) in Gurugram, aimed at developing a common maritime operational picture.

Conclusion:

The dialogue marks a significant step in strengthening India-Australia defence relations. With enhanced maritime surveillance, defence industrial cooperation, and technological collaboration, both countries are reinforcing their shared goal of a secure, stable, and rules-based Indo-Pacific.

8th India-Indonesia Joint Commission Meeting

Context:

India and Indonesia recently convened the 8th India-Indonesia Joint Commission Meeting (JCM) in New Delhi. The meeting focused on expanding cooperation in defence, maritime security, trade, digital connectivity, critical minerals, and infrastructure development.

Key Areas of Cooperation:

- **Defence and Security:** Both countries agreed to deepen defence ties through military exchanges, joint exercises like Samudra Shakti and Garuda Shakti, and cooperation in defence production and technology.
- **Maritime Security:** Focus on Maritime

Domain Awareness, protection of sea lanes, and Indo-Pacific stability, especially in the Strait of Malacca.

- **Trade, Connectivity & Infrastructure:** Efforts to enhance connectivity, infrastructure, and investment to support regional integration and resilient supply chains.
- **Digital & Emerging Technologies:** Cooperation in fintech, healthcare, digital connectivity, pharmaceuticals, and critical minerals for clean energy and high-tech industries.
- **People-to-People Links:** Strengthening tourism, education, culture, and exchanges based on shared civilizational ties.

Strategic Significance for India:

- **Act East Policy:** Indonesia occupies a central place in India's Act East Policy due to its strategic location at the junction of the Indian and Pacific Oceans and its influential role within ASEAN. Stronger ties with Indonesia enhance India's engagement with Southeast Asia and reinforce its regional presence.
- **SAGAR Vision:** The partnership complements India's SAGAR (Security and Growth for All in the Region) vision by promoting maritime cooperation, regional security, and sustainable economic development in the Indo-Pacific.
- **Global South Cooperation:** As major developing democracies, India and Indonesia play an important role in amplifying the voice of the Global South. Both countries advocate sustainable development, reform of multilateral institutions, and a more equitable global governance framework.

India-Indonesia Relations:

- India and Indonesia share deep historical, cultural, and economic ties dating back to ancient maritime trade networks. Diplomatic relations have evolved into a Comprehensive Strategic Partnership based on shared democratic values, economic cooperation, and common interests in maintaining a free, open, and inclusive Indo-Pacific.

- Bilateral trade, defence cooperation, connectivity initiatives, and collaboration within ASEAN, G20, and other multilateral forums continue to strengthen this relationship.

Conclusion:

The 8th India-Indonesia JCM strengthens bilateral cooperation in strategic, economic, and technological areas. This partnership supports India's Act East Policy and SAGAR vision while promoting a balanced, rules-based regional order and amplifying the voice of the Global South.

India-France Relations

Context:

Recently, Prime Minister Modi and French President Emmanuel Macron held bilateral talks in Nice, France, on 14 June 2026. The meeting was significant as it was the first summit after the elevation of India-France ties to a "Special Global Strategic Partnership".

Key Outcomes of the meeting:

- Innovation Roadmap 2030 adopted to provide a long-term framework for cooperation in AI, semiconductors, deep-tech, renewable energy, space technology, and defence innovation.
- Joint India-France AI Working Group established to institutionalize and expand collaboration in Artificial Intelligence.
- Dialogue on Economic Security launched to strengthen cooperation in critical minerals, resilient supply chains, and emerging technologies.
- Both leaders emphasized the early conclusion of the India-EU Free Trade Agreement (FTA) to boost trade and investment.
- A High-Level Mechanism will be created to double India-France bilateral trade within five years.
- Cooperation will be expanded in aviation, railways, MSMEs, and skill development,

including a Centre of Excellence for Skilling in Aeronautics at Kanpur.

- Defence collaboration will be deepened through co-design, co-development, and co-production of advanced defence platforms and technologies.
- Both countries agreed to enhance space cooperation, particularly in human spaceflight, space situational awareness, and private-sector participation in the space sector.

PRIME MINISTER'S VISIT TO FRANCE

List of Outcomes

- ♦ Adoption of India-France Innovation Roadmap 2030
- ♦ Creation of a Joint India-France AI Working Group focused on AI governance
- ♦ MoU* on establishment of National Centre of Excellence for Skilling in Aeronautics & Allied Sectors at NSTI, Kanpur
- ♦ Expanded possibilities for using India's real-time payment system – UPI* – in France
- ♦ Incubation of additional 10 Indian startups at Station F
- ♦ Establishment of Centre of Digital Sciences between DST* & Institut National de Recherche en Sciences et Technologies du Numérique
- ♦ Establishment of ICCR India Chair on "AI, Innovation and Culture" at Université Paris-Saclay
- ♦ Letter of Intent between ICMR* & Health Data Hub of France



About India and France relations:

- India and France have elevated their relationship to a Special Global Strategic Partnership, reflecting shared commitments to strategic autonomy, multipolarity, and a rules-based international order. Since the establishment of the Strategic Partnership in 1998, bilateral ties have expanded across defence, space, nuclear energy, climate

action, and the Indo-Pacific.

- Defence remains the cornerstone of the relationship, evolving from buyer-seller transactions such as Rafale aircraft and Scorpene submarines to co-development and technology transfer. Regular military exercises, Varuna, Garuda and Shakti enhance interoperability between the armed forces. In the Indo-Pacific, France is a key partner due to its Indian Ocean territories and support for maritime security.
- Space cooperation through the ISRO-CNES partnership and civil nuclear collaboration, including the Jaitapur Nuclear Power Project and Small Modular Reactors (SMRs), are important pillars. Both countries also co-founded the International Solar Alliance (ISA), demonstrating leadership in climate governance.

Significance for India:

- France remains India's most reliable strategic partner in Europe and supports India's vision of strategic autonomy. The growing emphasis on innovation, technology, and economic security aligns with India's goals of becoming a global manufacturing and technology hub.
- The partnership also strengthens India's position in the Indo-Pacific, enhances access to advanced technologies, and contributes to supply-chain diversification amid geopolitical uncertainties.

Conclusion:

The Nice Summit demonstrates the evolution of India-France relations from a defence-centric partnership to a comprehensive strategic collaboration. By focusing on innovation, economic security, critical technologies, and resilient supply chains, both countries are laying the foundation for a future-oriented partnership capable of addressing twenty-first-century challenges.

Indian PM Visit to Slovakia 2026

Context:

Recently, Prime Minister Narendra Modi paid a State Visit to the Slovak Republic on 15 June 2026. The visit marked the first-ever visit by an Indian Prime Minister to Slovakia since its independence in 1993, culminating in the elevation of bilateral ties to a Comprehensive Partnership.

Key Outcomes of the visit:

- India and Slovakia have upgraded their bilateral relationship to a Comprehensive Partnership aimed at deepening cooperation across political, economic, defence, technological, educational, cultural, and multilateral domains.
- India and Slovakia signed 11 agreements/MoUs covering labour migration, defence cooperation, digital technologies, higher education and research, audio-visual creation, quantum communication, critical infrastructure protection, tourism, scientific cooperation, and consular affairs. The two sides also established the first-ever ICCR Chair in Artificial Intelligence at the Technical University of Kosice and promoted academic collaboration between IIT Delhi and the Slovak Technical University.
- In the political and security domain, Slovakia reaffirmed its support for India's permanent membership in a reformed UN Security Council and its membership in the Nuclear Suppliers Group (NSG). Both countries agreed to strengthen cooperation in counter-terrorism through a Joint Working Group on Counter-Terrorism and reiterated support for the early adoption of the Comprehensive Convention on International Terrorism (CCIT).
- The two sides also agreed to expand cooperation in trade, investment, energy, connectivity, emerging technologies, space, healthcare, water management, and disaster

resilience. Special emphasis was placed on collaboration in AI, semiconductors, 5G/6G technologies, green energy, automotive and railway sectors, while also promoting tourism, cultural exchanges, and people-to-people ties.

Importance for India:

- **Strategic Importance:** Deepens India's engagement with Central and Eastern Europe. Expands support for India's global governance aspirations.
- **Economic Importance:** Access to Slovakia's advanced industrial and automotive ecosystem. New opportunities for trade, manufacturing, and investment.
- **Technological Importance:** Strengthens cooperation in AI, quantum technologies, cyber security, semiconductors, and digital innovation.
- **Security Importance:** Enhances defence cooperation and counter-terrorism collaboration.



India–Slovakia Bilateral Relations:

- India and Slovakia established diplomatic relations in 1993 following Slovakia's independence. Bilateral ties are friendly and supported by regular Foreign Office Consultations (FOC), high-level visits, and

growing political engagement.

- President Droupadi Murmu's visit (2025) and PM Narendra Modi's historic visit (2026) have further strengthened ties.
- Bilateral trade crossed €1.28 billion in 2024, with key sectors including automobiles, electronics, machinery, pharmaceuticals, and engineering goods.
- The two countries cooperate through the Joint Economic Committee (JEC) and have growing investments, including Indian companies such as Jaguar Land Rover (Tata Motors) and TCS.
- India and Slovakia maintain active cultural exchanges under the Cultural Exchange Programme (2023–26). Yoga, Ayurveda, Indian festivals and the Slovak translation of the Upanishads have strengthened cultural linkages.

Conclusion:

The India–Slovakia Comprehensive Partnership marks a historic milestone in bilateral relations. Through cooperation in defence, technology, education, trade, innovation, and people-to-people exchanges, the partnership opens a new chapter in India's engagement with Central Europe and strengthens its strategic presence in Europe.

Bangladesh Padma Barrage Project and Ganges Water Treaty

Context:

Recently, Bangladesh approved the construction of the Padma Barrage Project to regulate the flow of the Padma River (the Ganga River in Bangladesh) and address seasonal water scarcity.

Background:

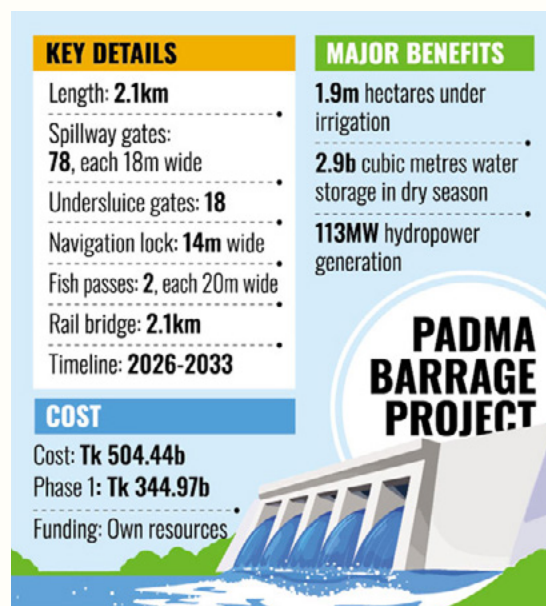
- The project comes at a time when Bangladesh has repeatedly raised concerns over reduced water flow in the Ganga during the dry season, which it attributes partly to

the operation of India's Farakka Barrage.

- This issue is closely linked to the 1996 Ganges Water Treaty, which governs water sharing between the two countries and is set to expire in December 2026. The treaty is currently under review, making transboundary water sharing a key diplomatic issue.

Key Features of the Project:

- The Padma Barrage aims to improve water availability during the dry season, enhance irrigation, reduce dependence on groundwater, and strengthen water security. The proposed 2.1-km-long barrage will be built about 180 km downstream of India's Farakka Barrage in West Bengal.
- The project is estimated to cost Tk 50,443 crore (around Rs.39,170 crore) and will be completed over seven years. It is expected to store 2,900 million cubic metres of water and benefit nearly 6.5 crore people in southwestern and northern Bangladesh.



Environmental and Geopolitical Concerns:

- Experts say big barrages can disturb natural river flow and groundwater systems. Climate change may make water flow even more uncertain in the future, reducing the

long-term benefit of such projects.

- The project also has strategic concerns because of its location near India and possible foreign (including Chinese) support. It may affect future talks on river water sharing between India and Bangladesh.

Implications on India:

- May reduce water flow from the Ganga in dry months.
- Can increase tension on river water sharing.
- May affect talks on Ganges Water Treaty renewal.
- Could impact Farakka Barrage water planning.
- May raise border and security concerns.
- Need for more talks and cooperation with Bangladesh.

Importance for Bangladesh:

- **Water Security**
 - » Enhances dry-season water availability.
 - » Reduces dependence on groundwater extraction.
- **Agricultural Benefits**
 - » Supports irrigation and crop productivity.
 - » Improves resilience against drought conditions.
- **Flood Management**
 - » Helps regulate river flow and manage seasonal flooding.
- **Strategic Significance**
 - » Increases Bangladesh's control over its water resources.
 - » Strengthens its bargaining position in transboundary water negotiations.

Conclusion:

The Padma Barrage represents Bangladesh's attempt to address growing water security challenges and adapt to changing hydrological conditions. While the project promises significant socio-economic benefits, it also raises environmental and geopolitical concerns. Its success will depend on sustainable river management, regional cooperation, and balanced water-sharing arrangements between

India and Bangladesh.

US-Iran Peace Deal and Nuclear Diplomacy

Context:

Recently, a new US-Iran Memorandum of Understanding (MoU) has been signed to extend a ceasefire and initiate a broader peace framework between the two countries following recent conflict involving Iran and United States, alongside tensions involving regional actors in the Middle East.

Key Highlights of the Agreement:

- **End to Hostilities**
 - » Immediate and “permanent” cessation of military operations on all fronts
 - » Includes commitment to avoid escalation in Lebanon and surrounding regions
- **Respect for Sovereignty**
 - » Mutual pledge by the US and Iran to respect:
 - Territorial integrity
 - Internal political affairs
 - » Designed to reduce interference in domestic governance structures
- **60-Day Negotiation Timeline**
 - » A maximum 60-day window set for negotiating a final peace deal
 - » Timeline may be extended with mutual consent
 - » Countdown begins from signing of the MoU
- **Maritime and Blockade Adjustments**
 - » US to begin lifting naval restrictions and easing maritime constraints
 - » Full rollback of blockade-related measures within 30 days
 - » Gradual normalization of shipping in Iranian ports
- **Strait of Hormuz: Free Navigation**
 - » Iran to ensure safe and uninterrupted passage through the Strait of Hormuz
 - » No transit charges for commercial

vessels

- » Restoration of global energy and trade flows through the waterway
- » Joint future framework planned with Gulf states

▪ **Economic Reconstruction Fund**

- » Proposed \$300 billion reconstruction and development fund for Iran
- » Fund to be developed by US and regional partners
- » US not required to directly contribute financially
- » Focus on infrastructure and economic recovery

▪ **Sanctions Framework**

- » Commitment to eventually lift US economic sanctions on Iran
- » Includes both unilateral US sanctions and UN-linked measures
- » Timeline linked to Iran's compliance with nuclear obligations

▪ **Nuclear Non-Proliferation Commitment**

- » Iran agrees not to develop or acquire nuclear weapons
- » Existing enriched uranium stockpiles to be managed under supervision of the International Atomic Energy Agency (IAEA)
- » Mechanism for disposal or dilution to be decided in follow-up negotiations

▪ **Interim Nuclear Status Quo**

- » Temporary freeze on major changes to Iran's nuclear programme
- » No new sanctions during negotiation period
- » Limited waivers for oil and financial transactions

▪ **Frozen Assets Release**

- » US to release part of Iran's frozen funds
- » Disbursement linked to compliance milestones

▪ **Monitoring and Implementation**

- » Creation of a joint monitoring mechanism
- » Supervision of compliance and implementation of the MoU
- » Final agreement to be endorsed through

a UN Security Council resolution



Strategic Significance:

▪ **Energy Security**

- » Reopening of the Strait of Hormuz stabilizes global oil supply chains
- » Reduces volatility in international crude oil prices

▪ **Geopolitical De-escalation**

- » Reduces risk of direct US-Iran military confrontation
- » Impacts regional dynamics involving West Asian conflicts

▪ **Nuclear Diplomacy**

- » Reinforces non-proliferation framework under IAEA oversight
- » Attempts to limit Iran's nuclear breakout capacity

▪ **Economic Re-engagement**

- » Potential reintegration of Iran into global financial systems
- » Large-scale reconstruction funding signals economic normalization

Challenges and Concerns:

- **Verification Issues:** Monitoring Iran's nuclear compliance remains complex
- **Regional Reaction:** Uncertainty over response from allies like Israel and Gulf states
- **Implementation Gap:** Many provisions depend on future negotiations
- **Political Risks:** Domestic opposition in both

countries may affect durability

Conclusion:

The US–Iran MoU represents a significant diplomatic attempt to stabilize one of the world's most volatile geopolitical regions. However, its success depends on sustained compliance, effective verification mechanisms, and political will on both sides to transition from a ceasefire framework to a durable peace agreement.

Project Nimbus: Google and Amazon's Israel AI Project

Context:

Recently, during the commencement speech at Stanford University, hundreds of students and protesters protested Google's involvement with the Israeli government in Project Nimbus, a cloud computing and artificial intelligence (AI) project.

About Project Nimbus:

- Project Nimbus is a \$1.2 billion cloud-computing project launched in 2021 by the Israeli government and awarded jointly to Google Cloud and Amazon Web Services (AWS). The project aims to provide advanced cloud infrastructure, data storage, artificial intelligence (AI), and machine-learning services to Israeli government agencies.

Key Features:

- Establishment of local cloud infrastructure within Israel.
- Provision of AI and machine-learning tools.
- Support for government sectors such as finance, healthcare, education, and transportation.
- Enhancement of data sovereignty by keeping government data within Israel.

Reason for protest:

- **Allegations of Military Use:** Critics argue that cloud and AI services under Project Nimbus could indirectly support military operations in conflict zones, including surveillance of

Palestinian populations and data-driven targeting systems.

- **Human Rights Concerns:** Student activists and employees claim that technology companies are enabling systems that contribute to civilian harm in the Israel–Palestine conflict. They argue that corporate contracts must align with international humanitarian law.
- **Internal Dissent in Tech Firms:** Since the project's launch, hundreds of Google and Amazon employees have signed petitions opposing Nimbus, calling it unethical. Protests have included workplace sit-ins, demonstrations, and internal activism campaigns.
- **Broader Gaza Conflict:** After the escalation of violence in Gaza post-October 2023, opposition to Nimbus intensified, linking Big Tech infrastructure to broader geopolitical and humanitarian crises.

Corporate Response:

- Google and Amazon have maintained that Project Nimbus is intended for civilian government services such as healthcare, transport, and public administration.
- They also assert that the project is not designed for weapons or classified military operations. However, critics question whether such assurances can be effectively enforced once technology is deployed.

Significance for Governance and Ethics:

- Project Nimbus highlights the emerging ethical dilemma of AI and cloud computing in governance:
 - » Dual-use nature of AI (civilian vs military applications)
 - » Accountability of private tech firms in conflict zones
 - » Need for transparency in government–corporate contracts
 - » Protection of privacy and human rights in digital infrastructure

Conclusion:

The protests against Project Nimbus reflect a

broader global debate on the ethical limits of artificial intelligence and cloud technologies in warfare and governance. As AI becomes deeply embedded in state functions, the challenge lies in ensuring that technological advancement does not compromise human rights, accountability, and international humanitarian norms.

Bangladesh's PM Discusses Teesta Project to China

Context:

Recently, Bangladesh Prime Minister Tarique Rahman, during his first official visit to China, sought Chinese support for the long-pending Teesta River Comprehensive Management and Restoration Project (TRCMRP).

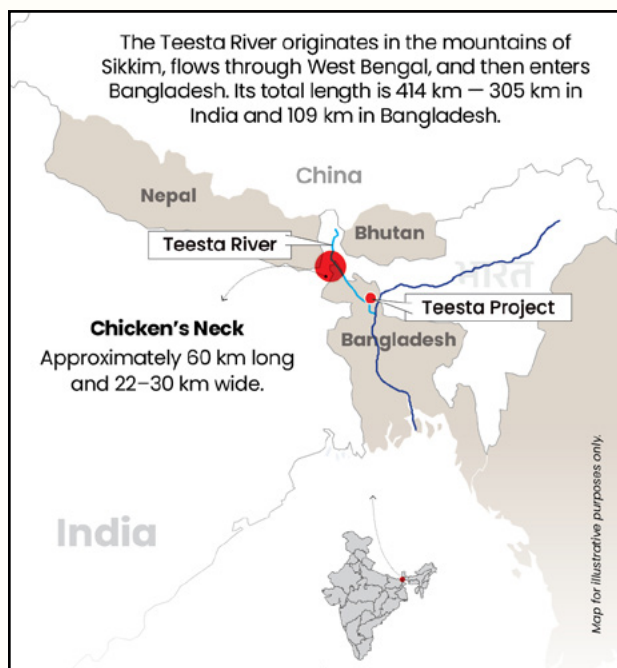
About TRCMRP:

- The proposed project, estimated at nearly US\$1 billion, is being developed with Chinese technical assistance through POWERCHINA.
- **Major Components:**
 - » River training and channel stabilization.
 - » Construction of about 114 km of embankments.
 - » Large-scale dredging of the river.
 - » Land reclamation using dredged materials.
 - » Flood control infrastructure.
 - » Irrigation expansion.
 - » Improvement of navigation.
 - » Restoration of degraded riverbanks.
- The project also proposes narrowing the river from an average width of around 3 km to nearly 1 km by converting the naturally braided river into a controlled meandering channel.

Objectives of the Project:

- The Bangladesh government expects the project to:
 - » Reduce riverbank erosion.
 - » Minimise flood damage.
 - » Increase irrigation coverage.

- » Improve dry-season water availability.
- » Enhance inland water transport.
- » Reclaim approximately 170 sq. km of land.
- » Promote regional economic development.



About The India-Bangladesh Teesta Water Dispute:

- The Teesta is one of the most contentious transboundary rivers between India and Bangladesh.
- **Background**
 - » Around 54 rivers are shared by India and Bangladesh.
 - » The Joint Rivers Commission (JRC) was established in 1972.
 - » A draft Teesta Water Sharing Agreement was negotiated in 2011.
- The agreement remains unsigned because of objections from the Government of West Bengal regarding water availability for farmers.

Bangladesh's Concerns

- Bangladesh argues that:
 - » Dry-season water availability has declined sharply.

- » Water diversion at India's Gazaldoba Barrage has significantly reduced downstream flow.
- » During the lean season, flows have reportedly fallen from nearly 10,000 cusecs in the 1990s to only a few hundred cusecs in some years.
- » Reduced discharge has affected agriculture, fisheries and livelihoods.

India's Concerns

- India maintains that:
 - » Water demands in North Bengal have increased.
 - » State government consent is necessary due to India's federal structure.
 - » River flow itself has declined because of climatic and hydrological changes.
 - » Chinese involvement near the strategically important Siliguri Corridor (Chicken's Neck) raises national security concerns.

Way Forward:

- Conclude a fair and sustainable India-Bangladesh Teesta Water Sharing Agreement.
- Strengthen the Joint Rivers Commission.
- Adopt Integrated River Basin Management (IRBM).
- Ensure transparent environmental and social impact assessments.
- Increase stakeholder consultation with local communities and experts.
- Prioritise nature-based solutions over excessive structural interventions.
- Promote India-Bangladesh cooperation in flood forecasting, sediment management and climate adaptation.
- Ensure infrastructure projects are economically viable, environmentally sustainable and geopolitically balanced.

Conclusion:

The Teesta is no longer merely a river shared by India and Bangladesh, it has become a focal point where transboundary water

governance, environmental sustainability, domestic politics and Indo-Pacific geopolitics converge. While Bangladesh seeks development through the Teesta restoration project with Chinese assistance, unresolved upstream water sharing, ecological concerns and strategic competition underscore the need for a cooperative, science-based and basin-wide approach. A durable solution lies not only in engineering interventions but also in equitable water diplomacy, ecological stewardship and sustained regional cooperation.

India-Seychelles Relations & MAHASAGAR Vision 2026

Context:

Recently, Prime Minister of India paid State Visit to Seychelles On 27–29 June 2026, during this visit both countries elevated their strategic partnership by signing multiple agreements in areas such as maritime security, healthcare, digital payments, space, agriculture, and development cooperation. The visit also marked 50 years of diplomatic relations and reinforced India's MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions) vision for the Indian Ocean Region (IOR).

Key Outcomes of the Visit:

- India and Seychelles agreed to deepen cooperation in healthcare, education, skill development, renewable energy, digital transformation, maritime security, defence, and sustainable development.
- Several Memoranda of Understanding (MoUs) were signed covering UPI implementation, healthcare, agriculture, banking, EXIM Bank cooperation, shipping, space exploration, extradition, capacity building, and a Line of Credit (LoC).
- India also announced a USD 175 million Special Economic Package, comprising a USD 125 million Line of Credit and USD 50 million Grant Assistance, to support

infrastructure, healthcare, food security, vocational training, maritime security, and defence cooperation.

About MAHASAGAR Vision:

- The visit highlighted India's MAHASAGAR vision, which aims to transform the Indian Ocean into an "Ocean of Opportunity." It is based on maritime security, sustainable economic prosperity, mutual respect, and shared responsibility for regional peace and development.
- Building upon the earlier SAGAR (Security and Growth for All in the Region) doctrine, MAHASAGAR promotes the Blue Economy, disaster resilience, regional connectivity, and inclusive growth through collaborative partnerships.



Maritime Security Cooperation:

- Maritime security remains the cornerstone of India-Seychelles relations. Cooperation focuses on countering piracy, Illegal, Unreported and Unregulated (IUU) fishing, drug trafficking, maritime crime, hydrography, maritime surveillance, and defence capacity building.
- India strengthened Seychelles' maritime capabilities by refitting PS Zoroaster and gifting the Fast Attack Vessel PS Lespwar to the Seychelles Coast Guard, enhancing maritime domain awareness in the Western Indian Ocean.

Importance of Seychelles for India:

- Seychelles occupies a strategic location in the Western Indian Ocean along vital Sea

Lines of Communication (SLOCs). It is an important partner in India's maritime security architecture, Indo-Pacific strategy, and Blue Economy initiatives.

- Cooperation with Seychelles helps combat piracy, seaborne terrorism, and illegal fishing while balancing growing geopolitical competition in the region. As a Small Island Developing State (SIDS), Seychelles is also a key partner in India's development diplomacy.

About India-Seychelles Relations:

- India and Seychelles share a long-standing partnership rooted in historical, cultural, and strategic ties. Indians first settled in Seychelles in the eighteenth century, and the Indian diaspora continues to contribute significantly to its economy.
- The countries conduct the biennial Exercise LAMITYE since 2001, and India demonstrated its security commitment through Operation Flowers are Blooming (1986) during an attempted coup.
- During the visit, Seychelles also announced its decision to join the Coalition for Disaster Resilient Infrastructure (CDRI), strengthening cooperation in climate resilience.

Conclusion:

The 2026 State Visit reaffirmed India's commitment to a secure, inclusive, and rules-based Indian Ocean Region. By strengthening defence, development, and maritime cooperation under the MAHASAGAR vision, India has reinforced its role as a trusted security and development partner for Seychelles and other island nations in the Indo-Pacific.



Environment & Ecology



Bonn Climate Change Conference 2026 (SB64): Climate Finance, Adaptation, and the Future of Global Climate Governance

Context:

The 64th Session of the Subsidiary Bodies (SB64) under the United Nations Framework Convention on Climate Change (UNFCCC) was held in Bonn, Germany, from 8–18 June 2026. The conference serves as the principal platform for mid-year climate negotiations and functions as an important interim review point between COP30, to be held in Belém, Brazil, and the proposed COP31 in Antalya, Türkiye.

The conference took place at a time when the world is facing intensifying climate challenges, including severe heatwaves, floods, droughts, biodiversity loss, and rising sea levels. At the same time, geopolitical tensions, economic uncertainties, and disagreements over climate finance continue to pose challenges to international climate cooperation. Against this backdrop, SB64 not only shaped the direction of global climate negotiations but also highlighted the challenges and opportunities associated with global climate governance.

Role of the Subsidiary Bodies under the UNFCCC

- The Bonn Climate Change Conference is primarily organized around the two permanent subsidiary bodies of the UNFCCC: the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI).
- The SBSTA provides guidance on the scientific and technical aspects of climate change. It works on issues such as the latest

scientific research, emissions assessment, carbon markets, technological innovation, and technology transfer, while bridging scientific findings with policymaking.

- The SBI, on the other hand, reviews the implementation of various climate agreements. It deliberates on issues related to climate finance, adaptation, capacity building, transparency arrangements, and institutional frameworks. Together, these two bodies lay the foundation for the effective implementation of the UNFCCC, the Kyoto Protocol, and the Paris Agreement. Their recommendations often influence key decisions adopted at subsequent Conference of the Parties (COP) meetings.

Major Outcomes of the Bonn Climate Change Conference 2026 (SB64):

- **Discussion on the Global Electrification Target:** The joint COP31 Presidency of Türkiye and Australia proposed increasing the share of electricity in global energy demand from 20% to 35% by 2035, presented as the "35x35" target. Although no final consensus was reached, the proposal gave fresh momentum to global discussions on the clean energy transition.
- **Launch of the Turquoise Nexus Initiative:** The Food and Agriculture Organization (FAO) and Türkiye launched the Turquoise Nexus Initiative. Its objective is to better integrate food security, water resource management, and climate adaptation into Nationally Determined Contributions

(NDCs). The initiative seeks to address the multidimensional impacts of climate change through an integrated approach.

- **Climate Finance and the Global Goal on Adaptation (GGA):** Developing countries reiterated their demand to increase public and grant-based adaptation finance to at least US\$120 billion annually by 2035. The conference made it evident that without adequate financial support, it would be extremely difficult for developing countries to achieve their climate goals.
- **Launch of the Trade and Climate Dialogue:** For the first time in the history of the UNFCCC, an official dialogue on the interlinkages between trade and climate change was initiated. The objective is to understand how the global trading system affects climate goals and to assess the potential impact of measures such as the Carbon Border Adjustment Mechanism (CBAM) on developing countries.
- **Progress on Just Transition:** Through the Belém–Antalya Mechanism, discussions focused on the social and economic implications of transitioning from fossil fuel-based economies to green economies. Particular emphasis was placed on protecting the livelihoods of workers, local communities, and energy-dependent regions.

Other Issues: Climate Finance, Adaptation, and Loss and Damage

- **Climate Finance:**
 - » The most significant and contentious discussions at SB64 revolved around climate finance. Developing countries argued that developed nations bear greater historical responsibility for climate change and, therefore, must fulfill their commitments regarding financial and technological assistance. They called for adequate, predictable, and grant-based climate finance, emphasizing that debt-based assistance places an additional economic burden on countries already struggling with the climate crisis.
- **Challenge of the North–South Divide:**
 - » In contrast, several developed countries advocated greater reliance on private sector investment, multilateral development banks, and blended finance. Consequently, disagreements persisted over the sources of climate finance and the distribution of responsibilities. This situation demonstrates that climate change is not merely an environmental issue but also a matter of global economic justice and responsibility.
 - » The Bonn Conference once again highlighted the deep divisions between the Global North (developed countries) and the Global South (developing countries).
 - » Developing countries argued that developed nations have contributed the largest share of greenhouse gas emissions since the Industrial Revolution and are therefore primarily responsible for the current climate crisis. Consequently, they should play the leading role in providing climate finance, technology transfer, and capacity building.
 - » On the other hand, developed countries emphasized the need to focus on present and future emissions and expected greater responsibility from China, India, and other emerging economies. This divergence remains a major obstacle to progress in climate negotiations.
- **Adaptation: The New Centre of Climate Governance**
 - » Adaptation received special emphasis at SB64. Technical discussions progressed on the Baku Adaptation Roadmap under the Global Goal on Adaptation (GGA).
 - » The conference emphasized the development of measurable indicators to assess countries' progress in adapting to climate change.
 - » Key areas of discussion included climate-resilient agriculture, water security, disaster risk reduction, public health, ecosystem conservation, and

climate-resilient infrastructure.

- » Several Small Island Developing States (SIDS) and Least Developed Countries (LDCs) stressed that emission reductions alone are no longer sufficient. Since certain impacts of climate change have already become unavoidable, adaptation must receive equal priority alongside mitigation.

▪ **Issue of Loss and Damage:**

- » Although Loss and Damage was not a central item on the formal agenda, it received extensive attention during the conference. Countries emphasized the need to operationalize the Fund for Responding to Loss and Damage (FRLD) effectively and strengthen the Santiago Network.
- » Challenges such as sea-level rise, extreme weather events, ecosystem destruction, and climate-induced displacement have become existential threats for many countries. Consequently, developing countries called for additional financial support to address these challenges. However, uncertainty continues regarding the long-term financial sources and contribution arrangements for the fund.

Implications for India

From India's perspective, SB64 has several significant dimensions.

- First, progress on Just Transition is highly important for India, as the country must balance energy security, economic development, and decarbonization. Protecting employment and livelihoods in coal-dependent regions remains one of India's key concerns.
- Second, progress under the Global Goal on Adaptation strengthens India's demand for greater support in adaptation finance, technological cooperation, and capacity building.
- Third, during the conference, India reiterated the importance of the principle of Common but Differentiated Responsibilities and

Respective Capabilities (CBDR-RC). India maintains that historical responsibility must be taken into account while designing global climate action.

- Fourth, discussions on Loss and Damage and climate justice are consistent with India's long-standing policy of advocating the interests of vulnerable and developing countries.
- Fifth, discussions on oceans, mountain ecosystems, and climate resilience are particularly relevant for India, given its extensive coastline, Himalayan ecosystems, and large climate-vulnerable population.

Major Challenges

- Although SB64 advanced several important discussions, numerous challenges remain. No concrete and binding agreement was reached on climate finance.
- The availability of adaptation finance remains far below actual requirements.
- Long-term financial sources for the Loss and Damage Fund remain unclear.
- The current pace of global emissions reduction is not consistent with the Paris Agreement's 1.5°C target. The trust deficit between developed and developing countries continues to affect climate negotiations.

Conclusion:

The Bonn Climate Change Conference 2026 made it clear that climate change is not merely an environmental crisis but also an issue of development, finance, justice, and global governance. The success of COP30 and COP31 will depend largely on the extent to which developed countries fulfill their financial and technological commitments and how effectively the adaptation needs of developing countries are addressed. It is essential for the global community to recognize that the climate crisis cannot be resolved through competition but only through cooperation, mutual trust, and shared responsibility. For India and the Global South, climate justice, adequate finance, technology transfer, and inclusive development will remain the central pillars of global climate diplomacy in the years ahead.

Short Issues

Mesalina Bishnoi: New Lizard Species Found in India

Context:

The Zoological Survey of India (ZSI) and independent wildlife researchers have recently discovered an entirely new species of lizard, *Mesalina bishnoi*, in Gajner, Bikaner district of Rajasthan. This discovery highlights previously unexplored aspects of desert biodiversity and underscores the ecological richness of the Thar Desert.

Background and Recent Discovery:

- In 1935, British zoologist Malcolm A. Smith reported the presence of the genus *Mesalina* in the Jaisalmer region. However, due to the absence of a physical specimen, the record remained unverified and existed only in scientific literature.
- Recently, researchers collected specimens from a rocky desert landscape near Bikaner and conducted detailed genetic analyses. This has provided the first official and scientifically validated evidence of the presence of the genus *Mesalina* in India.

About *Mesalina bishnoi*:

- Discovery and Location:** *Mesalina bishnoi* was discovered near Gajner in Bikaner district, Rajasthan, within the Thar Desert region of India.
- Habitat:** The species inhabits a harsh desert ecosystem characterized by rocky and compact soil, sparse vegetation, and an extremely arid climate.
- Taxonomic Identity:** It is a newly identified species belonging to the genus *Mesalina*. Lizards of this genus are generally small, fast-moving, and diurnal (active during the day).
- First Record in India:** This discovery represents the first confirmed occurrence of the genus *Mesalina* in India, supported by specimen-based scientific evidence.
- Significance of the Name:** The species has

been named “bishnoi” in honor of the Bishnoi community of Rajasthan, renowned for its long-standing tradition of wildlife conservation and environmental protection.

- Physical Size:** It is a small-bodied lizard with a snout-to-vent length of approximately 39.2 mm.
- Coloration and Pattern:** Its body is grey to olive-brown in color, featuring lateral stripes, black markings behind the eyes, and a distinctive pattern of dark spots interspersed with white dots.



Major Monitor Lizard Species Found in India:

- Monitor lizards belong to the family Varanidae and are among the most intelligent reptiles. In India, all monitor lizard species are protected under Schedule I of the Wildlife (Protection) Act, 1972, making hunting, capture, or trade a serious legal offense.
 - Bengal Monitor (*Varanus bengalensis*):** Widely distributed across forests, agricultural landscapes, and urban fringes throughout India.
 - Asian Water Monitor (*Varanus salvator*):** The second-largest lizard species

in the world, commonly found in mangroves and wetlands, including the Sundarbans.

- » **Yellow Monitor (*Varanus flavescens*):** Occurs mainly in the floodplains and wet grasslands of northern and eastern India.
- » **Desert Monitor (*Varanus griseus*):** Adapted to arid environments and found primarily in the Thar Desert and parts of Gujarat.

Conclusion:

The discovery of *Mesalina bishnoi* represents a significant addition to India's reptilian biodiversity. It not only enhances scientific understanding of desert-dwelling species but also demonstrates that the Thar Desert remains a biologically rich ecosystem with immense potential for new discoveries. The finding reinforces the importance of continued biodiversity exploration, taxonomic research, and conservation efforts in India's arid landscapes.

Surha Tal Becomes India's 100th Ramsar Site

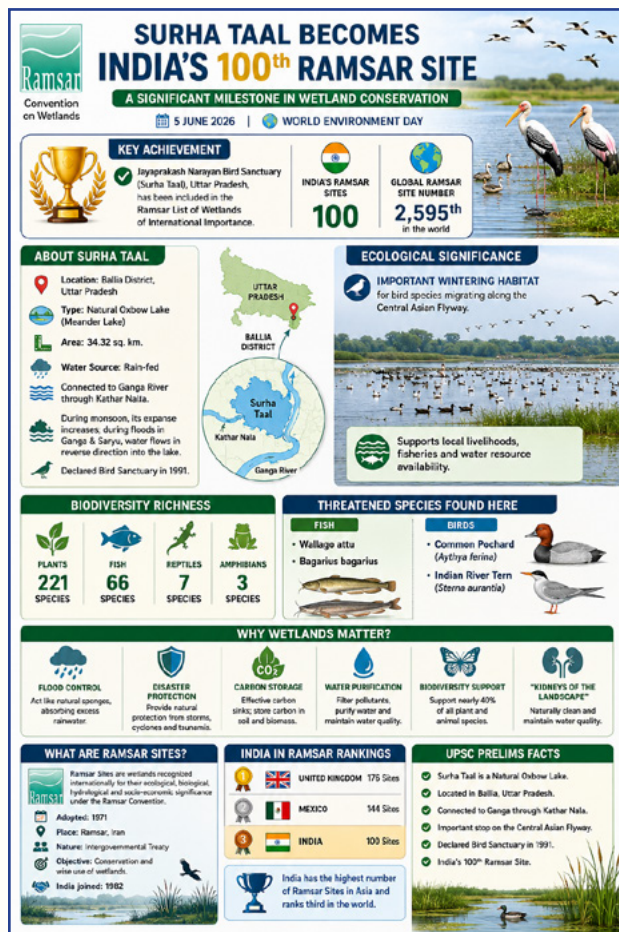
Context:

On the occasion of World Environment Day (5 June 2026), Jayaprakash Narayan Bird Sanctuary (Surha Tal), located in Ballia district of Uttar Pradesh, has been included in the Ramsar List as a Wetland of International Importance. With this addition, the number of Ramsar Sites in India has increased to 100 (the 2,595th Ramsar Site in the world). This achievement reflects India's commitment to wetland conservation policies and biodiversity protection.

About Jayaprakash Narayan Bird Sanctuary (Surha Tal):

- Jayaprakash Narayan Bird Sanctuary (Surha Tal) is a natural oxbow lake located in Ballia district of Uttar Pradesh. Situated

in the Gangetic plains, it covers an area of approximately 34.32 square kilometres. It is a rain-fed lake connected to the Ganga River through a water channel known as the Kathar Nala. During the monsoon season, its expanse increases significantly, and at times, when floods occur in the Ganga and Saryu rivers, water flows in the reverse direction into the lake.



- Surha Tal is a natural perennial meander lake that serves as an important wintering habitat for bird species migrating along the Central Asian Flyway.
- It was declared a Bird Sanctuary in 1991. In addition, the area provides an important habitat for numerous fish species, aquatic vegetation, and other wetland-dependent fauna. The wetland also plays a significant role in supporting local livelihoods, fisheries,

and water resource availability.

- The site hosts 221 plant species, 66 fish species, seven reptile species, and three amphibian species. Among the fish species are the threatened Wallago attu and Bagarius bagarius, while the wetland's diverse waterbird population includes threatened species such as the Common Pochard (Aythya ferina) and the Indian River Tern (Sterna aurantia).

About Wetlands:

- A wetland is a marshy or waterlogged area where the soil remains completely saturated with water throughout the year or for certain months of the year.
- Wetlands constitute only about 6 percent of the Earth's land surface, yet they provide habitat and breeding grounds for nearly 40 percent of all plant and animal species.
- They also provide natural protection to approximately 60 percent of the global population living in coastal areas by reducing the impacts of storms, cyclones, and tsunamis.
- Wetlands act like natural sponges, absorbing excess rainwater and thereby reducing the risk of floods.
- As effective carbon sinks, wetlands store carbon in both soil and biomass.
- Due to their ability to filter pollutants, purify water, and maintain water quality, wetlands are often referred to as the "Kidneys of the Landscape."

What are Ramsar Sites?

- Ramsar Sites are wetlands recognized internationally for their ecological, biological, hydrological, and socio-economic significance under the Ramsar Convention.
- The Ramsar Convention is an intergovernmental treaty adopted in 1971 in the city of Ramsar, Iran, with the objective of promoting the conservation and wise use of wetlands. India became a contracting party to the Convention in 1982.
- Globally, there are around 2,595 designated

wetlands under the Ramsar Convention of 1971. India has the highest number of Ramsar Sites in Asia and ranks third in the world after the United Kingdom (176) and Mexico (144).

Major Challenges:

- Encroachment and pressure from agricultural expansion.
- Excessive exploitation of fisheries resources.
- Proliferation of aquatic weeds.
- Increasing impact of pollution and waste disposal.
- Changes in water availability due to climate change.
- These challenges can be addressed only through effective management, active participation of local communities, and scientific conservation strategies.

Conclusion:

The declaration of India's 100th Ramsar Site is not merely a symbolic achievement; it also highlights the growing importance of wetland conservation in the country. Going forward, transforming this recognition into a genuine conservation success will require prioritizing sustainable management, community participation, and a scientific approach. Only then can wetlands continue to play their vital role in ensuring biodiversity conservation, water security, and climate resilience.

Nilgiri Tahr Population Rises in Tamil Nadu

Context:

Tamil Nadu's conservation initiatives for the endangered Nilgiri Tahr under Project Nilgiri Tahr have yielded encouraging results. The third synchronised Nilgiri Tahr survey conducted in April 2026 estimated the population at 1,364 individuals, reflecting a 4.68% increase from the 2025 count of 1,303 and an overall rise of more than 32% compared to 2024.

About the Nilgiri Tahr:

- The Nilgiri Tahr (*Nilgiritragus hylocrius*) is an endangered mountain ungulate endemic to the southern Western Ghats of India, particularly in Kerala and Tamil Nadu. It is the State Animal of Tamil Nadu and is locally known as “Varayaadu”.

Key Features:

- Only mountain ungulate species found in southern India.
- Adapted to tropical montane grasslands and shola forests.
- Diurnal in nature and active during daylight hours.
- Exhibits strong sexual dimorphism, with males being larger and darker in colour.
- Both males and females possess curved horns.
- Serves as an important ecological indicator species for high-altitude grassland ecosystems.

Habitat and Distribution:

- The Nilgiri Tahr is endemic to a narrow stretch of approximately 400 km in the Western Ghats, extending from the Nilgiri Hills in the north to the Asambu Hills in the south.
- **Major Habitats:**
 - » Eravikulam National Park (Kerala)
 - » Mukurthi National Park (Tamil Nadu)
 - » Grass Hills National Park (Tamil Nadu)
 - » Agasthyamalai Landscape
- The species is generally found at elevations ranging from 1,200 to 2,600 metres above sea level and inhabits steep rocky cliffs, grasslands, and shola forest ecosystems.
- The Nilgiri Tahr is considered an indicator species for the health of montane grasslands and shola ecosystems. Conservation of these habitats not only protects the species but also safeguards biodiversity, water security, and ecosystem services in the Western Ghats.

Conservation Status:

- International and National Protection

- » **IUCN Red List:** Endangered
- » **Wildlife (Protection) Act, 1972:** Schedule I

- The species faces threats from habitat fragmentation, invasive species, poaching, climate change, and forest fires.

About Project Nilgiri Tahr:

- Tamil Nadu launched Project Nilgiri Tahr as a dedicated conservation programme aimed at securing the long-term survival of the species.
- **Key Components:**
 - » Scientific population monitoring.
 - » Radio-telemetry tracking.
 - » Habitat restoration.
 - » Grassland ecosystem conservation.
 - » Fire prevention and management.
 - » Community participation and awareness.

Conclusion:

The rise in the Nilgiri Tahr population demonstrates the success of coordinated conservation efforts undertaken by Tamil Nadu and Kerala. Continued habitat protection, grassland restoration, fire management, and technological monitoring under Project Nilgiri Tahr will be crucial for ensuring the long-term survival of this unique and endangered species of the Western Ghats.

Hindu Kush Himalaya: Drier Monsoon, Rising Risks

Context:

Recently, the “Hindu Kush Himalaya Monsoon Outlook 2026” report jointly released by the International Centre for Integrated Mountain Development and Institute of Atmospheric Physics has predicts a weak or drier monsoon in the Hindu Kush Himalaya (HKH) region.

Key Findings of the Analysis:

- The HKH Monsoon Outlook 2026 indicates that likely El Niño conditions may weaken

the South Asian monsoon, leading to reduced rainfall. Above-normal temperatures are expected to increase heat stress and water loss.

- Low winter snow persistence further reduces seasonal water storage, increasing dependence on monsoon rainfall and groundwater. Despite overall drier conditions, short-duration extreme rainfall events may still trigger floods and landslides in the region.

About the Hindu Kush Himalaya (HKH) Region:

- The HKH region spans 3,500 km across eight countries-Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan.
- Known as the “Water Tower of Asia,” it contains the largest ice and snow reserves outside the polar regions and feeds major rivers like the Ganga, Brahmaputra, and Indus, supporting nearly 1.9 billion people.



Causes behind the Drier Monsoon:

- El Niño conditions, marked by warm Pacific Ocean waters, are the main factor weakening the monsoon. Below-normal Northern Hemisphere snow cover also contributes to reduced rainfall.
- Although a possible positive Indian Ocean Dipole (IOD) may partly offset these effects, uncertainty remains.

What is Ecological Concerns?

- The Hindu Kush Himalaya region is warming almost twice as fast as the global average, accelerating glacier melt and increasing risks of Glacial Lake Outburst Floods (GLOFs).
- Long-term glacier loss threatens water security, even though short-term river flows may increase. The region is also highly biodiverse and ecologically fragile.

What is significance for India?

- India depends heavily on HKH-origin rivers for agriculture, hydropower, and drinking water. Changes in monsoon patterns and glacier melt directly impact water availability and disaster risk, making climate adaptation and water management critical.

Conclusion:

A drier monsoon in the HKH region does not reduce climate risks. Rising temperatures, glacier retreat, and extreme rainfall events continue to threaten water security and livelihoods, requiring stronger resilience and cooperation.

Human-Induced Global Warming Reaches Record in 2025

Context:

A new assessment by the Indicators of Global Climate Change (IGCC) has found that human contribution to global warming reached its highest recorded level in 2025.

Key Findings of the IGCC Study:

- The IGCC report estimates that average global temperatures in 2025 were about 1.39°C higher than the 1850–1900 pre-industrial baseline.
- Out of this total warming, approximately 1.37°C was attributed to human activities, primarily greenhouse gas emissions. The remaining small share is linked to natural climate variability, including oceanic and atmospheric changes.

- It further estimates that global greenhouse gas emissions reached an all-time high of 56.8 billion tonnes of CO₂ equivalent in 2025, indicating persistent dependence on fossil fuels.
- The study also confirmed that 2025 was the third warmest year on record, continuing the recent trend of rapidly rising global temperatures.
 - » Intensification of extreme rainfall, floods, and droughts
 - » Melting glaciers and sea-level rise
 - » Ocean acidification affecting marine ecosystems
- Feedback mechanisms like ice-albedo loss and permafrost thaw further accelerate warming.

Comparison with Previous Years:

- The study builds on earlier IGCC assessments:
 - » **2024:** Warmest year on record (~1.55°C above baseline), with ~1.36°C human contribution
 - » **2023:** ~1.45°C warming, ~1.31°C human contribution
 - » **2025:** Third warmest year (~1.39°C), but highest-ever human contribution

Role of Natural Climate Variability:

- Despite record human-induced warming, 2025 was influenced by La Niña conditions, which typically have a cooling effect on global temperatures. This helped prevent 2025 from surpassing 2024 as the warmest year.

What is Human-Induced Global Warming

- Human contribution to global warming is primarily driven by the enhanced greenhouse effect, where excess greenhouse gases trap outgoing heat in the atmosphere.
- Major anthropogenic drivers include:
 - » Burning of fossil fuels (coal, oil, gas)
 - » Deforestation reducing carbon sinks
 - » Agriculture (methane from livestock, nitrous oxide from fertilizers)
 - » Industrial emissions (cement, chemicals, refrigerants)
- Key greenhouse gases include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O).

Global Climate Risks:

- Rising temperatures are linked to:
 - » Increased frequency of heatwaves

Implications for Climate Policy:

- The findings highlight the urgent need for stronger mitigation efforts under global frameworks such as the Paris Agreement. Countries are under pressure to enhance their Nationally Determined Contributions (NDCs) to align with the 1.5°C target.
- Experts stress that reducing emissions from energy, transport, and industry remains critical, along with scaling up renewable energy transitions.

Delhi Bird Atlas 2026

Context:

Recently, The Delhi Bird Atlas, released on World Environment Day (June 5), has mapped the distribution and abundance of bird species across Delhi for the first time. The report places Delhi second only to Nairobi among the world's national capitals in terms of bird diversity.

Key Findings of the Delhi Bird Atlas:

- The atlas was prepared by the Delhi Forest Department, Bird Count India, WWF-India, and other partner organizations with the support of citizen volunteers, researchers, and birdwatchers.
- According to the report, the Delhi Bird List now includes 471 bird species.
- During the first year of surveys, 221 species were recorded, including:
 - » 126 resident species
 - » 81 winter migrant species
 - » 14 summer migrant species
- The atlas also documents 18 endemic species.

- In addition, several threatened bird species have been recorded, including the Endangered Egyptian Vulture and the Black-bellied Tern.

Why is Delhi Rich in Bird Diversity?

- Delhi's exceptional bird diversity is primarily due to its unique geographical location.
- The city is situated at the confluence of the Aravalli landscape, Yamuna floodplains, wetlands and the Central Asian Flyway (CAF).
- The Central Asian Flyway is one of the world's major migratory bird routes, through which millions of birds undertake seasonal migrations.
- Delhi's proximity to the Western Himalayas further facilitates seasonal bird movements.
- As a result, Delhi serves as an important habitat for both resident and migratory bird species.

About Grassland Bird Census in Kaziranga:

- Kaziranga National Park in Assam conducted its first-ever grassland bird census in 2025. The survey recorded 43 grassland bird species, including one Critically Endangered, two Endangered, and six Vulnerable species as per the IUCN Red List.
- A notable achievement was the discovery of a breeding colony of the endangered Finn's Weaver, a species endemic to the Brahmaputra floodplains.

Why is the Kaziranga National Park famous?

- Covering 42,996 ha, Kaziranga National Park is located in the State of Assam. It is the single largest undisturbed and representative area in the Brahmaputra Valley floodplain.
- It is a UNESCO World Heritage Site recognised in 1985. It is renowned for its significant population of one-horned rhinoceroses. Kaziranga National Park is India's second-largest butterfly habitat with 446 species.



Significance for Conservation:

- Both the Delhi Bird Atlas and Kaziranga's grassland bird census highlight the importance of scientific monitoring in biodiversity conservation.
- They provide crucial data for habitat management, conservation planning, and protection of threatened species. The findings also underscore the need to conserve wetlands, grasslands, and urban green spaces that support rich avian diversity.

Conclusion:

The Delhi Bird Atlas and Kaziranga bird census demonstrate India's growing commitment to biodiversity conservation. Protecting critical habitats such as the Yamuna floodplains and Brahmaputra grasslands will be essential for safeguarding bird populations and maintaining ecological balance in the face of increasing environmental pressures.

BRICS Agriculture Ministers Adopt 'Indore Declaration'

Context:

Recently, The BRICS Agriculture Ministers' Meeting held in Indore concluded with the unanimous adoption of the Indore Declaration, a landmark document aimed at strengthening food security, farmer welfare, climate-resilient agriculture, agricultural trade, and digital transformation in agriculture.

Key outcomes of the Indore Declaration:

- **Four Priority Areas:** The BRICS countries identified four major priorities:
 - » Food security and nutritious diets.
 - » Agricultural trade and cooperation.
 - » Climate-resilient and regenerative agriculture.
 - » Innovation, technology, and partnerships in food systems.
- Special emphasis was placed on the welfare of small and marginal farmers, access to credit, fair prices, and market linkages.

Four New Institutional Initiatives:

- **BRICS Network of Centres of Excellence on Agro-Ecology and Regenerative Agriculture**
 - » Promotes natural farming, organic agriculture, and sustainable farming practices.
 - » Facilitates joint research, capacity building, and knowledge sharing.
 - » India's Indian Institute of Farming Systems Research (Modipuram) will play a key role.
- **BRICS Network on Digital Agriculture**
 - » Focuses on Artificial Intelligence (AI), geospatial technologies, digital public infrastructure, and data-driven farming.
 - » Coordinated by IIT Delhi.
 - » Aims to connect technological innovation directly with farmers.
- **Global Forum on Farmers' Rights in Seed Systems**
 - » Protects farmers' seed rights and

indigenous seed diversity.

- » Promotes conservation of traditional knowledge and biodiversity.
- » Addresses food security and climate resilience concerns.
- **BRICS AgriN (Agro Inputs, Genetic Resources and Information Network)**
 - » Strengthens cooperation in seeds, genetic resources, and agricultural inputs.
 - » Promotes information sharing, technical cooperation, and capacity building.

Other Important Outcomes:

- Strengthening the BRICS Agricultural Research Platform as a "Knowledge-to-Action Hub."
- Support for a fair and transparent multilateral agricultural trading system.
- Discussion on a potential BRICS Grain Exchange.
- Cooperation on reducing food loss and food waste.
- Focus on climate adaptation, regenerative agriculture, and carbon credit opportunities for farmers.
- Greater participation of youth, women, startups, and agri-entrepreneurs in agriculture.

Significance:

- BRICS countries represent nearly 50% of the world's population, about 42% of global agricultural land, and around 42% of world foodgrain production. Therefore, decisions taken by BRICS can significantly influence global agricultural governance.
- For India, the declaration aligns with priorities such as Natural Farming, Digital Agriculture Mission, food security, climate resilience, and farmer-centric development. It also strengthens India's leadership role in shaping global agricultural cooperation.

Conclusion:

The Indore Declaration marks an important step toward building a more sustainable, technology-driven, and farmer-centric agricultural future.

By promoting innovation, climate resilience, seed sovereignty, and digital transformation, BRICS countries have demonstrated that international cooperation can play a crucial role in addressing global food and agricultural challenges.

Mimeusemia Kali: New Forester Moth in Western Ghats

Context:

Recently, scientists from the Zoological Survey of India (ZSI), Pune, discovered a new species of forester moth, *Mimeusemia kali*, in the Kali Tiger Reserve located in the Western Ghats.

Key Highlights of the Discovery:

- **New Species Identified**
 - » **Scientific Name:** *Mimeusemia kali* Kalawate & László, 2026
 - » **Discovered in:** Kali Tiger Reserve, Karnataka
 - » **Family:** Noctuidae
 - » **Group:** Forester moths
- **Distinctive Features:** The species is distinguished from closely related taxa by:
 - » Unique morphological characteristics
 - » Distinct reproductive structures
 - » Genetic divergence confirmed through phylogenetic analysis
- **Significance:**
 - » First major addition to the genus *Mimeusemia* since 1995
 - » Expands scientific understanding of moth evolution and distribution
 - » Highlights gaps in documentation of India's insect biodiversity

Ecological Importance of Moths:

- **Pollinators**
 - » Contribute to pollination of several flowering plants, especially nocturnal species
- **Food Chain Support:** Moths serve as a vital food source for:
 - » Birds

- » Bats
- » Reptiles
- » Amphibians
- » Small mammals

- **Environmental Indicators**

- » Highly sensitive to habitat disturbance and climate change
- » Widely used as bio-indicators of ecosystem health

- **Herbivores**

- » Influence plant population dynamics through feeding activities in larval stages

About Kali Tiger Reserve:

- The discovery was made in the Kali Tiger Reserve, a major biodiversity-rich protected area in the Western Ghats.
 - » Located in Uttara Kannada district, Karnataka
 - » Formerly known as Dandeli-Anshi Tiger Reserve, renamed in 2015 after the Kali River
 - » Spread over approximately 1,300 sq. km
 - » Declared a Project Tiger Reserve in 2007 after merging Dandeli Wildlife Sanctuary and Anshi National Park
 - » Part of a larger forest continuum extending into Goa and Maharashtra, forming an important wildlife corridor
 - » Habitat for Bengal tigers, black panthers, Indian elephants, gaurs, king cobras, and over 200 bird species including the great hornbill
 - » Forest types include moist deciduous and montane rainforests of the Western Ghats biodiversity hotspot

Importance of the Western Ghats:

- The discovery reinforces the global significance of the Western Ghats as a biodiversity hotspot.

About the Western Ghats:

- Also known as Sahyadri Hills
- Extends approximately 1,600 km
- Covers Gujarat, Maharashtra, Goa, Karnataka, Kerala, and Tamil Nadu
- Highest peak: Anamudi (2,695 m)

- UNESCO World Heritage Site
- One of the world's eight major biodiversity hotspots

Ecological Significance:

- Occupies less than 6% of India's land area
- Supports over 30% of India's biodiversity
- High levels of endemism across flora and fauna
- Acts as the principal watershed of Peninsular India
- Source of major rivers such as Godavari, Krishna, and Kaveri

About Zoological Survey of India (ZSI):

Particular	Details
Established	1916
Headquarters	Kolkata
Ministry	Ministry of Environment, Forest and Climate Change
Role	Apex organization for animal taxonomy and zoological research in India

Major Functions:

- **Taxonomic Research:** Identification and classification of animal species
- **Biodiversity Assessment:** Monitoring faunal diversity across ecosystems
- **Conservation Support:** Scientific inputs for conservation policy and planning
- **Ecological Studies:** Research on species distribution and climate change impacts

Heatwaves Trigger Severe Surface Ozone Pollution in India

Context:

A recent study published in Clean Air found a sharp rise in ground-level (surface) ozone pollution due to severe heatwaves in India. In 2024 alone, the study estimates over 830 deaths in India linked to heatwave-driven ozone pollution.

What is Ground-Level Ozone?

Ozone (O₃) exists in two forms:

- **Stratospheric ozone (15–50 km above Earth)**
 - » Forms the ozone layer
 - » Protects Earth from harmful ultraviolet (UV) radiation
 - » Acts as a natural “sunshield”
- **Ground-level (tropospheric) ozone**
 - » A harmful air pollutant
 - » Not directly emitted, but formed through photochemical reactions involving:
 - Nitrogen oxides (NO_x)
 - Volatile organic compounds (VOCs)
 - Sunlight and high temperature

Thus, unlike protective ozone aloft, ground-level ozone is a secondary pollutant with toxic impacts on human health and ecosystems.



Key Findings of the Study:

- **Heatwaves significantly increase ozone levels**
 - » Heat accelerates chemical reactions producing ozone
 - » Ozone concentrations rise sharply during heatwave days
 - » Levels often exceed safe limits across Indian regions
- **Unsafe baseline pollution in India**
 - » **Safe level:** ~30 parts per billion (ppb) (~60 µg/m³)
 - » **India's background levels:** ~50–55 ppb already high

- » During heatwaves, levels increase further, often exceeding WHO guidelines
- **Regional hotspots**
 - » Northwest India and Indo-Gangetic Plain (IGP) show the highest ozone concentrations
 - » These regions combine:
 - High pollution load
 - Dense population
 - Strong heatwave intensity

Why Heatwaves Increase Ozone Concentration:

- Heatwaves act as a chemical amplifier of pollution due to:
 - » Faster photochemical reactions under high temperature
 - » Strong sunlight intensity increasing ozone formation
 - » Atmospheric stagnation, reducing pollutant dispersion
 - » Urban emissions of NO_x and VOCs acting as precursors
 - » Climate change-induced frequency of heat extremes

Broader Implications:

- **Climate–Air Pollution Nexus:** Heatwaves and ozone pollution reinforce each other, creating a compound hazard that increases mortality risk.
- **Agricultural damage:** Ground-level ozone reduces crop yield by damaging plant tissues and lowering photosynthesis.
- **Urban vulnerability:** Highly polluted urban clusters in northern India face dual stress of heat and toxic air.

Policy Suggestions:

- To address this emerging threat, the study highlights the need for:
 - » Real-time ozone monitoring during heatwaves
 - » Inclusion of ozone in heatwave health alerts (IMD & CPCB)
 - » Reduction of NO_x and VOC emissions from transport and industries

- » Expansion of urban green cover to reduce heat intensity
- » Development of integrated heat–air pollution early warning systems

Conclusion:

The study clearly establishes that heatwaves are not only thermal hazards but also drivers of toxic air pollution episodes, particularly ground-level ozone formation. With climate change increasing both heatwave frequency and intensity, India may face a growing burden of combined heat and air pollution stress unless mitigation measures are urgently strengthened.

Ballista Spider

Context:

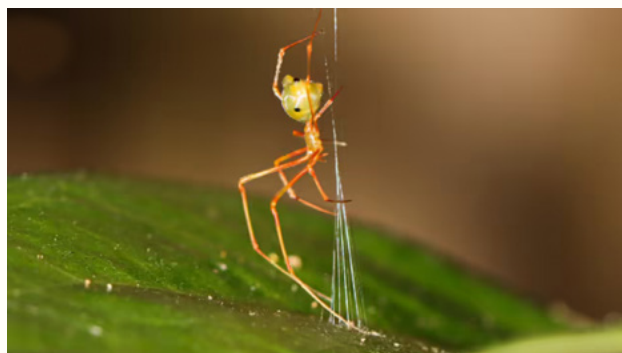
Recently, researchers discovered a new species of spider in the rainforests of Far North Queensland, Australia, which has been named the "Ballista Spider." Belonging to the genus *Propostira* and the Theridiidae (cobweb spider) family, this tiny creature has attracted significant attention due to its highly unusual and complex mechanical hunting strategy.

Key Features of the Ballista Spider

- **Physical Characteristics:** It is an extremely small species (approximately 5 millimetres long) and is nocturnal in nature.
- **Unique Hunting Technique (Catapult Trap):** This spider uses its web like a spring-loaded catapult or "ballista" (an ancient military weapon) to capture prey. It primarily preys on the Green Tree Ant (*Oecophylla smaragdina*), a highly aggressive ant species.
- **Extreme Acceleration (140G Acceleration):** When its trap is triggered, the prey is pulled upward at an acceleration of 1,367 metres per second squared. This force is approximately 140 times the force of gravity (140G) and is around 15 times greater than the maximum force typically tolerated by fighter jet pilots.

How Does the Web Work?

- The spider spends several hours constructing a cone-shaped structure made of highly tensioned silk threads. This structure stores energy like a spring.
- Scientists believe that the spider uses chemical signals (pheromones) to attract ants.
- When an ant bites the structure, the trap is activated.
- The stored energy is instantly released, launching the ant nearly 30 centimetres upward into the spider's web, where it becomes trapped.



Ecological Significance and Hyper-Specialization:

- From an environmental and biodiversity perspective, the most remarkable aspect of the Ballista Spider is that it is a hyper-specialized predator.
- It preys exclusively on a single species, the Green Tree Ant (*Oecophylla smaragdina*).
- Green Tree Ants are known for their aggressiveness, powerful bite, and strong adhesive feet. If attacked directly, they can summon an entire colony through chemical signals, potentially overwhelming and killing a predator.
- To overcome this threat, the Ballista Spider has evolved this unique "siege weapon." Without any direct physical contact, it can detach the ant from its strong grip and capture it safely from a distance.

Conclusion:

This discovery is highly significant for the field of science and technology, particularly in bio-mimicry. By studying the flexible and mechanical properties of this spider's silk, scientists may be able to develop new synthetic materials for advanced shock absorbers, robotics, and medical sutures in the future.

Bangladesh Becomes the 27th Member of IBCA

Context:

Bangladesh has recently joined the International Big Cat Alliance (IBCA), taking the total number of member countries in the global initiative to 27. This development not only strengthens India's environmental diplomacy but is also considered a significant step toward tiger conservation and biodiversity protection in South Asia.

About International Big Cat Alliance:

- The International Big Cat Alliance (IBCA) is a multilateral global initiative launched by India on 9 April 2023 to commemorate 50 years of Project Tiger. The Alliance aims to promote international cooperation among countries, scientific institutions, conservation organizations, and other stakeholders for the conservation of the world's seven major big cat species.
- The Alliance focuses on the conservation of the following seven big cat species:
 - » Tiger
 - » Lion
 - » Leopard
 - » Snow Leopard
 - » Cheetah
 - » Jaguar
 - » Puma
- Headquartered in India, the IBCA seeks to facilitate the exchange of best conservation practices, strengthen capacity building, promote scientific research, mobilize financial support, and combat illegal hunting and wildlife trafficking.

Why is Bangladesh's Membership Important?

- Bangladesh is home to a significant portion of the Sundarbans, the world's largest mangrove forest and one of the most important natural habitats of the Royal Bengal Tiger.
- With growing challenges such as climate change, sea-level rise, human-wildlife conflict, and poaching, regional cooperation has become increasingly essential.
- Bangladesh's membership in the IBCA will enable the country to benefit from advanced conservation technologies, scientific research, training programmes, and international collaboration.
- It will also strengthen transboundary conservation efforts between India and Bangladesh for the protection of the Sundarbans ecosystem and its wildlife.

Key Objectives of the IBCA:

- Conserve big cat species and their natural habitats.
- Strengthen efforts to combat poaching and illegal wildlife trade.
- Promote scientific research, knowledge sharing, and technical cooperation among member countries.
- Enhance capacity building and mobilize financial resources for wildlife conservation.
- Support biodiversity conservation and climate change-related initiatives.

Conclusion:

The International Big Cat Alliance (IBCA) reflects India's growing leadership in global environmental governance and wildlife conservation. India and Bangladesh have long cooperated in protecting the Sundarbans ecosystem and conserving the Royal Bengal Tiger. Bangladesh's inclusion as the 27th member of the Alliance is expected to further enhance bilateral cooperation in scientific research, capacity building, technology sharing, and efforts to curb illegal wildlife trade, thereby

contributing to the long-term conservation of big cat species and their habitats.

Europe Heatwave Crisis 2026

Context:

In recent times, Europe is witnessing an unprecedented early summer heatwave, with temperatures crossing 41°C in several countries. According to the World Health Organization (WHO), the heatwave has been linked to over 1,300 excess deaths since 21 June 2026. Germany recorded a historic 41.7°C, while Poland and the Czech Republic also registered all-time temperature records.

About Heatwave:

- A heatwave is a prolonged period of unusually high temperatures, often accompanied by high humidity, that exceeds the normal climatic conditions of a region.
- Heatwaves increase the risk of heatstroke, dehydration, wildfires, crop losses, and excess mortality, particularly among vulnerable populations such as the elderly and children.

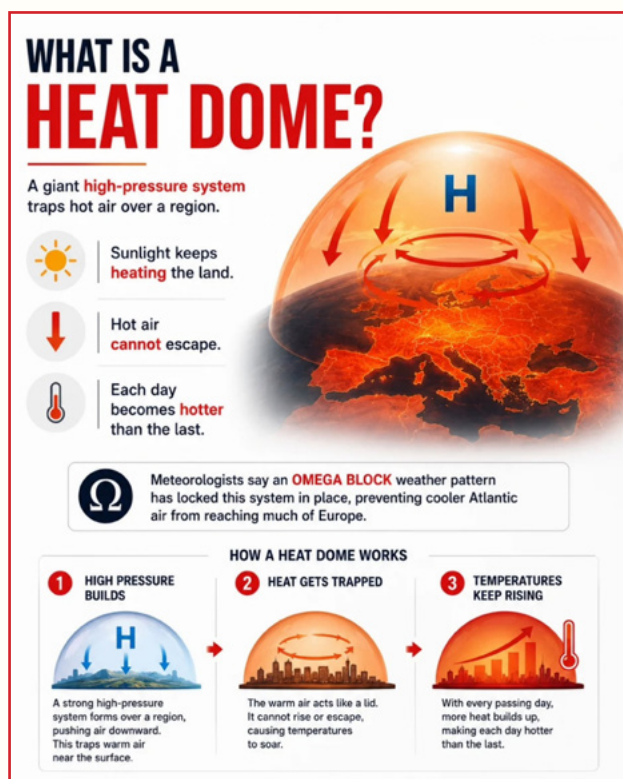
Reason for heatwave in Europe:

- The immediate cause of the European heatwave is an Omega Block, a meteorological phenomenon in which a high-pressure system becomes trapped between two low-pressure systems, resembling the Greek letter Ω (Omega).
- This high-pressure system acts like a heat dome, preventing warm air from escaping into the upper atmosphere. The sinking air becomes compressed and warmer, suppressing cloud formation and rainfall while allowing continuous solar heating. As a result, temperatures remain exceptionally high for several consecutive days.

Why is Europe Warming Faster?

- Europe is currently the fastest-warming continent, warming at nearly twice the global average. The major reasons include:

- » Climate change driven by greenhouse gas emissions.
- » Arctic amplification, where melting ice reduces the Earth's albedo, leading to greater heat absorption.
- » Urban Heat Island Effect, as concrete-dominated cities retain and radiate heat.
- » Continued dependence on fossil fuels, increasing atmospheric greenhouse gas concentrations.



Why is Europe Highly Vulnerable?

- Despite temperatures comparable to those experienced in tropical regions, Europe faces greater impacts because:
 - » Buildings are designed to retain heat during winters, with limited air conditioning.
 - » Longer summer daylight hours reduce nighttime cooling.
 - » Europe has an ageing population, making more people susceptible to heat-related illnesses.
 - » Adaptation measures have not kept

pace with the increasing frequency and intensity of heatwaves.

Impacts of the Heatwave:

- The heatwave has resulted in:
 - » Over 1,300 heat-related excess deaths, according to WHO.
 - » Record-breaking temperatures in Germany, Poland, and the Czech Republic.
 - » Pressure on healthcare systems, electricity grids, and water resources.
 - » School closures, cancellation of public events, and restrictions on outdoor activities.
 - » Increased risks of droughts, wildfires, and water scarcity.

Global and Indian Significance:

- The European heatwave highlights the growing impact of climate change on public health and economies. For India, where heatwaves are becoming more frequent, the event underscores the importance of implementing Heat Action Plans, strengthening early warning systems, climate-resilient urban planning, and achieving the targets under the Paris Agreement and National Action Plan on Climate Change (NAPCC).

Conclusion:

The European heatwave demonstrates that extreme heat is no longer an isolated weather event but an emerging climate risk. Strengthening climate adaptation, improving disaster preparedness, and accelerating global efforts to reduce greenhouse gas emissions are essential to protect lives and build resilience against future heat extremes.



Science & Technology



GAGAN: A New Dimension in India's Satellite-Based Navigation Capability

Context:

Recently, in June 2026, India achieved a significant milestone in the fields of civil aviation and space technology. The Directorate General of Civil Aviation (DGCA) successfully certified India's first Satellite-Based Landing System Approach on a commercial jet aircraft using GPS Aided GEO Augmented Navigation (GAGAN). This achievement is not merely a technological advancement in aviation but also highlights India's growing indigenous navigation capabilities, technological self-reliance, and its aspirations for global leadership. At a time when precise navigation, safe air operations, and digital infrastructure have become the foundation of strategic power worldwide, GAGAN has emerged as an important strategic and economic asset for India.

What is GAGAN?

- GAGAN (GPS Aided GEO Augmented Navigation) is India's Satellite-Based Augmentation System (SBAS), jointly developed by the Indian Space Research Organisation (ISRO) and the Airports Authority of India (AAI).
- It is not an independent navigation system; rather, it enhances the accuracy,

availability, continuity, and integrity of GPS signals.

- GAGAN corrects GPS signal errors in real time and provides timely alerts to pilots whenever GPS signals become unsuitable for safe navigation.



- Operational since 2015, GAGAN has placed India among a select group of nations, including the United States, Europe, and Japan that possess an operational SBAS.

How Does GAGAN Work?

- GAGAN operates through an integrated network of space-based and ground-based infrastructure.

- Its key components include:
 - » 15 Indian Reference Stations (INRES) that continuously monitor GPS signals.
 - » 2 Indian Master Control Centres (INMCC) that process collected data and calculate signal corrections.
 - » 3 Indian Land Uplink Stations (INLUS) that transmit correction messages to satellites.
 - » A dedicated communication network connecting all ground stations.
 - » Geostationary satellites GSAT-8, GSAT-10, and GSAT-15, equipped with GAGAN payloads.
- Together, these components provide aircraft with highly accurate and reliable navigation guidance.

Significance of the Recent Achievement:

- The DGCA's certification of India's first GAGAN-based satellite-guided landing in June 2026 is historic in several respects.
- First, it demonstrates that India is no longer confined to developing satellite technologies but has successfully deployed them in real-world civil aviation operations.
- Second, it will facilitate safe landings at numerous airports where installing expensive Instrument Landing Systems (ILS) is not economically or technically feasible.
- Third, it will make India's aviation sector safer, more efficient, and more cost-effective while aligning it with international standards.

GAGAN's Role in India's Indigenous Navigation Ecosystem:

In recent years, India has developed two major navigation systems:

- **NavIC (Navigation with Indian Constellation)**
 - » India's independent regional satellite navigation system.
 - » Provides Positioning, Navigation, and Timing (PNT) services.
 - » Covers India and regions extending approximately 1,500 km beyond its borders.
- **GAGAN**
 - » Enhances the quality and accuracy of

GPS signals.

- » Primarily developed for civil aviation.
- » Enables precision satellite-based approach and safe aircraft landings.
- Thus, NavIC and GAGAN complement each other. While NavIC provides independent navigation services, GAGAN enhances the reliability, precision, and safety of navigation.

Strategic Importance of GAGAN:

- **Enhanced Aviation Safety:** GAGAN enables highly accurate determination of an aircraft's altitude, direction, and position. As a result, it facilitates:
 - » Safe landings during adverse weather conditions
 - » Improved flight path management
 - » Optimized air traffic operations
 - » Reduced risk of aviation accidents
- **Strengthening Atmanirbhar Bharat:** For decades, India depended largely on foreign navigation systems. Through GAGAN and NavIC, India has:
 - » Reduced strategic dependence,
 - » Developed indigenous space technologies,
 - » Promoted domestic industries, and
 - » Taken significant steps toward technological sovereignty.
- **Strengthening India's Position in the Global Aviation Network:** GAGAN has been developed in accordance with International Civil Aviation Organization (ICAO) standards. It is interoperable with major global SBAS systems such as:
 - » WAAS (Wide Area Augmentation System) – United States
 - » EGNOS (European Geostationary Navigation Overlay Service) – Europe
 - » MSAS (Multi-functional Satellite Augmentation System) – Japan
- Notably, GAGAN is the world's first SBAS certified for equatorial regions, underscoring its technological uniqueness.

Applications of GAGAN Beyond Aviation:

GAGAN is not confined to civil aviation alone.

- **Maritime Transportation:** It improves precise

vessel positioning, port operations, and maritime safety.

- **Road Transportation:** It supports Intelligent Transport Systems (ITS), toll management, vehicle tracking, and logistics optimization.
- **Railways:** It enhances train operations, signalling systems, and railway safety.
- **Disaster Management:** It provides accurate location information for relief and rescue operations during earthquakes, floods, cyclones, and other natural disasters.
- **Defence and National Security:** It plays an important role in border surveillance, military operations, and strategic communications.
- **Surveying and Geospatial Services:** Its applications are expanding in land surveying, smart cities, digital mapping, and infrastructure development.

Economic and Policy Significance:

- GAGAN is an important enabler of both India's digital economy and space economy.
- It:
 - » Reduces aviation operating costs,
 - » Saves fuel,
 - » Improves flight punctuality,
 - » Lowers airport infrastructure expenditure, and
 - » Encourages new industries based on satellite-enabled services.
- It can also serve as a foundational technology for India's growing space economy and the expansion of its private space sector.

Challenges:

- » Although GAGAN has been a highly successful project, several challenges remain:
- » Full implementation of GAGAN-based procedures across all airports is yet to be achieved.
- » Wider integration of compatible avionics across airline fleets is necessary.
- » Cybersecurity threats and signal jamming must be effectively addressed.
- » Commercial applications of GAGAN across multiple sectors need greater expansion.

- » Domestic industries based on NavIC and GAGAN must be strengthened to compete globally.

Way Forward:

- In the coming years, GAGAN should evolve beyond being merely an aviation project and become a key component of India's broader Positioning, Navigation, and Timing (PNT) infrastructure.
- To achieve this:
 - » GAGAN-based approach procedures should be implemented at more airports.
 - » Greater integration between NavIC and GAGAN should be promoted.
 - » Its applications should be expanded to drones, autonomous vehicles, smart transportation, and digital logistics.
 - » Private industries and startups should be encouraged to develop GAGAN-based solutions.
 - » International cooperation should be strengthened to enhance GAGAN's global acceptance and service coverage.

Conclusion:

GAGAN has emerged as a powerful symbol of India's scientific capability, technological self-reliance, and leadership in global aviation. It is not merely a system for improving GPS signals but a strategic platform that is transforming aviation safety, modern transportation, disaster management, defence, and digital infrastructure. The successful satellite-based landing certified in June 2026 has demonstrated that India is no longer merely a consumer of space technology but an innovator capable of setting global benchmarks. Together, NavIC and GAGAN will provide India with Navigation Sovereignty, laying a strong technological foundation for the country's vision of becoming a Viksit Bharat.

Short Issues

Chandrayaan-3 Finds Moon Soil Similar to Antarctic Meteorite

Context:

Recent analysis of data from India's Chandrayaan-3 mission has revealed a close chemical similarity between lunar soil at Shiv Shakti Point (near the Moon's South Pole) and a lunar meteorite found in Antarctica's Allan Hills region (ALHA 81005), advancing understanding of the Moon's surface composition.

Key Findings of the Study:

- A study by scientists from the Physical Research Laboratory (PRL) found that the soil at Shiv Shakti Point is rich in iron and magnesium but deficient in aluminium, closely matching the composition of the Antarctic lunar meteorite ALHA 81005 discovered in 1982.
- Chemical analysis showed that the meteorite contains about 25.8% aluminium oxide and 13.7% iron and magnesium oxides, which closely matches the soil data collected by Chandrayaan-3's APXS instrument on the Pragyaan rover.

Geological Significance:

- The findings suggest that the lunar surface is not uniform but contains mixed material from both surface and deeper layers. Scientists believe that the soil at Shiv Shakti Point may include material excavated from deeper regions due to major impact events.
- One possible explanation is the influence of the South Pole-Aitken (SPA) basin, one of the largest impact structures in the solar system. Its formation may have brought deep

lunar materials to the surface, enriching the region with iron- and magnesium-bearing minerals.

Role of Chandrayaan-3 Instruments:

- The Alpha Particle X-ray Spectrometer (APXS) onboard the Pragyaan rover played a key role in analysing the chemical composition of lunar soil. The data helped compare lunar samples with meteorites found on Earth in Antarctica, northwest Africa, Libya, and Oman.



- These comparisons showed that the Shiv Shakti Point soil closely aligns with high-magnesium and iron-rich lunar meteorites, strengthening understanding of lunar crust diversity.

Scientific Importance:

- The study supports the lunar magma ocean theory and provides evidence of mixing between deep and surface lunar materials due to large impact events. It also highlights the Moon's compositional diversity, especially in the highland regions.
- For future missions, such findings can help identify scientifically rich landing sites that may contain materials from deeper lunar layers, offering insights into the Moon's early evolution.

About Chandrayaan-3:

- Chandrayaan-3 is India's third lunar mission, which achieved a historic soft landing near the lunar South Pole on August 23, 2023. It made India the first country to land in this region and the fourth to achieve a successful lunar landing.
- The mission used the LVM3-M4 launch vehicle and included the Vikram lander and Pragyaan rover, carrying instruments like APXS, LIBS, RAMBHA, and ChaSTE for in-situ analysis.

Conclusion:

The Chandrayaan-3 findings mark a significant advancement in lunar science by linking lunar surface soil with meteorites found on Earth. This not only deepens understanding of the Moon's geological history but also enhances the scientific value of India's lunar exploration programme.

Amoebic Meningoencephalitis: A Rising Public Health Concern in India

Context:

In recent times, Amoebic meningoencephalitis has emerged as a serious but under-recognised public health threat in India, particularly highlighted by the recent surge in Kerala, which reported 133 infections and 33 deaths in the first five months of 2026..

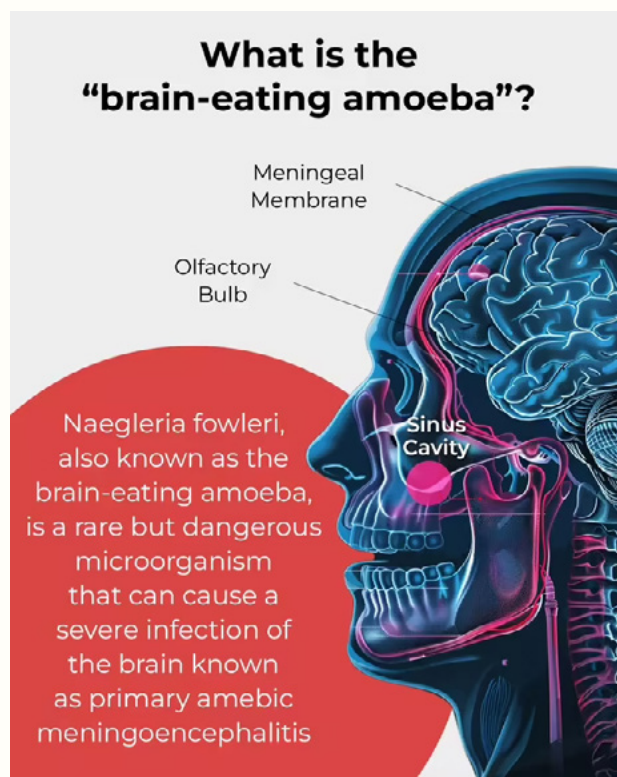
About Amoebic Meningoencephalitis:

- Amoebic Meningoencephalitis (AME) is a rare but highly fatal infection of the central nervous system caused by free-living amoebae found in warm freshwater and soil.
- These organisms enter the human body accidentally and lead to severe inflammation and destruction of brain tissue. AME is not spread from person to person and is primarily an environmental infection.

Types of Amoebic Meningoencephalitis:

Primary Amoebic Meningoencephalitis (PAM)

- Primary Amoebic Meningoencephalitis (PAM) is caused by the amoeba *Naegleria fowleri*. It is an acute, rapidly progressing infection that typically affects healthy individuals.
- Infection occurs when contaminated warm freshwater enters the nasal passages during swimming, diving, or bathing. The organism travels through the olfactory nerve to the brain, causing severe and often fatal meningoencephalitis within days.



Granulomatous Amoebic Encephalitis (GAE):

- Granulomatous Amoebic Encephalitis (GAE) is caused mainly by *Acanthamoeba* infection and *Balamuthia mandrillaris* infection. Unlike PAM, GAE is a subacute to chronic infection that develops over weeks to months.
- It often affects immunocompromised individuals but can also occur in healthy people. The amoebae may enter through

the respiratory tract or broken skin and spread via the bloodstream to the brain. Importantly, infection does not occur through drinking contaminated water and there is no evidence of transmission through air, vapour, or aerosol droplets.

Conclusion:

The rising cases of AME highlights the need for improved water safety, early diagnosis, and clinical awareness. Climate change, warm freshwater exposure, and better detection are contributing to increased reporting. Strengthening surveillance and public education is crucial to reduce fatalities associated with these infections.

DengiAll Vaccine: Lessons from Brazil's Dengue Vaccine Safety Concerns

Context:

Brazil recently suspended the use of its dengue vaccine, Butantan-DV, after reports of serious adverse events, including two deaths and one intensive care admission among vaccine recipients. The development has drawn attention in India because DengiAll, India's indigenous dengue vaccine being developed by Panacea Biotech in collaboration with the Indian Council of Medical Research (ICMR), is based on a similar technology platform.

What is DengiAll?

- DengiAll is a tetravalent live-attenuated dengue vaccine, meaning it contains weakened forms of all four dengue virus serotypes:
 - » DENV-1
 - » DENV-2
 - » DENV-3
 - » DENV-4
- The vaccine aims to provide protection against all circulating dengue virus strains prevalent in India.

Key Challenge:

- A major concern in dengue vaccination is a phenomenon called Antibody-Dependent Enhancement (ADE).
- In dengue infection:
 - » Type-specific antibodies provide strong protection against a particular serotype.
 - » Cross-reactive antibodies can recognize multiple serotypes.
- However, when cross-reactive antibody levels decline, they may facilitate viral entry into immune cells rather than neutralize the virus. This can result in severe dengue infection, a process known as ADE.
- ADE is considered one of the most significant safety challenges in dengue vaccine development.

India's Preparedness:

- India's Phase-III DengiAll trial enrolled over 10,000 volunteers and participants are being monitored for two years after vaccination.
- Experts have recommended:
 - » Detailed analysis of antibody responses against all four serotypes.
 - » Careful assessment of ADE risk before regulatory approval.
 - » A strong post-marketing pharmacovigilance system.
 - » Long-term monitoring of vaccine recipients for adverse events.

About Dengue:

- Dengue is a mosquito-borne viral disease caused by the Dengue Virus (DENV) and transmitted mainly by the Aedes aegypti mosquito.
 - » **Causative Agent:** Dengue virus, an RNA virus belonging to the Flaviviridae family.
 - » **Four Serotypes:** The virus exists in four distinct serotypes:
 - DENV-1
 - DENV-2
 - DENV-3
 - DENV-4

- » **Vector:** Primarily spread by the *Aedes aegypti* mosquito, a daytime-biting mosquito.

Conclusion:

Brazil's experience highlights that a dengue vaccine must not only be effective but also safe in the long term. India's DengiAll vaccine has the potential to be a significant milestone in dengue control; however, ensuring its safety requires thorough evaluation of risks such as Antibody-Dependent Enhancement (ADE) and continuous monitoring over time.

Global Mapping of Arbuscular Mycorrhizal Fungi

Context:

A recent study published in the journal 'Science' has produced the first global map of Arbuscular Mycorrhizal (AM) fungi, uncovering the immense scale of underground fungal networks that support plant life and contribute significantly to climate regulation.

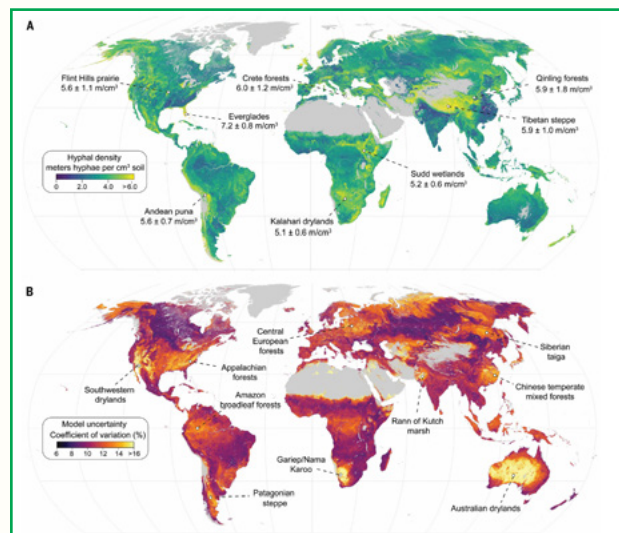
Key Findings of the Study:

- Global topsoils contain approximately 110 quadrillion km of fungal hyphae, equivalent to nearly a billion trips between the Earth and the Sun.
- AM fungal networks store around 300 million tonnes of carbon.
- These fungi help sequester nearly 4 billion tonnes of CO₂-equivalent annually, representing about 11% of global human-induced carbon emissions.
- Nearly 40% of global AM fungal networks are concentrated in grassland ecosystems, including:
 - » South Sudan grasslands
 - » Tibetan Plateau
 - » India's Banni Grasslands in Gujarat
- Croplands exhibit around 50% lower fungal density compared to natural ecosystems.

What are Arbuscular Mycorrhizal (AM)

Fungi?

- AM fungi are ancient soil microorganisms that form mutually beneficial symbiotic relationships with nearly 80% of terrestrial plant species.



How does the Symbiosis Work?

- **Fungi provide:**
 - » Phosphorus, nitrogen, zinc, and water from the soil.
 - » Enhanced nutrient absorption through extensive underground networks.
- **Plants provide:**
 - » Sugars and carbon compounds produced through photosynthesis.
 - » This nutrient exchange improves plant growth and ecosystem productivity.

Important Structures:

- **Arbuscules**
 - » Tree-like structures formed inside root cells.
 - » Main sites of nutrient exchange.
- **Vesicles**
 - » Storage organs containing lipids and nutrients.
- **Hyphae**
 - » Thread-like filaments forming extensive underground networks connecting plants and soil.

Ecological and Agricultural Significance:

- **Climate Change Mitigation**
 - » Significant carbon sequestration capacity.
 - » Supports soil carbon storage and reduces atmospheric CO₂ levels.
- **Soil Health**
 - » Produces glomalin, a glycoprotein that improves soil structure and reduces erosion.
- **Sustainable Agriculture**
 - » Enhances nutrient-use efficiency.
 - » Improves drought tolerance and resistance to salinity.
 - » Reduces dependence on chemical fertilizers.
- **Biodiversity Conservation**
 - » Supports ecosystem resilience and plant diversity.

Threats to AM Fungi:

- The study warns that AM fungal networks are increasingly threatened by:
 - » Conversion of grasslands into croplands.
 - » Intensive tillage practices.
 - » Excessive use of chemical fertilizers.
 - » Monoculture farming systems.
 - » Land degradation and habitat loss.
- Grasslands are currently being converted to agriculture at a rate nearly four times faster than forests, posing a major risk to these underground ecosystems.

Significance for India:

- India's Banni Grasslands have been identified as a global hotspot for AM fungal diversity. The findings support India's efforts towards:
 - » Natural Farming
 - » Sustainable agriculture
 - » Land restoration
 - » Climate change mitigation
 - » Soil health management

Conclusion:

The global mapping of AM fungi reveals that Earth's underground fungal networks function

as critical ecological infrastructure supporting food security, biodiversity, and climate regulation. Recognizing and conserving these hidden ecosystems is essential for achieving sustainable agriculture and global climate goals.

India's Nuclear-Based Cu-Cl Hydrogen Facility

Context:

Recently, India has inaugurated the world's first Hydrogen Production Facility based on the Copper-Chlorine (Cu-Cl) Thermochemical Cycle using nuclear process heat generated from the Fast Breeder Test Reactor (FBTR) at the Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam.

About the project:

- This project is World's first hydrogen production facility using the Copper-Chlorine (Cu-Cl) Thermochemical Cycle powered by nuclear heat.
 - » Located at IGCAR, Kalpakkam, Tamil Nadu.
 - » Developed jointly by the Department of Atomic Energy (DAE), Bhabha Atomic Research Centre (BARC), and IGCAR, the project marks a major breakthrough in clean hydrogen production and advanced nuclear technology.
 - » The facility serves as a technology demonstrator to validate large-scale hydrogen production using nuclear energy.
 - » Supports India's transition towards low-carbon energy systems and enhances long-term energy security.

What is the Copper-Chlorine (Cu-Cl) Thermochemical Cycle?

- The Copper-Chlorine (Cu-Cl) Thermochemical Cycle is an advanced method for producing hydrogen by splitting water into hydrogen and oxygen through a

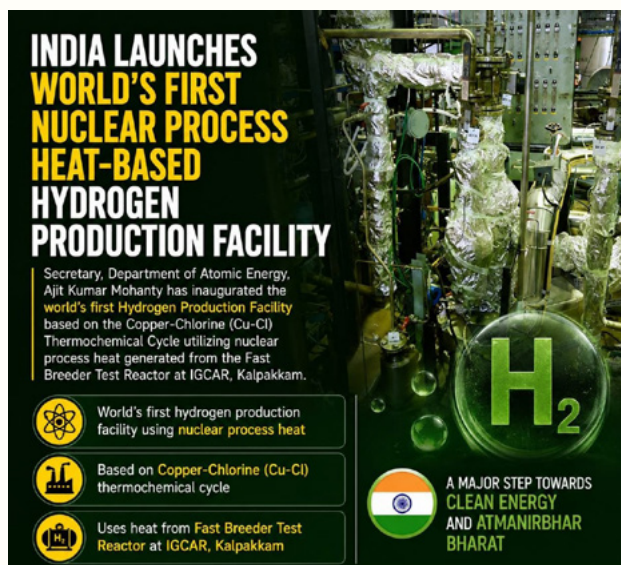
series of chemical reactions.

▪ **Features:**

- » Requires relatively lower temperatures (around 500°C) compared to other thermochemical cycles.
- » Utilizes both heat and electricity.
- » Produces green hydrogen without carbon emissions.
- » Highly suitable for integration with advanced nuclear reactors.

Why is Nuclear Heat Used?

- Conventional hydrogen production relies on fossil fuels, resulting in significant carbon emissions. Nuclear reactors provide:
 - » Continuous carbon-free electricity.
 - » High-temperature process heat.
 - » Reliable 24×7 operation.
 - » Large-scale hydrogen production capability.
- This makes nuclear energy an attractive option for producing clean hydrogen economically.



What is the Fast Breeder Test Reactor?

- The Fast Breeder Test Reactor (FBTR) is India's experimental fast breeder reactor operated by IGCAR.
- **Key Facts:**
 - » Located at Kalpakkam, Tamil Nadu.

- » Commissioned in 1985.
- » Uses mixed plutonium-uranium carbide fuel.
- » Employs liquid sodium as coolant.
- » Acts as a testing platform for future Fast Breeder Reactors (FBRs).

Significance for India:

- **Supports National Green Hydrogen Mission**
 - » Enables clean hydrogen production.
 - » Reduces dependence on imported fossil fuels.
 - » Promotes energy independence.
- **Advances Decarbonisation**
 - » Produces hydrogen without carbon dioxide emissions.
 - » Helps industries transition to cleaner energy.
- **Strengthens Energy Security**
 - » Utilizes indigenous nuclear technology.
 - » Diversifies India's clean energy portfolio.
- **Global Technological Leadership**
 - » India becomes the first country to demonstrate this technology.
 - » Enhances India's reputation in advanced nuclear and hydrogen technologies.
- **Supports Net-Zero Goals:** The technology aligns with India's commitments to:
 - » Reduce carbon intensity.
 - » Expand non-fossil energy capacity.
 - » Achieve Net Zero by 2070.

Challenges:

- High initial capital costs.
- Public concerns regarding nuclear energy.
- Need for advanced hydrogen storage and transportation infrastructure.
- Scaling up from demonstration to commercial production.
- Regulatory and safety requirements.

Conclusion:

Nuclear-assisted hydrogen production combines the reliability of nuclear energy with the sustainability of clean hydrogen, offering a viable pathway for India's low-carbon future. The successful demonstration of the

Cu-Cl Thermochemical Hydrogen Production Facility represents a landmark achievement that strengthens energy security, accelerates decarbonisation, and positions India at the forefront of next-generation clean energy technologies.

Oxytocin in Caesarean Deliveries: Role & Importance

Context:

Recently, The World Health Organization (WHO) has sought information from India following reports linking suspected spurious oxytocin to maternal deaths in Rajasthan related to Caesarean deliveries.

What is a Caesarean Section (C-Section)?

- A Caesarean section (C-section) is a surgical procedure in which a baby is delivered through incisions made in the mother's abdomen and uterus, instead of through the birth canal (vaginal delivery).

When is a C-Section Performed?

- A C-section is recommended when a vaginal delivery may pose risks to the mother or the baby. Common indications include:
 - » Fetal distress (the baby is not receiving enough oxygen)
 - » Prolonged or obstructed labour
 - » Placenta previa (placenta covers the cervix)
 - » Breech or transverse presentation of the baby
 - » Multiple pregnancies (twins, triplets, etc.)
 - » Previous C-section or certain maternal medical conditions (in selected cases)

About Oxytocin:

- Oxytocin is a peptide hormone produced

in the hypothalamus and released by the posterior pituitary gland. It plays a vital role during childbirth by stimulating uterine contractions, aiding placental expulsion, promoting breastfeeding, and strengthening maternal-infant bonding. Synthetic oxytocin is included in the WHO Model List of Essential Medicines and is widely used in obstetric care.

Why is Oxytocin Critical During C-Sections?

- A Caesarean section (C-section) is a surgical procedure in which a baby is delivered through incisions made in the mother's abdomen and uterus, instead of through the birth canal (vaginal delivery).
- Unlike normal vaginal delivery, where labour naturally triggers high oxytocin release, women undergoing Caesarean section (C-section) often require synthetic oxytocin because the hormonal response may be inadequate, especially under spinal or epidural anaesthesia.
- Administered immediately after delivery, oxytocin contracts the uterus, compresses blood vessels at the placental site, reduces blood loss, and prevents postpartum haemorrhage (PPH), one of the leading causes of maternal mortality worldwide.



Challenges Posed by spurious oxytocin:

- Fake or substandard oxytocin lacking active pharmaceutical ingredients fails to induce adequate uterine contractions.
- Increases the risk of severe postpartum haemorrhage, emergency blood transfusions, and maternal deaths.
- Weakens public confidence in healthcare institutions and essential medicines.
- Reflects gaps in manufacturing standards, quality testing, and supply-chain monitoring.

Government Measures:

- To curb counterfeit medicines, the Government of India has mandated QR codes and barcodes on vaccines, antimicrobials, anti-cancer drugs, narcotics, and Schedule H2 medicines for better traceability.
- The Central Drugs Standard Control Organisation (CDSCO), India's National Regulatory Authority under the Drugs and Cosmetics Act, 1940, is responsible for drug approvals, quality regulation, clinical trials, and coordination with State Drug Control Organisations to ensure safe and effective medicines.

Conclusion:

Oxytocin is a life-saving medicine that plays a crucial role in preventing postpartum haemorrhage during Caesarean deliveries. Ensuring the quality, safety, and traceability of essential medicines through robust regulation is vital for protecting maternal health and reducing preventable maternal deaths.

Herbal Cigarettes May Be More Harmful Than Tobacco

Context:

On the occasion of World No Tobacco Day (May 31), a new study published in the Journal of Hazardous Materials has raised serious concerns for public health policy. The joint research conducted by the Indian Institute of Technology Gandhinagar (IITGN) and the

University of Illinois, USA, found that herbal cigarettes marketed as “natural” and “tobacco-free” are just as harmful, or even more harmful, than conventional tobacco products.

Key Findings of the Study:

- Scientists compared two leading tobacco cigarette brands available in India with four popular herbal cigarette variants containing ingredients such as tulsi (holy basil), clove, cinnamon, green tea, and chamomile. The major findings were as follows:
 - » **Higher Emission of Fine Particulate Matter:** The smoke generated by herbal cigarettes contained 20% higher concentrations of sub-500-nanometer fine particles compared to tobacco cigarettes. These microscopic particles are capable of crossing the alveolar barrier in the lungs and entering the bloodstream directly.
 - » **Increased Oxidative Potential (OP):** Herbal cigarette smoke exhibited a significantly higher oxidative potential, which increases the production of Reactive Oxygen Species (ROS) in the body. Elevated ROS levels can lead to DNA damage, severe inflammation, and cardiovascular diseases at the cellular level.
 - » **Impact of the Wrapper Material:** Herbal cigarette variants wrapped in tendu leaves (similar to bidis) showed 49% higher oxidative potential than those wrapped in paper, making them potentially more damaging to human health.
 - » **Presence of Toxic Heavy Metals:** Some tulsi-based herbal cigarettes claiming to be “100% natural” were found to contain toxic heavy metals such as lead, raising further concerns regarding their safety.

Policy Concerns and Regulatory Gaps:

- In India, tobacco products are regulated under the Cigarettes and Other Tobacco Products Act (COTPA), 2003. However,

herbal cigarettes generally fall outside the scope of this legislation because they do not contain tobacco or nicotine. This regulatory loophole has created two major concerns:

- » **Misleading Marketing (Greenwashing):** Manufacturers often promote herbal cigarettes as wellness products or as a safe alternative for quitting smoking. Such marketing creates a false sense of safety, particularly among young people and non-smokers.
- » **The Science of Combustion:** The study highlights that the primary public health risk is not limited to nicotine alone. The process of burning any organic material produces harmful smoke, tar, soot, and toxic particles that can adversely affect human health.

harmless. However, emerging scientific evidence suggests that herbal cigarettes may pose serious health risks comparable to, or even greater than, conventional cigarettes. Therefore, public health experts recommend imposing regulations, safety standards, and health warnings on herbal cigarettes similar to those applied to tobacco products in order to better protect public health.

Way Forward:

- **Strengthening the Regulatory Framework:** The government should consider expanding the scope of COTPA to include tobacco-free smoking products and mandate statutory health warnings on their packaging.
- **Standardization and Quality Control:** Regulatory bodies such as the Food Safety and Standards Authority of India (FSSAI) and the Central Drugs Standard Control Organization (CDSCO) should establish strict testing standards for heavy metals and other harmful substances present in herbal smoking products.
- **Public Awareness Campaigns:** Comprehensive health awareness campaigns are needed to communicate the message that “natural does not necessarily mean safe.” Such initiatives can help counter misleading narratives surrounding herbal cigarettes.

Conclusion:

At present, herbal cigarettes often escape stringent regulatory oversight because of their “natural” and “tobacco-free” claims. Experts warn that this misleading marketing encourages greater consumption by creating the impression that these products are

New Direction to Global MSME Cooperation: From Atmanirbhar Bharat to Global Competitiveness

Context:

In June 2026, under its BRICS Chairship, India organized the First BRICS MSME Forum and the Third SME Working Group Meeting, giving fresh momentum to global cooperation among Micro, Small and Medium Enterprises (MSMEs). Held under the theme "Building MSME Ecosystems: Sustainable Roots for Global Pathways," the meeting enabled member countries to deliberate on key issues such as financial inclusion, technology transfer, digital transformation, green manufacturing, and the participation of MSMEs in global value chains. This initiative is not confined to international cooperation alone; rather, it reflects India's broader vision of positioning MSMEs as the cornerstone of Atmanirbhar Bharat, employment generation, innovation, and inclusive economic development.

MSME Sector: The Backbone of the Indian Economy

- The MSME sector has long been one of the most vibrant and dynamic segments of India's economy. It is not only engaged in production and exports but has also emerged as a major driver of entrepreneurship, innovation, and socio-economic transformation. To create a more conducive environment for enterprise expansion, the Government implemented the revised MSME classification with effect from April 1, 2025. By increasing the investment and annual turnover thresholds,

many enterprises that would previously have moved out of the MSME category can now expand their businesses without losing access to government incentives.

- According to data available as of January 2026, the MSME sector contributes approximately 31.1% to India's Gross Domestic Product (GDP), 35.4% to manufacturing output, and nearly 48.58% to the country's total exports. In addition, it provides direct and indirect employment to around 389 million (38.9 crore) people, making it the second-largest employment-generating sector in India after agriculture.
- The greatest strength of the MSME sector lies in its diversity. It encompasses traditional handicrafts, rural industries, the service sector, modern manufacturing, startups, and technology-based enterprises. It has emerged as an effective vehicle for the economic empowerment of women entrepreneurs, first-generation entrepreneurs, and youth from rural and semi-urban areas.

Financial Inclusion and Digital Transformation:

- For a long time, one of the biggest challenges faced by Indian MSMEs was limited access to formal finance. Through initiatives such as the Digital Credit Assessment Model, additional equity support to SIDBI, and digital loan appraisal mechanisms, the

Government has significantly addressed this challenge. Today, even small enterprises are able to obtain credit within a comparatively shorter period through digital platforms. This has not only enhanced financial inclusion but has also strengthened the participation of MSMEs in the formal economy.

Policies and Initiatives:

■ **PM Vishwakarma Scheme:**

- » India's MSME policy accords special importance to traditional artisans. The PM Vishwakarma Scheme is an excellent example of this approach. The scheme provides artisans and craftspeople engaged in 18 traditional occupations with skill development, modern toolkits, collateral-free loans, digital payment training, and marketing support.
- » The impact of the scheme has been remarkable. The target of registering 3 million beneficiaries, originally set for four years, was achieved in just two years. More than 2.4 million artisans have received skill training, nearly 600,000 beneficiaries have been sanctioned collateral-free loans exceeding Rs.5,133 crore, and around 800,000 artisans have been integrated into digital transactions.

■ **ASPIRE Scheme:**

- » To strengthen the rural economy, the Government has promoted rural innovation and entrepreneurship through the ASPIRE (A Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship) initiative.
- » Through Livelihood Business Incubators, more than 123,000 individuals had been trained by June 2026, and over 1,000 micro enterprises had been established. This has created new local employment opportunities in rural areas.

■ **Prime Minister's Employment Generation Programme (PMEGP):**

- » The Prime Minister's Employment

Generation Programme (PMEGP) has significantly accelerated self-employment across the country. By May 2026, the scheme had facilitated the establishment of more than 1.084 million micro enterprises and generated employment opportunities for nearly 9.7 million people. The availability of the application process in 19 regional languages has further expanded its outreach.

■ **MSME Champions Scheme:**

- » In today's global economy, production alone is not sufficient; quality, innovation, and competitiveness are equally essential. Accordingly, the MSME Champions Scheme promotes initiatives such as design development, Intellectual Property Rights (IPR), incubation, and lean manufacturing.
- » The Zero Defect Zero Effect (ZED) Certification Programme encourages quality-based and environmentally sustainable manufacturing. By May 2026, more than 9.3 million MSMEs had registered under the programme, while approximately 668,000 enterprises had been certified. Likewise, the Lean Manufacturing Programme has proven effective in reducing production costs, minimizing waste, and enhancing global competitiveness.

■ **Self-Reliant India (SRI) Fund:**

- » For micro and small enterprises, debt financing alone is often insufficient; expansion also requires equity capital. Keeping this need in view, the Self-Reliant India (SRI) Fund was established.
- » Operating under the Fund of Funds model, the initiative had invested nearly Rs.2,851 crore in 761 MSMEs by May 2026. The Union Budget 2026-27 allocated an additional Rs.2,000 crore for the fund, enabling greater availability of long-term capital for growth-oriented enterprises.

▪ **Cluster Development and Technological Modernization:**

- » The Micro and Small Enterprises Cluster Development Programme (MSE-CDP) and SFURTI promote shared infrastructure, Common Facility Centres, and cluster-based development. These initiatives reduce production costs while improving access to modern technologies for small enterprises. By June 2026, 612 cluster projects had been approved, and 364 projects had been completed, marking significant progress in this direction.
- » Simultaneously, the expansion of Technology Centres is preparing Indian MSMEs for Industry 4.0, advanced manufacturing, and emerging technologies. Existing Technology Centres and Extension Centres are providing skill training to thousands of youth and technical assistance to thousands of MSMEs. The World Bank-supported Technology Centre Systems Programme is also accelerating this transformation.

▪ **RAMP Scheme:**

- » The World Bank-supported RAMP (Raising and Accelerating MSME Performance) Scheme represents an important example of coordinated reforms between the Centre and the States. Through State-level Investment Plans, proposals worth thousands of crores have been approved, and by June 2026, more than 5.5 million MSMEs had directly or indirectly benefited from the scheme. It is strengthening administrative reforms, institutional capacity building, and policy coordination.

diversification, green manufacturing, and effective integration into global supply chains. In addition, there is a continuing need to enhance the productivity of micro enterprises, expand digital literacy, and provide greater market access to women and rural entrepreneurs.

Conclusion:

India's proactive role in the BRICS MSME Forum clearly demonstrates that the country is no longer focused solely on promoting MSME development at the domestic level but is also moving towards providing leadership in global MSME cooperation. Multi-dimensional policies centred on financial inclusion, technological innovation, skill development, social inclusion, and cluster-based industrial development have infused new energy into India's MSME sector. If this momentum continues, MSMEs will not only play a decisive role in advancing India towards becoming a five-trillion-dollar economy but will also make a significant contribution to realizing the vision of "Viksit Bharat 2047" and establishing India as a leading global hub for manufacturing, innovation, and entrepreneurship.

Way Forward:

Although India's MSME sector has made remarkable progress, several challenges remain, including global competition, the high cost of technological upgradation, limited investment in research and development, export

Short Issues

India Seafood Exports 2025-26: Record Growth and Blue Economy

Context:

According to data recently released by the Marine Products Export Development Authority (MPEDA), India's seafood exports reached an all-time high of 1,972,018 metric tonnes in the financial year 2025-26. In terms of value, this amounted to \$8.46 billion (approximately Rs.73,890 crore).

Key Highlights of the data:

- India's seafood exports have recorded a historic performance, reaching 19,72,018 metric tons and \$8.46 billion (Rs.73,890 crore). This is the highest export level so far, setting a record in both volume and value.
- According to the product composition, frozen shrimp was the leading export item, contributing \$5.62 billion (66.52% of total earnings) with a volume of 7,92,647 metric tons. This mainly includes L. vannamei (white-leg shrimp) and black tiger shrimp.
- Other major products include frozen fish (\$643.7 million), dried seafood (\$577.44 million, with a 78% increase in rupee terms), frozen squid (\$513.84 million), and steady growth in cuttlebone (cuttlefish). Chilled and live products are also emerging segments.
- In key markets, the United States was the largest importer in value terms at \$2.33 billion, while China was the largest importer by volume at 4.9 lakh metric tons. The European Union (\$1.59 billion), Southeast Asia (\$1.35 billion), Japan, and the Middle East were also important markets.
- India's major export ports include Visakhapatnam (Vizag), Jawaharlal Nehru Port Trust (JNPT), and Kochi Port, which form the backbone of the country's maritime export infrastructure.

Significance for India:

- Boost to Blue Economy**
 - » Strengthens India's Blue Economy framework
 - » Enhances livelihood security for coastal communities
 - » Supports fisheries-based rural employment
- Foreign Exchange Earnings**
 - » Seafood is one of India's top agricultural export earners
 - » Contributes significantly to trade balance and forex reserves
- Agricultural Diversification**
 - » Promotes non-traditional exports beyond agriculture and textiles
 - » Encourages aquaculture expansion and coastal industrialization
- Global Supply Chain Integration**
 - » India is emerging as a key supplier of shrimp and marine products globally
 - » Strong integration with US, EU, and East Asian food supply chains



Challenges:

Despite record growth, several structural issues

persist:

- Dependence on shrimp exports (low product diversification)
- Volatility in demand from major markets like the US
- Strict quality and sanitary standards in developed countries
- Climate change impacts on coastal aquaculture
- Rising competition from countries like Vietnam, Ecuador, and Thailand
- High input costs affecting profitability of small farmers

Way Forward:

To sustain export growth, India needs to:

- Diversify seafood export basket beyond shrimp
- Invest in value-added marine products
- Strengthen cold chain and processing infrastructure
- Improve compliance with international quality standards
- Promote sustainable aquaculture practices under the Blue Economy framework
- Expand market access in Africa, West Asia, and Latin America

Conclusion:

India's record seafood exports in 2025–26 highlight the country's growing strength in global marine trade. However, long-term sustainability will depend on diversification, value addition, and resilient supply chains. Strengthening the Blue Economy can make seafood exports a stable pillar of India's export strategy and coastal development model.

Mission Senehjori

Context:

Recently, The Union Minister for Development of North Eastern Region (DoNER), Jyotiraditya M. Scindia, along with the Chief Minister of Assam, launched Mission "Senehjori", a cluster-based initiative aimed at transforming Assam's

Muga silk sector into a globally competitive luxury textile ecosystem. The mission seeks to enhance the entire value chain, from production to branding and export.

Background:

- Muga silk, found exclusively in Assam, holds the distinction of being the world's only naturally golden silk. It was also India's first silk to receive a Geographical Indication (GI) tag.
- Despite its immense cultural value and international uniqueness, the sector has remained largely fragmented and under-commercialized. Historically, Muga rearers faced low farm-gate prices (averaging Rs.25,000 per kg), limiting economic benefits to grassroots artisans.

About Mission Senehjori

- The Mission Senehjori is a Rs.411 crore, cluster-based initiative launched by the Ministry of Development of North Eastern Region (MDoNER) to transform Assam's Muga silk sector.
- Aimed at empowering over 2.5 lakh weavers and rearers, it seeks to elevate the state's GI-tagged 'golden thread' into a globally competitive, premium luxury brand. Launched jointly by the Ministry of DoNER and the Government of Assam, Mission Senehjori is designed to span three years (2026–2028).
- The mission covers all key stages of production, including host plant cultivation (Som and Soalu), silkworm seed production, reeling and weaving infrastructure, branding and GI authentication, export promotion, tourism development, and digital traceability systems.
- It will be implemented across major silk-producing districts of Assam such as Jorhat, Sivasagar, Dibrugarh, Tinsukia, Lakhimpur, Dhemaji, Majuli, and Sualkuchi.



Objectives of the Mission:

- **Value Addition & Income Generation:** Elevating the returns of Muga silk rears and weavers to over Rs.50,000 per kilogram by streamlining the processing, branding, and quality control.
- **Institutional Support:** Establishing 30 Farmer Producer Organizations (FPOs) and over 1,180 Farmer Interest Groups (FIGs).
- **Infrastructure Overhaul:** Constructing five modernized Muga reeling units and a specialized Muga Spun Mill in key producing districts like Jorhat, Sivasagar, and Majuli.
- **Regeneration of Host Plants:** Rejuvenating 5,000 hectares of Som and Soalu host plants to ensure sustainable silkworm feed.
- **Traceability & Branding:** Introducing unified 'Senehjori' branding and digitally traceable, GI-linked systems, allowing consumers globally to verify the authenticity of their purchases.
- **Tourism Integration:** Promoting the cultural economy by creating a 'Muga Silk Trail', a Silk Tourism Park, and hosting annual Muga Utsavs.

Cultural and Economic Significance:

- Muga silk is a Vanya silk (wild silk) along with Eri and Tasar
- Historically used in Ahom dynasty royal

attire

- Today forms part of traditional Assamese dress (Mekhela Chador)
- Major contributor to rural livelihoods and women empowerment

Conclusion:

Mission Senehjori represents a strategic shift from traditional sericulture to a global luxury silk economy model. By integrating technology, branding, and cluster development, the initiative aims to position Assam's Muga silk as a global heritage textile while significantly improving rural incomes and preserving cultural identity.

Flex Fuel Vehicles and Ethanol Blending in India

Context:

India's first flex-fuel motor vehicles were recently launched. Compatible with ethanol blends ranging from E20 to E85, these vehicles mark India's entry into mass-market flex-fuel mobility.

About Flex Fuel Vehicles (FFVs):

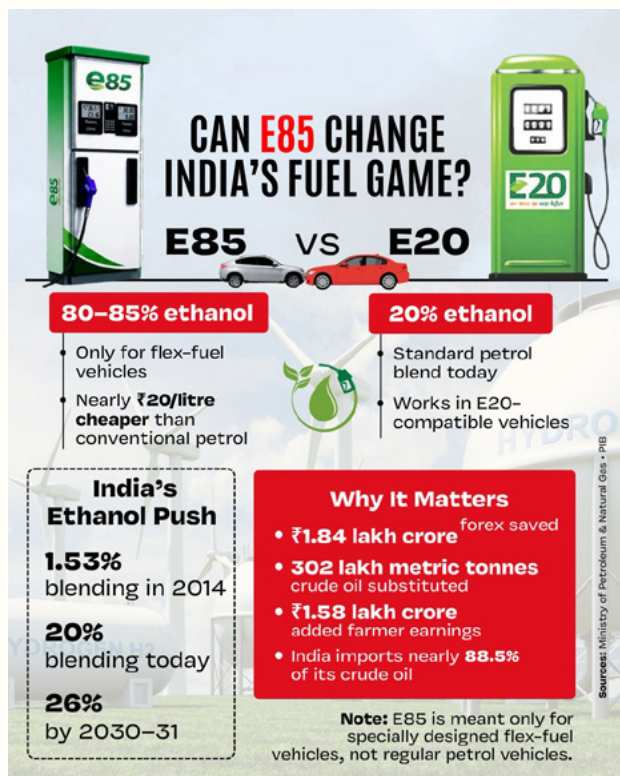
- Flex Fuel Vehicles are automobiles equipped with modified internal combustion engines that can run on petrol, ethanol, or a mixture of both. They can seamlessly operate on blends such as E20 and E85 without manual intervention.
- Ethanol is a renewable biofuel produced from agricultural feedstocks such as sugarcane, maize, surplus grains, and agricultural residues.

Key Features of Flex Fuel Technology:

- **Automatic Fuel Adaptation:** Advanced sensors and an Engine Control Module (ECM) detect the fuel blend and adjust engine parameters automatically.
- **Compatibility with Multiple Blends:** FFVs can operate on petrol, ethanol, or varying blends like E20, E30, and E85.
- **Lower Carbon Emissions:** Ethanol burns

cleaner than petrol, reducing greenhouse gas emissions and air pollution.

- **Indigenous Solution:** Since ethanol is domestically produced, flex-fuel technology reduces dependence on imported fossil fuels.



Significance of Flex Fuel Vehicles for India:

- **Reducing Crude Oil Imports:** India imports nearly 88% of its crude oil requirements. Greater adoption of FFVs can improve energy security and reduce foreign exchange expenditure.
- **Strengthening Farmer Incomes:** Ethanol production creates additional demand for agricultural produce, providing farmers with new income opportunities. The ethanol blending programme has generated over Rs.1.58 lakh crore in earnings for farmers since 2014.
- **Environmental Benefits:** Increased ethanol usage reduces carbon emissions, lowers vehicular pollution, and supports India's climate commitments.

- **Affordable Low-Carbon Mobility:** Unlike electric vehicles, FFVs can use existing fuel infrastructure, making adoption faster and more cost-effective.

About Ethanol Blending Programme (EBP):

- Launched in 2003, the Ethanol Blending Programme aims to reduce crude oil imports, enhance energy security, lower emissions, and create remunerative markets for farmers.
- **Major Achievements:**
 - » Ethanol blending increased from around 1.5% in 2014 to 20% nationwide by March 2025.
 - » Significant savings in foreign exchange and reduction in crude oil consumption have been achieved.
- **Impact:**
 - » Saved approximately ₹1.84 lakh crore in foreign exchange.
 - » Replaced over 302 lakh metric tonnes of crude oil.
 - » Reduced about 909 lakh metric tonnes of CO₂ emissions.

Policy Support for Ethanol-Based Mobility:

- The government has introduced several measures, including the National Policy on Biofuels, PM-JI-VAN Yojana, Interest Subvention Scheme, and GST reduction on ethanol from 18% to 5%.
- Additionally, the Global Biofuels Alliance, launched during India's G20 Presidency, promotes international cooperation in biofuel development.

Challenges:

- Key challenges include limited availability of flex-fuel vehicles, inadequate infrastructure for higher ethanol blends, taxation-related distortions, feedstock sustainability concerns, and low consumer awareness.

Conclusion:

The launch of India's first mass-market flex-fuel motor marks a major step towards sustainable mobility and energy security. Supported by

the Ethanol Blending Programme and strong policy initiatives, flex-fuel vehicles can reduce oil imports, increase farmer incomes, and lower emissions. With continued investment in infrastructure, awareness, and innovation, India can emerge as a global leader in ethanol-based transportation and biofuel development.

FSSAI Vegan Logo Mandate: New Rules for Vegan Foods

Context:

Recently, Food Safety and Standards Authority of India (FSSAI) under Food Safety and Standards (Vegan Foods) Amendment Regulations, 2026, have mandated that all approved vegan food products must carry a standardised vegan logo from July 2027.

Key Features of the Vegan Logo Mandate:

- **Mandatory Timeline:** All approved vegan products must compulsorily display the specified logo on their packaging.
- **Prior Approval Requirement:** Food Business Operators (FBOs) must obtain explicit approval from the licensing authority before using the logo.
- **Strict Definition:** Only products that are 100% free from animal-derived ingredients will qualify as vegan. This includes prohibition of milk, meat, eggs, fish, honey, and processing aids like bone char.
- **Import Coverage:** The regulation applies equally to domestic manufacturers as well as imported vegan products sold in India.
- **Operational Integrity:** Manufacturers must ensure complete physical separation from non-vegan production lines or follow strict sanitation validation protocols to prevent cross-contamination.

Significance of the Move:

- **Consumer Trust:** A government-certified logo will help ensure authenticity and build trust in plant-based products.
- **Industry Growth:** It supports expansion of

the plant-based market driven by health, sustainability, and ethical consumption trends.

- **Clear Labelling:** Reduces confusion between terms like vegan, dairy-free, and vegetarian by standardising labels.
- **Preventing Misleading Claims:** Helps curb greenwashing and ensures only certified products carry vegan claims, especially in milk alternatives, meat substitutes, and vegan snacks.



About FSSAI and Its Regulatory Role:

- The Food Safety and Standards Authority of India is an autonomous statutory body established under the Food Safety and Standards Act, 2006.
- Operating under the Ministry of Health and Family Welfare, it regulates the manufacture, storage, distribution, sale, and import of food products in India.
- Its core mandate includes:
 - » Ensuring safe and wholesome food for consumers
 - » Setting science-based standards for food products and additives
 - » Regulating labelling, packaging, and

food safety compliance

Conclusion:

The mandatory vegan logo introduced by FSSAI represents a significant step towards strengthening transparency and trust in India's food ecosystem. By standardising labelling and improving regulatory oversight, the move is expected to benefit consumers and support the structured growth of the plant-based food industry.

FCNR(B) Deposits: RBI Push to Attract NRI Funds

Context:

The Reserve Bank of India (RBI) has allowed banks to mobilise fresh FCNR(B) deposits till September 2026 and offered a swap facility to reduce hedging costs. Despite this, in recent times inflows remain weak, raising the need for higher interest rates to attract NRI funds.

About FCNR(B) Deposits:

- Foreign Currency Non-Resident (Bank) or FCNR(B) deposits are fixed-term deposits opened by NRIs, OCIs, and PIOs in India. These accounts allow deposits in foreign currencies like the US dollar, euro, pound sterling, yen, Australian dollar, and Canadian dollar, without converting them into rupees.
- Interest earned on these deposits is tax-free in India for eligible non-residents. Banks offer rates linked to global benchmark interest rates.

Current Situation and Trends:

- FCNR(B) inflows have fallen sharply. In FY26, inflows dropped 86% to \$946 million from \$7.1 billion in FY25. Outstanding FCNR(B) deposits stood at \$33.8 billion.
- Overall NRI deposits also declined in FY26 to \$14.41 billion from \$16.16 billion, although NRE and NRO deposits saw an increase, partly offsetting the fall in FCNR(B)

inflows. Both NRE and NRO accounts are denominated in Indian Rupees.



Interest Rate Gap and Competitiveness:

- FCNR(B) deposit rates in India remain relatively low compared to domestic rupee deposits and global alternatives. Major Indian banks like SBI, HDFC Bank, and ICICI Bank offer around 2.9%–3.6% on FCNR(B) deposits, while comparable rupee fixed deposits offer around 6.3%–6.5%.
- In contrast, US dollar deposits and certificates of deposit in foreign markets offer over 4% returns. For example, US banks such as Merrick Bank and Morgan Stanley offer 4–4.3% annual yields, making them more attractive to NRIs.
- Experts suggest Indian banks may need to raise FCNR(B) rates by at least 100 basis points to remain competitive.

RBI Measures and Swap Facility:

- To boost inflows, the RBI has introduced a swap facility that covers hedging costs for banks raising FCNR(B) deposits. This reduces risk and improves profitability for banks.
- Banks can exchange foreign currency deposits with the RBI at a concessional rate, making it easier to mobilise dollar funds. The facility is valid for deposits raised till September 2026.

Challenges in Mobilisation:

- Despite policy support, inflows remain weak due to low interest competitiveness and attractive returns available in foreign

markets, especially in the US where rates remain above 4%. Experts believe regulatory support alone may not be sufficient without higher deposit rates.

Importance for India:

- FCNR(B) deposits are an important source of foreign currency funding for India's external stability. Higher inflows help strengthen forex reserves, support the banking system, and reduce pressure on external financing.

Conclusion:

While RBI's swap facility improves the attractiveness of FCNR(B) deposits, weak inflows highlight the need for higher interest rates. To effectively attract NRI funds, Indian banks must balance global competition, hedging costs, and domestic financial stability.

India Records Historic Remittance Inflows in FY26

Context:

India recorded a historic surge in inward remittances in 2025–26, with Indian workers abroad sending home \$110.47 billion, the highest ever in a single year.

Key Highlights of Remittance Trends:

- In the January–March 2026 quarter alone, Indians abroad remitted \$31.07 billion, marking a 13-year high and a 34% year-on-year increase. For the full fiscal year 2025–26, remittances rose by 26% compared to the previous year.
- Broader “private transfers,” which include remittances, deposits from non-resident Indians, and personal gifts, reached \$151.71 billion. Net transfers stood at \$144.07 billion after accounting for outward flows.

Drivers behind the Surge:

- The increase in remittances was influenced by multiple factors. A key driver was the West Asia geopolitical situation, which encouraged precautionary transfers

from Indian workers in Gulf countries. Additionally, currency depreciation enhanced the value of remitted funds in domestic terms.

- Data from the Reserve Bank of India indicates that remittances have remained resilient despite global financial volatility and subdued capital inflows.

Changing Geography of Remittances:

- Traditionally, Gulf countries have been the largest source of remittances. However, their share has declined from 47% in 2016–17 to about 38% in 2023–24. Countries such as the United Arab Emirates, Saudi Arabia, Kuwait, Qatar, Oman, and Bahrain remain important but less dominant.
- At the same time, advanced economies like the United States and the United Kingdom are emerging as significant contributors. This shift reflects changing migration patterns, with more skilled Indian workers moving to developed economies.



Impact on India's External Sector:

- Strong remittances played a critical role in cushioning India's external account amid weak capital inflows. Net FDI inflows remained subdued, and FPI flows were volatile, increasing reliance on remittance inflows to stabilise the rupee.
- In FY26, India still managed a BoP surplus of \$7.22 billion in Q4, largely supported by these private transfers.
- Remittances also helped offset pressures from a widening trade deficit, particularly

driven by high crude oil imports.

Conclusion:

Record remittances in FY26 provided a crucial buffer for India's external finances and helped stabilise the rupee amid global uncertainties. However, they remain a supportive but temporary pillar. Sustainable external stability will depend on stronger FDI, resilient capital markets, and a more balanced trade structure in the years ahead.

Land Port Management System (LPMS)

Context:

Recently, Union Home Minister Amit Shah launched the Land Port Management System (LPMS) – VINIMAY on 9 June 2026. Developed by the Land Ports Authority of India (LPAI), the platform aims to digitise and streamline cargo and passenger movement across India's land borders, supporting the vision of a technology-driven Smart Border Management System.

What is LPMS (VINIMAY)?

- LPMS is a state-of-the-art digital platform that integrates operations across India's land ports into a unified system. It enables secure, real-time exchange of logistics and regulatory information and provides end-to-end digital workflows for cargo and passenger processing.
- **Key Features:**
 - » Single digital platform for land port operations.
 - » Integration with national portals and regulatory agencies.
 - » Single Electronic Window for seamless clearances.
 - » Automatic Number Plate Recognition (ANPR)-based gate operations.
 - » Reduction in paperwork, processing time, and transaction costs.

» Improved coordination among government agencies and private stakeholders.

- The system is expected to enhance ease of doing business, facilitate trade, and strengthen border security.

About Land Ports Authority of India (LPAI):

- The Land Ports Authority of India (LPAI) is a statutory body under the Ministry of Home Affairs, established in 2012. It is responsible for developing and managing Integrated Check Posts (ICPs) and land ports along India's international borders.
- Currently, LPAI operates 15 land ports across borders with Pakistan, Nepal, Bhutan, Bangladesh, and Myanmar. Its objective is to ensure efficient movement of passengers and cargo while promoting regional trade and connectivity.

About border Management and Border Development Initiatives:

- India shares a land border of about 15,106.7 km with seven neighbouring countries, making border management a critical national security priority.
- **Key initiatives include:**
 - » **Border Area Development Programme (BADP):** Improves infrastructure and quality of life in border villages.



» **Coastal Security Scheme (CSS):** Strengthens coastal security

infrastructure.

- » **Vibrant Villages Programme (VVP):** Promotes development and livelihood opportunities in remote border villages.
- » **Border Infrastructure and Management (BIM) Scheme:** Supports roads, fencing, floodlighting, and surveillance infrastructure.
- LPMS complements these initiatives by introducing digital governance and real-time monitoring at border crossings.

Conclusion:

The launch of LPMS (VINIMAY) marks a significant step towards modernising India's border governance through digital technology. By integrating trade facilitation, passenger movement, and security management, it strengthens the vision of Smart Borders while contributing to economic growth, regional connectivity, and national security.

Dropshipping Model in the Digital Economy

Context:

The recent rise of AI-driven storefronts, influencer marketing, and social media commerce has significantly expanded the practice of drop shipping, creating both economic opportunities and consumer protection concerns.

About Drop Shipping:

- Drop shipping is an e-commerce business model where a seller markets and sells products without maintaining inventory. Orders are forwarded to a manufacturer or wholesaler who directly ships the product to the customer.

How does it work?

- Seller creates an online store or social media shop.
- Customer places an order and makes payment.
- Seller forwards the order to a supplier.

- Supplier ships the product directly to the customer.
- Seller earns profit from the price difference.

Key Features:

- No inventory or warehousing requirement.
- Low startup and operational costs.
- Global sourcing and market access.
- AI-assisted marketing and customer support.
- Limited supply-chain transparency.
- Shared or unclear accountability.

Advantages:

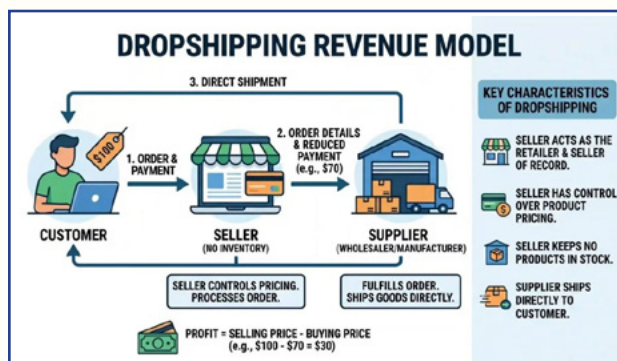
- Encourages entrepreneurship.
- Expands product variety for consumers.
- Supports growth of the digital economy.
- Enables easy market entry for small businesses.

Risks for Online Shoppers:

- Online scams and fake stores.
- Counterfeit or defective products.
- Inflated product prices.
- Delivery delays.
- Difficult refunds and returns.
- Data privacy and cyber-security risks.
- Misleading AI-generated product images and reviews.

Simple Example

- » A seller advertises a mobile cover for Rs.500 on Instagram. After receiving an order, they purchase the same product from a wholesaler for Rs.250 and ask the wholesaler to deliver it directly to the customer. The seller earns Rs.250 without ever handling the product.



Way Forward:

- Improve supply-chain transparency.
- Strengthen consumer protection mechanisms.
- Ensure platform accountability.
- Enhance data protection safeguards.
- Increase awareness about online shopping risks.

Relevant Indian Regulatory Framework:

- **Consumer Protection Act, 2019**
 - » Protects consumers from unfair trade practices.
 - » Provides mechanisms for grievance redressal.
- **Consumer Protection (E-Commerce) Rules, 2020**
 - » Mandate disclosure of seller information.
 - » Require transparent refund and return policies.
- **Information Technology Act, 2000**
 - » Addresses cyber fraud and data-related offences.
- **Digital Personal Data Protection Act, 2023**
 - » Regulates handling of personal data by digital entities.

Conclusion:

Drop shipping has democratized online entrepreneurship and expanded e-commerce opportunities. However, stronger regulations and consumer awareness are needed to address concerns related to transparency, product quality, and digital safety.

Odisha Coal Gasification Project

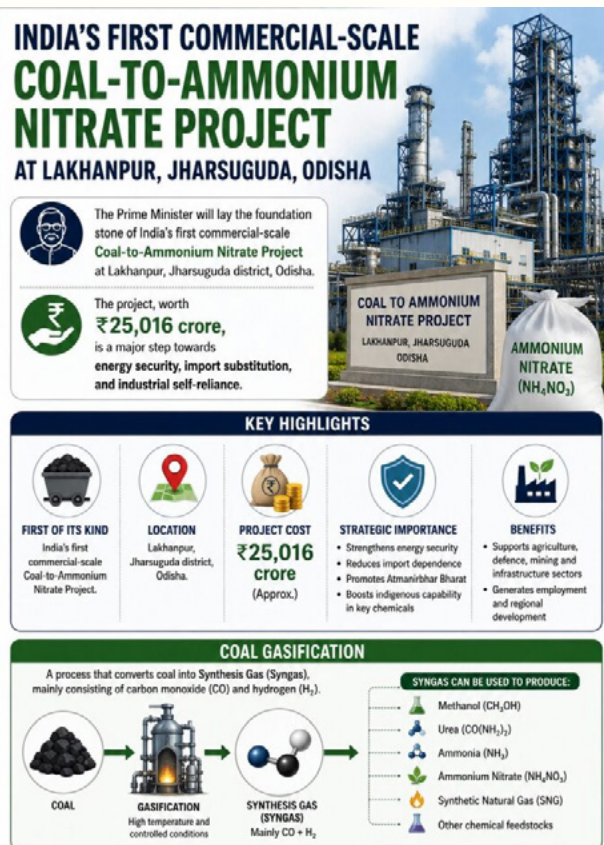
Context:

Recently, PM Modi virtually laid the foundation stone of a Rs.25,000 crore Coal-to-Ammonium Nitrate project at Lakhanpur, Jharsuguda in Odisha. The project is being developed by Bharat Coal Gasification and Chemicals Limited (BCGCL), a joint venture of Coal India Limited (CIL) and Bharat Heavy Electricals Limited

(BHEL). It is considered India's first large-scale industrial coal gasification-based chemical project.

About the Project:

- The project is a commercial coal gasification plant that converts domestic coal into ammonium nitrate, a key industrial chemical used primarily in:
 - » Mining explosives
 - » Infrastructure development
 - » Civil engineering activities
- The facility is designed to produce around 2,000 tonnes per day (TPD) of ammonium nitrate, with annual production of about 6.6 lakh tonnes.
- It will use indigenously developed Pressurised Fluidised Bed Gasification (PFBG) technology provided by BHEL, making it a milestone in domestic technological capability.



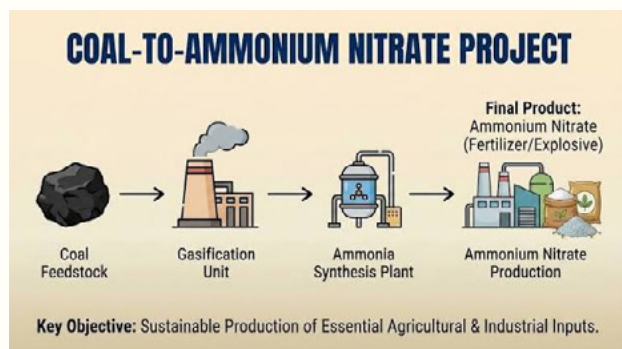
How Does Coal Gasification Work in This

Project?

- Coal gasification converts solid coal into syngas (carbon monoxide + hydrogen) instead of burning it directly. This syngas is then processed into:
 - » Ammonia (NH_3) via the Haber-Bosch process
 - » Nitric acid (HNO_3) via the Ostwald process
 - » Finally, ammonium nitrate (NH_4NO_3)
- Thus, coal acts as a feedstock for chemical production rather than just a fuel, enabling higher value addition.

What is Coal Gasification?

- Coal gasification is a process in which coal is converted into syngas (synthetic gas), a mixture of hydrogen, carbon monoxide, and carbon dioxide. This syngas can then be used to produce chemicals, fertilisers, fuels, and other industrial products.



Compared to direct coal burning, gasification:

- Improves efficiency of coal utilisation
- Enables production of high-value chemicals
- Reduces environmental footprint when combined with cleaner technologies

Significance of the Project:

- Energy and Import Security:** India imports large quantities of ammonia and related chemicals. This project reduces dependency by using abundant domestic coal.
- Value Addition to Coal Economy:** Instead of

burning coal for electricity, it is converted into high-value chemicals, improving resource efficiency.

- Boost to Aatmanirbhar Bharat:** Indigenous technology from BHEL and public sector collaboration strengthens self-reliance in strategic chemical production.
- Industrial Growth:** Ammonium nitrate is crucial for mining, infrastructure, and construction, supporting India's core sectors.

Challenges:

- High capital and operational costs
- Environmental concerns (CO_2 emissions from gasification)
- Technology scaling risks
- Need for strict safety norms due to explosive nature of ammonium nitrate

Conclusion:

The Coal-to-Ammonium Nitrate Project represents a strategic shift in India's coal policy—from mere energy generation to value-added chemical production and industrial self-reliance. It also highlights how coal gasification can play a critical role in India's energy transition while balancing economic growth and import substitution.

RBI Introduces New Compensation Framework for Victims

Context:

Recently, The Reserve Bank of India (RBI) has announced a revised compensation framework for victims of digital payment frauds under the RBI (Commercial Banks — Responsible Business Conduct) Third Amendment Directions, 2026. The new rules will come into effect for electronic banking transactions (EBTs) carried out on or after January 1, 2027. The move aims to strengthen customer protection as digital payment frauds continue to rise across the country.

Rising Digital Payment Frauds in India:

- India's rapid adoption of digital payment platforms such as UPI, mobile banking, internet banking, and credit/debit cards has transformed financial transactions.
- However, it has also led to an increase in cyber frauds, including phishing, SIM swapping, OTP theft, fake UPI IDs, QR code scams, vishing, and AI-powered deepfake frauds.
- According to RBI data, the banking sector reported more than 36,000 fraud cases involving Rs.13,930 crore during 2023–24.

Key Features of the New Compensation Rules:

- Under the revised compensation framework, a genuine customer who reports the fraud to both the National Cyber Crime Reporting Portal or Helpline 1930 and their bank within five calendar days will be eligible for compensation. This benefit can be claimed only once in a lifetime.
- For fraud losses of up to Rs.50,000, victims will receive 85% of the net loss or Rs.25,000, whichever is lower. The compensation will be shared between the RBI, the customer's bank, and the beneficiary bank in domestic fraud cases.
- In cross-border frauds, the RBI and the customer's bank will bear the compensation, as foreign beneficiary banks are excluded from liability.
- The revised rules also introduce special protection for credit card users. Banks must provide a shadow reversal, a temporary credit restoring the disputed amount, within five days of receiving a complaint.
- If the stolen money is later recovered, banks must recalculate the customer's actual loss and adjust the compensation accordingly.
- The RBI has already implemented several measures to curb digital payment frauds, including mandatory two-factor authentication, real-time fraud monitoring systems, and stricter action against mule

accounts used by fraudsters.

- However, challenges such as low public awareness, poor recovery rates, cross-border cybercrime, and rapidly evolving AI-based scams continue to pose significant risks.

Conclusion:

The RBI's revised compensation framework marks an important step toward building greater trust in India's digital payment ecosystem. By providing faster financial relief, clearly defining institutional responsibility, and strengthening consumer rights, the new rules seek to reduce the financial impact of online banking frauds.

Zojila Tunnel: Year-Round Kashmir-Ladakh Connectivity

Context:

Recently, the final breakthrough of the strategically important 13.15-km-long Zojila Tunnel, which connects Kashmir with Ladakh, has been successfully completed.

Key Features and Geographic Location:

- The Zojila Tunnel will be Asia's longest bi-directional single-tube road tunnel. It is located at an altitude of 11,578 feet in the Himalayas.
- The tunnel connects Ganderbal (Baltal) in Jammu & Kashmir with Dras (Minamarg) in Ladakh along National Highway-1 (NH-1), a crucial route linking the region.
- It is being constructed by Megha Engineering and Infrastructure Limited (MEIL) using the New Austrian Tunneling Method (NATM), a modern engineering technique suited for complex mountain geology. The project is expected to become fully operational by February 2028.

Strategic Importance:

- The tunnel will provide all-weather connectivity between Kashmir and Ladakh. At present, the Zojila Pass remains closed

for 3–4 months during winter due to heavy snowfall and avalanches, cutting off Ladakh from the rest of India. Once completed, the tunnel will ensure uninterrupted 365-day connectivity.

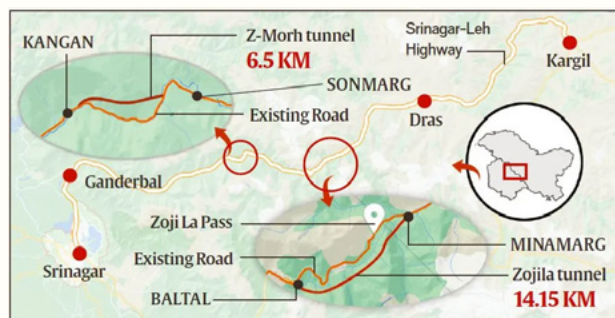
- It will significantly reduce travel time across the Zojila route from about 3.5 hours to just 15 minutes. This will also help reduce fuel consumption, emissions, and overall transportation costs.
- From a national security perspective, the tunnel is highly significant as it lies close to the Line of Control (LoC) and the Line of Actual Control (LAC). It will greatly improve India's defence preparedness by enabling the continuous movement of troops, military equipment, tanks, and essential supplies even during harsh winter conditions.

Regional Economy and Tourism Development:

- The tunnel is expected to boost the regional economy of Ladakh, which often faces winter isolation and high prices of essential goods due to disrupted supply chains. Improved connectivity will lower transport costs and

support smoother movement of goods and services.

- It will also promote tourism throughout the year, especially winter tourism, thereby generating new employment opportunities and supporting local livelihoods in the region.



Conclusion:

The Zojila Tunnel is not only an engineering marvel but also a key pillar of inclusive development in the Himalayan region. It is expected to be a game-changer in securing India's sovereignty and territorial integrity amid twin-front challenges with China and Pakistan.




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Defence and Internal Security

SIPRI Report 2026: Global Nuclear Arms Race and India's Strategic Shift

Context:

Recently, the renowned global arms and security research institution, the Stockholm International Peace Research Institute (SIPRI), published its annual Yearbook 2026. The report comes at a time when the world is witnessing unprecedented geopolitical tensions, the erosion of multilateral treaties, and the weakening of the Rules-based International Order. The findings of the report not only highlight the rapid modernization of global nuclear arsenals but also indicate a major and historic paradigm shift in South Asia, particularly in India's nuclear strategy.

Key Findings of the Global Nuclear Landscape:

- According to SIPRI 2026, all nine nuclear-armed states (the United States, Russia, the United Kingdom, France, China, India, Pakistan, North Korea, and Israel) are increasingly prioritizing military deterrence over diplomatic negotiations:
 - » **Size of the Arsenal:** The total number of nuclear weapons worldwide has reached approximately 12,187.
 - » **High Operational Alert (Ready-to-Fire):** Around 4,012 warheads are deployed on missiles and aircraft, of which approximately 2,100–2,200 warheads remain on “high operational alert,” meaning they can be launched within minutes.
 - » **Record Military Expenditure:** Global

military spending has reached an all-time high of US\$ 2.9 trillion.

HIGHLIGHTS OF THE YEARBOOK, 2026

TOTAL NUCLEAR WEAPONS:

Nine countries (USA, Russia, UK, France, China, India, Pakistan, North Korea, and Israel) together possessed approximately

12,187
nuclear weapons.



OF THESE,

9,745

are in military stockpiles and are considered potentially operationally available.



INDIA'S WARHEADS & SPENDING:

190 warheads as of January 2026.



12 nuclear warheads deployed, which can be delivered through its nuclear triad.



5th India is the world's fifth-largest military spender in 2025, with expenditure of \$92.1 billion, an increase of 8.9% over the previous year.



2nd India is the world's second-largest importer (8.2%) of major arms during the 2021-25 period.



India and South Asia: A Strategic Paradigm Shift

- This year's report confirms a significant and more assertive transformation in India's traditional security outlook:
 - » **Increasing Number of Warheads:** India's total nuclear warheads increased from 180 in 2025 to 190 at the beginning of 2026. This growth remains consistent with India's policy of "Credible Minimum Deterrence."
 - » **Peacetime Deployment:** The most significant claim in the report is that India has, for the first time, actively deployed 12 nuclear warheads during peacetime. Traditionally, India maintained a separation between the nuclear cores of its missiles and their launch systems. This "ready-to-fire" deployment reflects India's enhanced quick-response capability.
 - » **China-Centric Defense Strategy (Shift from Pakistan to China):** India's primary strategic focus is now increasingly centered on addressing China's military challenge. India is currently emphasizing the development of systems such as the Agni-V intercontinental ballistic missile (ICBM) and canisterized missile platforms to ensure that the entire Chinese mainland falls within India's deterrence range.

The Trilateral Nuclear Equation : India, China & Pakistan:

Country	Nuclear Warheads (SIPRI 2026)	Key Strategic Developments
China	Rapidly Expanding	Increased deployed warheads to 34; placing missiles in silos under a "Launch-on-Warning" posture.

India	190	Deployed 12 warheads during peacetime for the first time; focusing on long-range strike capabilities and strengthening the Nuclear Triad.
Pakistan	Stable but Advancing	Continuing qualitative improvements; focusing on MIRV technology to penetrate India's Ballistic Missile Defense (BMD) system.

- The growing strategic and technological cooperation between China and Pakistan presents India with the real challenge of a potential "two-front war."

Strategic and Security Implications for India:

- **Reconsideration of the 'No First Use' (NFU) Policy:** India's nuclear doctrine has long been anchored in the principle of "No First Use." However, given the aggressive nuclear modernization efforts of China and Pakistan, strategic experts are increasingly debating whether India should introduce greater flexibility into its NFU policy.
- **Strategic Autonomy versus Imports:** With a military budget of US\$ 92.1 billion, India is the world's fifth-largest defense spender. However, a concerning reality is that India remains the world's second-largest arms importer. Dependence on foreign suppliers for advanced military hardware could undermine strategic autonomy during times of crisis.
- **Integration of Advanced Technologies:** In response to China's advances in hypersonic missiles, space-based assets, cyber warfare, and the militarization of Artificial Intelligence (AI), India must continue to

upgrade its technological capabilities.

Way Forward:

- **Self-Reliance in Defense Manufacturing (DefTech Autonomy):** India must move beyond merely importing weapons and aggressively promote indigenous defense innovation. Industrial initiatives such as the Bharat Industrial Development Scheme (BHAVYA) should be leveraged to support defense startups and advanced military technologies.
- **Strengthening the Nuclear Triad:** India must further enhance its submarine-based nuclear capability (SSBNs, such as INS Arighat), as sea-based deterrents are the most difficult to neutralize and provide a credible second-strike capability.
- **Multilateral Diplomacy and Risk Reduction:** Alongside military preparedness, India should continue advocating for nuclear

risk reduction and crisis-management communication mechanisms at global forums while keeping diplomatic channels open with Beijing and Islamabad to prevent misunderstandings and miscalculations.

Conclusion:

The SIPRI Yearbook 2026 serves as a wake-up call for India. In this evolving security environment, India's peacetime deployment of nuclear warheads and its emphasis on China-focused long-range strike capabilities reflect strategic maturity and a realistic approach to national security. To safeguard its sovereignty, India must strengthen its indigenous defense capabilities while adhering to the principle that "Strength Respects Strength."

Short Issues

RudraM-II Missile: India's Indigenous Anti-Radiation Weapon

Context:

The Defence Research and Development Organisation (DRDO), in collaboration with the Indian Air Force (IAF), successfully conducted the flight test of the indigenous RudraM-II air-to-surface anti-radiation missile on June 2, 2026.

About RudraM-II Missile:

- RudraM-II is an indigenously developed, solid-propelled, air-to-surface anti-radiation missile designed to detect and destroy enemy radar systems, surveillance networks, and communication infrastructure that form the backbone of integrated air defence systems.
- It has been developed by the Research Centre

Imarat (RCI), Hyderabad, in collaboration with DRDO laboratories such as DRDL, HEMRL, and ARDE, along with production partners like Hindustan Aeronautics Limited (HAL).

Key Technical Specifications:

- The RudraM-II has an operational range of approximately 300–350 km, enabling stand-off engagement of enemy air defence systems without entering high-threat zones.
- It can achieve speeds of up to Mach 5.5, significantly reducing enemy reaction time.
- The missile carries a conventional warhead of up to 200 kg and can be launched from altitudes between 3 km and 15 km, offering flexibility across different combat scenarios.
- Powered by a solid-propellant rocket motor developed by DRDO, it ensures high reliability and sustained thrust throughout its flight profile.

Advanced Features and Guidance Systems:

- RudraM-II features a multi-layered guidance system designed for high precision and survivability. It uses a Passive Radar Homing (PRH) system to detect enemy radar emissions and lock onto targets. This is complemented by an Imaging Infrared (IIR) seeker, allowing the missile to maintain target tracking even if enemy radars are switched off mid-flight.
- Its hybrid navigation system integrates Inertial Navigation System (INS) with satellite guidance such as GPS/NavIC for accurate mid-course correction. The missile supports both Lock-On Before Launch (LOBL) and Lock-On After Launch (LOAL) modes, enabling flexible engagement in dynamic battlefield conditions.



INDIA'S INDIGENOUS RUDRAM-II MISSILE SUCCESSFULLY FLIGHT TESTED
 By DRDO and Indian Air Force on June 2, 2026

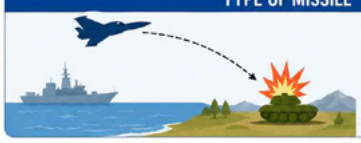
KEY HIGHLIGHTS

-  Missile was launched from an airborne platform under extreme release conditions.
-  **Successfully:**
 - Followed intended trajectory
 - Hit the predefined target accurately.
-  **Trials validated:**
 - Critical subsystems
 - Flight parameters
 - Precision strike capability.

ABOUT RUDRAM-II

-  RudraM-II is an indigenous air-to-surface missile.
-  **Designed for:** Precision strike missions.
-  **Capable of:** Destroying enemy ground based targets.

TYPE OF MISSILE

 **Air-to-surface missile:** Fired from aircraft to strike targets on land or sea.

 The successful flight test of RudraM-II strengthens India's indigenous defence capabilities and enhances the precision strike power of the IAF.

Strategic Significance:

- RudraM-II plays a key role in modern electronic warfare by neutralising enemy air defence networks. By destroying radar stations, surveillance systems, and surface-to-air missile (SAM) sites, it effectively

“blinds” enemy defences and creates safe corridors for follow-on air strikes and deep penetration missions.

- The system strengthens India's defence self-reliance under the Aatmanirbhar Bharat initiative. It is also expected to replace ageing imported systems such as the Russian-origin Kh-31 anti-radiation missiles, reducing dependence on foreign technology.

What is an Anti-Radiation Missile?

- An Anti-Radiation Missile (ARM) is a specialised weapon that detects and homes in on electromagnetic radiation emitted by enemy radar and communication systems. Instead of emitting signals, it passively tracks radio-frequency emissions and destroys their source.
- Such missiles are crucial in modern warfare as they degrade enemy air defence capabilities and enhance the safety and effectiveness of friendly air operations.

Conclusion:

The successful test of RudraM-II marks a major advancement in India's indigenous missile technology. With hypersonic speed, long-range strike capability and advanced guidance systems, it significantly enhances the Indian Air Force's operational effectiveness. The missile also reflects India's growing defence self-reliance and preparedness for modern electronic and air warfare scenarios.

DFPDS 2026: Enhanced Financial Powers for Armed Forces

Context:

Recently, Defence Minister Rajnath Singh unveiled the revised Delegation of Financial Powers for Defence Services (DFPDS) for the armed forces. Under this framework, the procurement-related financial powers of various commanders and financial authorities in the

Army, Navy, and Air Force have been increased by up to 100 percent. The government aims to accelerate defence procurement processes, enhance operational efficiency, and promote self-reliant defence production.

What is DFPDS?

- The Delegation of Financial Powers for Defence Services (DFPDS) is an administrative framework that authorizes various officials of the armed forces to make financial decisions and undertake procurement for defence service requirements.
- It primarily governs procurements related to Revenue Expenditure, including:
 - » Ammunition and spare parts,
 - » Maintenance of equipment,
 - » Medical supplies,
 - » Infrastructure and works projects,
 - » Items related to operational requirements.
- In contrast, major capital defence acquisitions (such as fighter aircraft, tanks, and warships) fall under the Defence Acquisition Procedure (DAP).

Key Features of the Revised Financial Powers:

- **Significant Increase in Financial Limits:** Under the new provisions, the procurement-related financial powers of various military authorities have been doubled or increased further. This will enable commanders to make quicker decisions without waiting for approvals from higher authorities.
- **Greater Autonomy for Operational Requirements:** Commanders of all three services have been granted special financial powers to meet emergency and operational requirements. This will facilitate rapid procurement in border areas and during crisis situations.
- **Promotion of Self-Reliance and Research:** Financial powers related to indigenisation and Research & Development (R&D) have also been doubled. The objective is to reduce dependence on foreign Original Equipment

Manufacturers (OEMs) and encourage the domestic defence industry.

- **Joint-Service Procurement:** The new DFPDS provides for joint procurement through a “Lead Service” mechanism. This will enable the Army, Navy, and Air Force to collectively procure items with common requirements, thereby reducing costs and ensuring better utilization of resources.
- **Encouraging Decentralisation:** The revised framework includes several additional Competent Financial Authorities (CFAs), allowing procurement decisions to be taken at lower levels and reducing bureaucratic procedures.

Significance of the Reform:

- **From the Perspective of National Security:** Rapid response capability has become extremely important in modern warfare. Amid challenges such as border tensions, drone warfare, cyber threats, and electronic warfare, military commanders require the ability to make immediate decisions. The enhanced financial powers address this requirement.
- **Boost to the Atmanirbhar Bharat Initiative:** By promoting indigenous research, innovation, and domestic production in the defence sector, this measure will strengthen the Atmanirbhar Bharat and Make in India initiatives.
- **Faster Procurement Process:** The defence procurement system has often been delayed due to complex procedures and multi-layered approval mechanisms. The decentralisation of financial powers is expected to reduce these bottlenecks.

Challenges:

- Although enhanced financial autonomy is a positive step, it also brings certain challenges:
 - » Ensuring financial accountability.
 - » Maintaining transparency in procurement processes.
 - » Preventing corruption and misuse of

resources.

- » Establishing better coordination among the different armed services.
- » Developing sufficient production capacity within the indigenous defence industry.

Conclusion:

The DFPDS-2026 revision is a significant reform aimed at providing the Indian Armed Forces with greater operational freedom, faster decision-making capability, and enhanced financial flexibility. It will not only strengthen defence preparedness but also support self-reliant defence production, joint military operations, and the development of a military structure aligned with the requirements of modern warfare.

BrahMos Missile System

Context:

Recently, India has signed a deal to export the BrahMos missile system to Vietnam. This development comes after the Philippines became the first foreign buyer of BrahMos missiles in 2022, marking India's emergence as a defence exporter of high-end missile technology.

About BrahMos Missile System:

- The BrahMos missile system is a supersonic cruise missile jointly developed by India and Russia. It is produced by BrahMos Aerospace, a collaboration between India's DRDO and Russia's NPOM (NPO Mashinostroyeniya).
- The name "BrahMos" is derived from two rivers—the Brahmaputra (India) and the Moskva (Russia), symbolizing strategic partnership.
- India holds a 50.5% stake, while Russia holds 49.5%. The missile was first successfully tested on 12 June 2001 from the Integrated Test Range, Chandipur, Odisha.

Key Features of BrahMos Missile:

- **Supersonic Speed and Precision:** BrahMos

is among the fastest cruise missiles in the world, capable of flying at speeds of around Mach 2.8 to 3.0. Its high speed significantly reduces enemy reaction time and enhances strike accuracy.

- **Two-Stage Propulsion System:** The missile uses a two-stage propulsion mechanism:
 - » **First stage:** Solid rocket booster accelerates the missile to supersonic speed.
 - » **Second stage:** Liquid-fuel ramjet engine sustains cruise at high speed.
- A ramjet engine compresses incoming air using forward motion without a rotating compressor, enabling sustained supersonic flight.



Know What the
BrahMos Missile Is

BrahMos is a supersonic cruise missile.



It was jointly developed by India & Russia.



1998
India & Russia signed an agreement for the BrahMos project.



2007
The Indian Army received the BrahMos missile for the first time.

February 2011: The Indian Army placed orders worth ₹3,000 crore for BrahMos missiles.

By March 2013: The Indian Navy & Air Force placed orders worth

₹6,800

crore for BrahMos missiles.

BrahMos-II is under development and is expected to have a range of up to

1,500

km

What is a Cruise Missile?

- Cruise missiles are unmanned, jet-powered weapons that maintain powered flight throughout their trajectory. They fly at low altitude and are highly manoeuvrable, making them difficult to detect.
- **Examples include:**
 - » BrahMos (India-Russia)
 - » Tomahawk (USA)
 - » Kalibr (Russia)
- **Force Multiplier in Modern Warfare:** Compared to subsonic missiles, BrahMos offers:
 - » 3× higher speed
 - » Greater kinetic energy
 - » Higher precision
 - » Reduced interception probability
- **Maritime and Regional Security:** BrahMos enhances deterrence capabilities, especially in the Indian Ocean Region and South China Sea, supporting India's broader strategic outreach.

Cruise vs Ballistic Missiles:

- **Cruise missiles:** Fly at low altitude, powered throughout, highly manoeuvrable.
- **Ballistic missiles:** Follow a high, arched trajectory and are powered only in the initial phase.
 - » Examples of ballistic missiles include Agni series and Prithvi missiles.

Operational Capability and Variants:

- BrahMos is a “fire-and-forget” stand-off weapon, meaning it can be launched from a safe distance and independently navigates to its target.
- It is deployed across multiple platforms:
 - » Land-based systems (Indian Army)
 - » Naval ships (Indian Navy)
 - » Fighter aircraft (Su-30 MKI) for air-launched version
 - » Submarine-launched variants

Key Variants:

- Extended-range versions up to 350–400 km
- BrahMos-NG (Next Generation) under development with lighter design and improved stealth features
- Its low radar signature and ability to fly as low as 10 metres in terminal phase enhance survivability against enemy air defence systems.

Strategic Significance:

- **Export Potential and Defence Diplomacy:** The sale to the Philippines, and upcoming deals with Vietnam and Indonesia, marks India's entry into the global high-end missile export market. It strengthens India's position as a credible defence exporter in the Indo-Pacific.

Conclusion:

The BrahMos missile system export to countries like Vietnam and Indonesia highlights India's growing presence in the global defence market and strengthens its strategic influence in the Indo-Pacific region.

India's Multi-Layered Ballistic Missile Defence System

Context:

Recently, The Defence Research and Development Organisation (DRDO) successfully conducted tests of its indigenous Ballistic Missile Defence (BMD) system. The tests demonstrated India's capability to intercept long-range ballistic missile threats through a multi-layered defence shield.

What is a Ballistic Missile Defence (BMD) System?

- A Ballistic Missile Defence (BMD) system is an integrated network of radars, sensors, command-and-control systems, and interceptor missiles designed to detect, track, and neutralize incoming ballistic missiles before they reach their targets.
- The concept of a multi-layered defence ensures that if a threat escapes one layer of interception, it can be engaged by another layer, thereby increasing the probability of successful interception.

Key Highlights of the Recent Tests:

- DRDO conducted three successful flight tests demonstrating India's multi-layered defence against long-range ballistic missiles.
- Interceptor missiles successfully tracked and neutralized their designated targets.
- The tests validated both exo-atmospheric and endo-atmospheric interception capabilities.
- The Ministry of Defence stated that the system is capable of engaging missile threats up to the range of Intercontinental Ballistic Missiles (ICBMs).
- DRDO also successfully carried out the maiden flight test of the Naval Anti-Ship Missile-Medium Range (NASM-MR), strengthening India's maritime strike capability.

India Joins an Elite Group of Nations:

- The successful demonstration has placed India among a small group of countries possessing advanced Ballistic Missile Defence capabilities. Only a handful of nations, including the United States, Russia, China and Israel, possess proven missile defence systems capable of countering long-range ballistic missile threats.



Evolution of India's BMD Programme

- **Phase-I**
 - » **Prithvi Air Defence (PAD)**
 - Exo-atmospheric interceptor.
 - Engages ballistic missiles outside the Earth's atmosphere.

- First successfully tested in 2006.
- » **Advanced Air Defence (AAD)**
 - Endo-atmospheric interceptor.
 - Destroys incoming missiles within the atmosphere.
 - Forms the second layer of defence.
- **Phase-II**
 - » India is currently developing advanced interceptor systems such as AD-1 and AD-2 to counter Intermediate-Range Ballistic Missiles (IRBMs) and Intercontinental Ballistic Missiles (ICBMs). Recent tests are part of this next-generation BMD architecture.

Strategic Significance:

- **Strengthening National Security:** The successful tests significantly improve India's capability to defend against ballistic missile attacks and emerging aerial threats.
- **Credible Nuclear Deterrence:** A robust BMD system complements India's nuclear doctrine by enhancing survivability against missile strikes.
- **Atmanirbhar Bharat in Defence:** The tests demonstrate India's growing self-reliance in advanced defence technologies and reduce dependence on imported missile defence systems.
- **Enhanced Maritime Capability:** The successful test of NASM-MR strengthens the offensive capabilities of the Indian Navy and expands India's anti-ship warfare options.

Conclusion:

The successful demonstration of India's multi-layered Ballistic Missile Defence system marks a major leap in the country's strategic defence capabilities. By developing an indigenous shield capable of intercepting long-range ballistic missile threats, India has strengthened its national security architecture and moved closer to achieving a comprehensive, self-reliant air and missile defence network.

Long Range Land Attack Cruise Missile

Context:

Recently, the Defence Research and Development Organisation (DRDO) successfully flight-tested the indigenously developed Long Range Land Attack Cruise Missile (LRLACM) from Dr APJ Abdul Kalam Island, Odisha, on 15 June 2026.

About Long Range Land Attack Cruise Missile (LRLACM):

- The Long Range Land Attack Cruise Missile (LRLACM) is an indigenous subsonic, surface-launched cruise missile designed to strike high-value land targets at long ranges with high precision.
- Developed By:** It was designed and developed by the Aeronautical Development Establishment (ADE) in Bengaluru, which is the nodal laboratory under the Defence Research and Development Organisation (DRDO). It was heavily supported by various domestic industry partners under the Aatmanirbhar Bharat (self-reliant India) initiative.

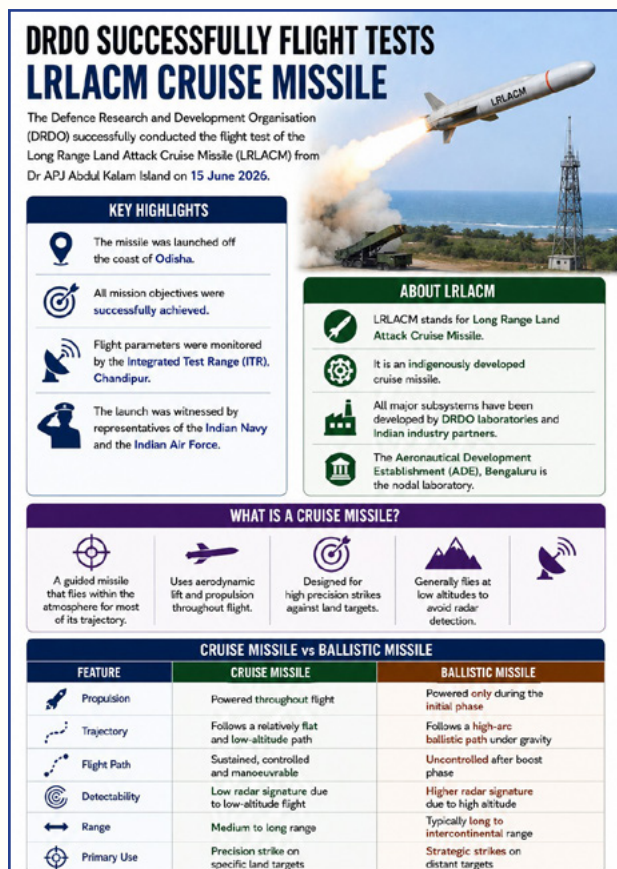
Key Technical Specifications:

- Range:** 1,000–1,500 km (estimated)
- Speed:** Subsonic (~Mach 0.8)
- Length:** Approximately 6 metres
- Weight:** Around 1–1.5 tonnes
- Warhead:** Conventional payload up to 450 kg
- Propulsion:** Indigenous turbofan engine

Key Features:

- Long-range precision strike capability.
- Subsonic cruise missile with low-altitude flight profile.
- Terrain-following and terrain-hugging capability.
- Advanced guidance, navigation, and control systems.
- Equipped with inertial and satellite-based navigation.

- High accuracy during mid-course and terminal phases.
- Capable of evading enemy radar and air-defence systems.
- Modular design with compatibility for multiple launch platforms.



DRDO SUCCESSFULLY FLIGHT TESTS LRLACM CRUISE MISSILE

The Defence Research and Development Organisation (DRDO) successfully conducted the flight test of the Long Range Land Attack Cruise Missile (LRLACM) from Dr APJ Abdul Kalam Island on 15 June 2026.

KEY HIGHLIGHTS

- The missile was launched off the coast of Odisha.
- All mission objectives were successfully achieved.
- Flight parameters were monitored by the Integrated Test Range (ITR), Chandipur.
- The launch was witnessed by representatives of the Indian Navy and the Indian Air Force.

ABOUT LRLACM

- LRLACM stands for Long Range Land Attack Cruise Missile.
- It is an indigenously developed cruise missile.
- All major subsystems have been developed by DRDO laboratories and Indian industry partners.
- The Aeronautical Development Establishment (ADE), Bengaluru is the nodal laboratory.

WHAT IS A CRUISE MISSILE?

- A guided missile that flies within the atmosphere for most of its trajectory.
- Uses aerodynamic lift and propulsion throughout flight.
- Designed for high precision strikes against land targets.
- Generally flies at low altitudes to avoid radar detection.

CRUISE MISSILE vs BALLISTIC MISSILE		
FEATURE	CRUISE MISSILE	BALLISTIC MISSILE
Propulsion	Powered throughout flight	Powered only during the initial phase
Trajectory	Follows a relatively flat and low-altitude path	Follows a high-arc ballistic path under gravity
Flight Path	Sustained, controlled and manoeuvrable	Uncontrolled after boost phase
Detectability	Low radar signature due to low-altitude flight	Higher radar signature due to high altitude
Range	Medium to long range	Typically long to intercontinental range
Primary Use	Precision strike on specific land targets	Strategic strikes on distant targets

Significance of the Test:

- Validated propulsion, guidance, navigation, control, and warhead delivery systems.
- Demonstrated successful target engagement and mission performance.
- Strengthens India's stand-off precision strike capability.
- Enhances deterrence against potential adversaries.
- Boosts indigenous defence manufacturing and technological self-reliance.

Strategic Importance:

- Enables deep-strike capability against high-value strategic targets.

- Improves survivability through low-observable flight paths.
- Supports network-centric and precision warfare requirements.
- Strengthens India's conventional and strategic deterrence posture.
- Reduces dependence on foreign missile technologies.

Compare of Cruise Missile vs Ballistic Missile:

Cruise Missile	Ballistic Missile
Flies within the atmosphere	Follows a ballistic trajectory
Powered throughout most of its flight	Powered only during initial phase
High precision and manoeuvrability	Higher speed and longer range
Terrain-following capability	Predictable trajectory
Difficult to detect due to low-altitude flight	Easier to track after launch

Indigenous Cruise Missiles:

- Nirbhay Cruise Missile
- Long Range Land Attack Cruise Missile (LRLACM)
- BrahMos Supersonic Cruise Missile (jointly developed by India and Russia)

Conclusion:

The successful test of the Long Range Land Attack Cruise Missile (LRLACM) represents a significant advancement in India's indigenous missile development programme. By enhancing long-range precision strike capabilities and reducing dependence on foreign technologies, the missile strengthens India's defence preparedness, strategic deterrence, and self-reliance in critical defence technologies.

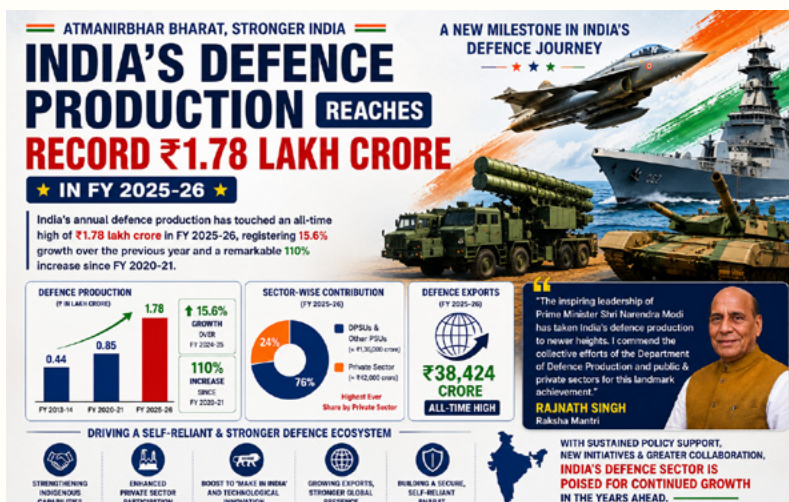
India's Defence Production Reaches Rs.1.78 Lakh Crore

Context:

Recently, India's defence manufacturing sector has reached a new milestone, with annual production touching an all-time high of Rs.1.78 lakh crore in 2025-26, driven by strong indigenisation efforts under the Atmanirbhar Bharat initiative and increasing private sector participation.

Key Highlights:

- Defence production rose to Rs.1.78 lakh crore, marking 15.6% growth over 2024-25.
- Output has increased 110% since 2020-21 and nearly four times since 2013-14.
- Private sector share reached a record Rs.42,000 crore (24%), showing rising industry participation.
- Defence Public Sector Undertakings (DPSUs) still dominate with around 76% share.
- Defence exports also reached a record Rs.38,424 crore in 2025-26.



Growth Drivers:

- The Ministry of Defence attributed the growth to sustained policy reforms, increased indigenous production, and stronger industry participation. Key

initiatives include:

- » **Defence Industrial Corridors (UP & Tamil Nadu):** Boost manufacturing hubs and infrastructure.
- » **Positive Indigenisation Lists:** Restrict imports and promote local production of weapons, aircraft, and systems.
- » **iDEX (Innovations for Defence Excellence):** Supports startups and MSMEs with grants for defence technologies.
- » **Liberalised FDI Policy:** Allows up to 74% FDI automatically and 100% via approval route.
- » **Technology Development Fund (TDF):** Promotes self-reliance in defence technology.
- » **Defence Testing Infrastructure Scheme (DTIS):** Supports testing and certification facilities.
- » **DefExpo:** Platform to showcase India's defence manufacturing capabilities.

Challenges in Defence Indigenisation:

- Despite strong growth, several structural challenges remain:
 - » Limited fiscal space for capital defence spending (around 28% of defence budget).
 - » High dependence on imports for advanced technologies like engines and sensors.
 - » Weak private-led defence R&D ecosystem compared to global standards.
 - » Fragmented innovation system with limited large-scale industry collaboration.
 - » Shortage of skilled manpower for advanced defence manufacturing.
 - » Insufficient infrastructure for testing, precision engineering, and materials research.

Importance for India:

- **Strategic Importance**
 - » Strengthens self-reliance (Atmanirbhar Bharat) in defence.

- » Reduces dependence on foreign suppliers.

- **Economic Importance**

- » Boosts manufacturing sector and job creation.
- » Expands private sector role in defence industry.

- **Export Potential**

- » Rising defence exports improve India's global defence market presence.

- **Security Importance**

- » Enhances readiness and control over critical military supply chains.

Conclusion:

India's record defence production in 2025–26 marks a significant step towards building a strong indigenous defence industrial base. While reforms and private sector participation are driving growth, sustained investment in R&D, technology, and skilled manpower will be crucial to achieve full self-reliance in defence manufacturing.

Indian Navy Commissions INS Dunagiri, INS Sanshodhak and INS Agray

Context:

PM Modi recently commissioned three frontline naval vessels "INS Dunagiri, INS Sanshodhak, and INS Agray" at the Syama Prasad Mookerjee Port in Kolkata. The tri-commissioning marks a milestone in India's transition towards a modern, self-reliant blue-water navy under the Aatmanirbhar Bharat initiative.

About the Inducted Vessels:

- The three vessels have been designed by the Indian Navy's Warship Design Bureau and built by Garden Reach Shipbuilders and Engineers (GRSE), Kolkata, with over 75% indigenous content and extensive MSME participation.

About INS Dunagiri – Stealth Guided

Missile Frigate:

- INS Dunagiri is a Project 17A stealth frigate, representing a new generation of multi-role warships. It is designed for high-intensity surface combat operations, including anti-ship, anti-air, and anti-submarine warfare roles.
- **Key features:**
 - » Advanced stealth design with reduced radar signature
 - » Equipped with modern sensor suites and integrated combat management systems
 - » Capable of operating in both blue-water and littoral zones
 - » Designed for multi-dimensional warfare including surface and aerial threats
 - » It is part of a series of advanced frigates that significantly enhance the Navy's strike and escort capabilities.

About INSSanshodhak–Large Hydrographic Survey Vessel:

- INS Sanshodhak is a Survey Vessel (Large) designed primarily for hydrographic and oceanographic mapping.
- **Key features:**
 - » Advanced sonar and underwater mapping systems
 - » Used for surveying ports, channels, and Exclusive Economic Zones (EEZ)
 - » Equipped for oceanographic data collection and maritime research
 - » Supports naval navigation safety and coastal infrastructure planning
 - » Often described as a “floating ocean laboratory,” it enhances India's Maritime Domain Awareness (MDA) and supports both defence and civilian applications.



About INS Agray – Anti-Submarine Warfare Shallow Water Craft:

- INS Agray is designed for littoral (coastal) anti-submarine warfare operations.
- **Key features:**
 - » Optimised for detection and neutralisation of submarines in shallow waters
 - » Equipped with lightweight torpedoes and advanced sonar systems
 - » Designed for coastal defence and harbour security
 - » Enhances protection against underwater threats in India's near-sea regions

Strategic Significance:

- Strengthening coastal and blue-water security amid rising Indo-Pacific naval competition
- Enhancing self-reliance in defence manufacturing under Make in India
- Improving multi-domain maritime capabilities (surface, sub-surface, and survey operations)
- Boosting India's role in regional maritime stability and ocean governance

Conclusion:

The simultaneous induction of INS Dunagiri, INS Sanshodhak, and INS Agray reflects India's evolving naval doctrine—shifting from platform acquisition to integrated, technology-driven maritime power. It also underscores the strategic importance of indigenous shipbuilding in ensuring long-term security, economic growth, and geopolitical influence in the Indian

Ocean Region.

Netra Airborne Early Warning and Control (AEW&C) system

Context:

In a major boost to India's defence manufacturing capability and strategic autonomy, the indigenous Netra Airborne Early Warning and Control (AEW&C) system has received Final Operational Clearance (FOC). Developed by the Centre for Airborne Systems (CABS), a Bengaluru-based laboratory of the Defence Research and Development Organisation (DRDO), the system represents a significant milestone in strengthening India's airborne and maritime surveillance capabilities.

Technical Specifications:

- The Netra AEW&C system is integrated onto the Brazilian Embraer EMB-145I aircraft platform and is equipped with an advanced suite of mission systems, including:
 - **AESA Radar (Active Electronically Scanned Array):** Provides 240-degree surveillance coverage.
 - **Identification Friend or Foe (IFF):** Advanced system to distinguish friendly from hostile aircraft.
 - **Mission Computer:** Enables real-time data processing and rapid decision-making.
 - » **Secure Communication Network:** Supports encrypted data sharing through Data Link and Satellite Communication (SATCOM).
 - » **Electronic Support Measures (ESM) and Communication Support Measures (CSM):** Capable of intercepting enemy electronic and communication signals.
- The system can detect, track, and identify aerial as well as maritime targets, significantly enhancing the Indian Air Force's (IAF) network-centric warfare capabilities.

Background:

The Netra AEW&C has proven to be a significant force multiplier for the Indian Air Force. Its operational effectiveness has been demonstrated in two major military operations:

- **Balakot Airstrike (2019):** During India's precision airstrike on Balakot, Netra played a crucial role by monitoring Pakistani airspace and providing real-time guidance and situational awareness to Indian fighter aircraft.

AEW&C (DRDO NETRA)

Indigenous airborne surveillance system



DEVELOPMENT	CORE FUNCTION	TECHNICAL CAPABILITY
 Developed by DRDO  Mounted on Embraer ERJ-145 aircraft  Fully Indian mission system	■ Airborne early warning ■ Tactical airspace control ■ Monitoring hostile aircraft and drones	■ Active electronically scanned radar ■ 240–300 km detection range ■ Secure data links Smaller footprint than AWACS

- **Operation Sindoor (2025):** During Operation Sindoor in 2025, Netra functioned as an airborne command-and-control centre. It supported electronic warfare operations by countering hostile and Chinese-origin technologies while coordinating frontline air operations. With the successful development of this technology, India became the fifth country in the world to possess an indigenous AEW&C capability.

Comparison with China's AWACS Capability:

A significant capability gap exists between India and China in terms of airborne early warning systems.

- **Numerical Imbalance:** The Indian Air Force (IAF) currently operates only six airborne surveillance aircraft—three indigenous Netra AEW&C systems and three Israeli Phalcon AWACS. In contrast, the People's Liberation Army Air Force (PLAAF) possesses more than 30 advanced AWACS platforms, including the KJ-2000, KJ-200, KJ-500, and the next-generation KJ-3000.
- **Technological Gap and Radar Coverage:** China's primary airborne surveillance platforms, the KJ-500 and the newer KJ-3000, employ fixed triangular Active Electronically Scanned Array (AESA) radars, providing continuous 360-degree coverage without blind spots. By comparison, India's current Netra Mk-1 has a surveillance range of approximately 200–250 km and offers only 240-degree coverage, leaving a blind spot in the rear sector.
- **Theatre Dominance:** Backed by its large AWACS fleet, China can maintain round-the-clock (24/7) airborne surveillance simultaneously across multiple strategic theatres, including Tibet (along the LAC), the Taiwan Strait, and the South China Sea. India, on the other hand, is estimated to require at least 18 AWACS/AEW&C aircraft to ensure continuous surveillance over a potential two-front scenario involving China and Pakistan.

Geopolitical and Strategic Significance:

- **Strengthening India's Role in the Indo-Pacific:** As China's military presence expands across the Indian Ocean Region (IOR) and the wider Indo-Pacific, the indigenous Netra system significantly enhances India's Maritime Domain Awareness (MDA). It reinforces India's role as a Net Security Provider in the region.
- **Technological Edge over Pakistan:** Pakistan currently operates 11 airborne early warning platforms, including:

- » Swedish Saab-2000 Erieye
- » Chinese ZDK-03 Karakoram Eagle
- » With Netra attaining Final Operational Clearance (FOC) and full combat readiness, India's air deterrence capability has strengthened considerably since the Balakot Airstrike, enabling a faster and more coordinated response to any potential aerial aggression.
- **Strategic Autonomy:** The indigenous development of Netra reduces India's dependence on foreign suppliers such as Israel and Russia for critical surveillance capabilities. This enhances India's ability to make independent strategic decisions during crises without external constraints.

Conclusion:

To bridge the numerical gap, the Union Cabinet has approved the Netra Mk-2 project at a cost of approximately Rs.19,000 crore. Under this initiative, large indigenous AESA radars are being installed on six Airbus A321 aircraft acquired from Air India; these will provide a range exceeding 500 km and enhanced coverage. In this sector, India still remains partially dependent on foreign components—such as the Brazilian aircraft platform—for radars and aircraft platforms. Achieving complete self-reliance requires the full indigenization of aircraft engines and fighter aircraft platforms.

Place in News

Venezuela

Recently, Venezuela is in the news due to a major earthquake that caused significant loss of life and damage across the country. The event has highlighted Venezuela's geographical setting, including its diverse landscapes, mountain systems, plains, and river networks.

Location and Physiographic Divisions:

- Located on the northern coast of South America, Venezuela is bordered by the Caribbean Sea and the Atlantic Ocean to the north. It shares land borders with Colombia to the west, Brazil to the south, and Guyana to the east. The country has a highly varied physical landscape divided into four major geographical regions: the Venezuelan Andes, Maracaibo Lowlands, Llanos plains, and the Guiana Highlands.
- The Venezuelan Andes, located in the northwest, are an extension of the Andes mountain system. This region contains high peaks such as Pico Bolivar, the highest point in Venezuela, rising to about 5,000 metres. The fertile valleys of this region support agriculture and major population centres.



Mountains, Plateaus and Plains:

- Venezuela's relief features include mountains, plateaus, and extensive plains. The Guiana Highlands in the southeast cover a large part of the country and represent one of the oldest geological formations on Earth. This region is known for tepuis—flat-topped mountains formed from ancient sandstone plateaus. Mount Roraima is one of the most famous tepuis, located near the Venezuela–Brazil–Guyana border.
- The Guiana Highlands also contain Auyán-tepui, from which Angel Falls descends. With a height of about 979 metres, Angel Falls is the world's highest uninterrupted waterfall.
- The central Llanos region is a vast tropical grassland plain formed mainly by river deposits. It is associated with the Orinoco River system and is important for cattle ranching, agriculture, and biodiversity. The Maracaibo Lowlands in the northwest contain Lake Maracaibo, the largest lake in South America and an important petroleum-producing region.

Rivers and Geographical Significance:

- Venezuela has an extensive river network dominated by the Orinoco River, one of South America's longest rivers. The river flows across the country and plays a major role in shaping the Llanos plains. Its tributaries, including the Caroní and Apure rivers, support ecosystems, agriculture, and hydroelectric power generation.
- The country's unique combination of Andean mountains, ancient plateaus, fertile plains, and major rivers makes Venezuela geographically significant.

Katchatheevu

Recently, A Sri Lankan MP stated that Sri Lanka's sovereignty over Katchatheevu has been conclusively settled under international law through the 1974 and 1976 Indo-Sri Lanka maritime agreements.

About Katchatheevu:

- A 285-acre (about 1.15 sq km) uninhabited island in the Palk Strait.
- Located about 33 km from Rameswaram and 24 km from Delft Island.
- Formed by a volcanic eruption around the 14th century.
- Barren, with no freshwater and therefore no permanent inhabitants.
- Home only to St. Anthony's Church, which hosts an annual festival attended by devotees from both India and Sri Lanka.
- **Historical background**
 - » Historically, the island was associated with the Ramnad Zamindari and later came under the Madras Presidency.
 - » After India and Sri Lanka became independent, ownership of the island remained disputed.



Key agreements:

- **Indo-Sri Lanka Maritime Agreement (1974)**
 - » Signed under Prime Minister Indira Gandhi.
 - » India recognized Sri Lanka's sovereignty over Katchatheevu.
 - » Indian fishermen and pilgrims were permitted to visit the island for resting, drying nets, and religious purposes without requiring passports or visas.
- **Maritime Boundary Agreement (1976)**
 - » Established the International Maritime Boundary Line (IMBL).
 - » Fishing by citizens of one country in the other's waters was prohibited.
 - » This significantly affected Indian fishermen who had traditionally fished around Katchatheevu.
 - » Sri Lanka therefore considers its sovereignty over Katchatheevu to be legally settled.

Lipulekh Pass

India and China have officially resumed border trade through the Lipulekh Pass after a six-year suspension.

About Lipulekh Pass:

- A high-altitude Himalayan mountain pass at 5,334 m (17,500 ft).
- Located in Uttarakhand, in Pithoragarh district.
- Situated near the India–Nepal–China tri-junction.
- It connects India's Kumaon region with the Tibet Autonomous Region.

Significance of Lipulekh Pass:

- **Strategic significance**
 - » One of the three officially designated India–China border trade routes.
 - » Important for border management and connectivity in the central Himalayan sector.
 - » Strengthens India's infrastructure and presence in a strategically sensitive region.
- **Trade importance**
 - » Enables traditional border trade between communities of India and Tibet.
 - » Supports the local economy by facilitating the exchange of notified goods.
- **Religious importance**
 - » Serves as the traditional route for the Kailash Manasarovar Yatra.
 - » Pilgrims use this pass to reach:
 - Mount Kailash
 - Lake Manasarovar
 - » Both sites hold immense religious significance for Hindus, Buddhists, Jains, and followers of Bon.



Major India–China mountain passes:

Pass	State/UT	Importance
Nathu La	Sikkim	Active border trade route; part of the historic Silk Route
Shipki La	Himachal Pradesh	Border trade; entry point of the Sutlej River into India
Lipulekh Pass	Uttarakhand	Border trade, Kailash Manasarovar Yatra, strategic tri-junction
Karakoram Pass	Ladakh	Historically important trade route; major strategic significance
Bum La Pass	Arunachal Pradesh	Border personnel meetings; military and diplomatic importance

Blue Line (Israel–Lebanon)

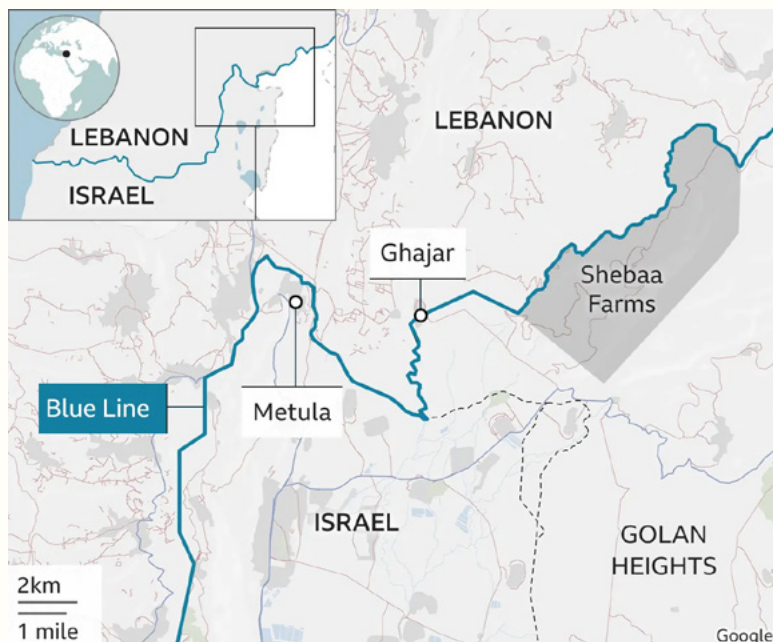
The Blue Line frequently comes into the news due to cross-border hostilities between Israel and Hezbollah, ceasefire violations, and concerns over escalation along the Israel–Lebanon frontier. The line is monitored by the United Nations Interim Force in Lebanon (UNIFIL).

What is the Blue Line?

- The Blue Line is a 120-km United Nations-drawn withdrawal line established in 2000 to verify Israel's withdrawal from southern Lebanon. It is not an internationally recognized border.
- It functions as a de facto boundary between:
 - » Lebanon (north),
 - » Israel (south), and
 - » the Israeli-occupied Golan Heights (east).

Why was it created?

- In May 2000, Israel withdrew its forces from southern Lebanon after an 18-year military presence.
- The United Nations established the Blue Line to confirm and monitor Israel's withdrawal, in accordance with United Nations Security Council Resolution 425 (1978).
- The line was intended as a practical reference for peacekeeping, not as a permanent international boundary.



Key features:

- **Length:** Approximately 120 km.
- **Marked by:** Around 272 blue barrels/markers placed along the route.
- **Monitoring agency:** United Nations Interim Force in Lebanon (UNIFIL).
- **Legal status:** Withdrawal line, not a formally agreed international border.

Major disputed areas:

- **Shebaa Farms**
 - » Claimed by Lebanon.
 - » Occupied and administered by Israel since 1967.
 - » Considered by the UN to be part of the Golan Heights, which Israel captured from Syria.
- **Kfarchouba Hills:**
 - » Adjacent to the Shebaa Farms.
 - » Also disputed between Lebanon and Israel.
- **Al-Ghajar**
 - » A village divided by the Blue Line.
 - » Its unique location has created administrative and security challenges

Slovakia

Narendra Modi made a historic state visit to Slovakia from 14–16 June 2026. This was the first-ever visit by an Indian Prime Minister to Slovakia since it became an independent nation in 1993,

marking a significant milestone in India–Slovakia bilateral relations.

About Slovakia:

▪ **Location**

- » A landlocked country in Central Europe.
- » Area: Approximately 49,036 sq. km.
- » Capital: Bratislava, the only national capital in the world that directly borders two countries—Austria and Hungary.

▪ **International Borders:** Slovakia shares 1,672 km of international borders with five countries:

- » Poland (North)
- » Ukraine (East)
- » Hungary (South)
- » Austria (Southwest)
- » Czech Republic (West)



Physical Features:

▪ **Mountain Ranges**

- Over 80% of Slovakia is covered by the Western Carpathian Mountains.

▪ **High Tatras**

- Highest mountain range in Slovakia.
- Contains Gerlachovský štít (2,655 m), the country's highest peak.

▪ **Low Tatras**

- » Forested mountain range with scenic valleys and glacial lakes.

Major Rivers:

▪ **Danube River**

- » Slovakia's most important river.
- » Forms part of the border with Hungary.
- » Passes through Bratislava.

▪ **Morava River**

- » Forms the border with Austria and the Czech Republic in the southwest.

Power Packed News

Establishment of the Bureau of Port Security (BoPS)

- The Government of India has established the Bureau of Port Security (BoPS) under the administrative control of the Ministry of Ports, Shipping and Waterways to strengthen the security of the country's maritime and coastal infrastructure.
- Constituted as a statutory body under the Merchant Shipping Act, BoPS has been designed on the lines of the Bureau of Civil Aviation Security (BCAS). Its primary objective is to oversee the security of ships, ports, and related economic assets. The Bureau will be headed by a senior Indian Police Service (IPS) officer serving as the Director General (DG).
- In view of increasing digitalisation, BoPS includes a dedicated Cyber Security Division to protect ports against cyberattacks and emerging technological threats such as drones. Additionally, the Central Industrial Security Force (CISF) has been designated as a Recognised Security Organisation (RSO), responsible for implementing security plans at the operational level. This initiative is expected to significantly enhance the security of India's maritime trade.

Operation Amistad

- On 24 June 2026, Venezuela was struck by two powerful earthquakes of magnitude 7.2 and 7.5, occurring within an interval of just 39 seconds. The strongest doublet earthquake in more than a century caused widespread devastation in the capital Caracas and La Guaira Province. Following the disaster, India launched Operation Amistad to provide humanitarian assistance to Venezuela.
 - » **Relief Material:** The Indian Air Force transported 35 tonnes of emergency relief supplies, including tents, water purifiers, and generators, using C-17 aircraft.
 - » **Field Hospital Deployment:** A 41-member medical team from the Indian Army's 60 Para Field Hospital Unit treated more than 1,900 injured persons in Caracas.
 - » **Donation of BHISHM Cubes:** India provided two indigenously developed BHISHM Cube mobile hospitals, equipped with ventilators and operation theatres, along with 6 tonnes of medicines to support relief efforts in Venezuela.

Hurun India Report

- According to the recently released Hurun India Report (2025–2026 Edition), the dominance of leading companies in India's corporate landscape remains clearly evident. The report has been jointly published by Axis Bank's Burgundy Private and Hurun India. Its key highlights are as follows:
- The top 10 most valuable privately owned companies in India have a combined valuation of Rs.86 lakh crore (US\$908 billion), accounting for 27% of the total valuation of the Hurun India 500 list.
- The combined valuation of all 500 companies featured in the list is estimated at over US\$3.4 trillion (approximately Rs.324 lakh crore).
- Reliance Industries has retained its position as India's most valuable private company for the fifth consecutive year, with a valuation of Rs.19.36 trillion, followed by HDFC Bank and Bharti Airtel.

- Compared to the previous year, the combined valuation of the top 10 companies has declined by nearly Rs.11 lakh crore. Despite this decline, these companies continue to maintain a dominant position in the Indian market.
- The report highlights that a substantial share of India's economic growth and market capitalisation remains concentrated among a limited number of large corporate groups.

Padma Awards 2026: 65 Eminent Personalities Honoured

- President Droupadi Murmu conferred the Padma Awards on 65 distinguished personalities during the Civil Investiture Ceremony-II, held at Rashtrapati Bhavan on 23 June 2026. The second phase of the ceremony included 2 Padma Vibhushan, 7 Padma Bhushan, and 56 Padma Shri awards. The honours were presented for exceptional contributions in fields such as sports, cinema, music, medicine, and public affairs.
 - » **Padma Vibhushan:** India's second-highest civilian award was conferred upon eminent jurist Justice K.T. Thomas and P. Narayanan.
 - » **Padma Bhushan:** The awardees included renowned playback singer Alka Yagnik, veteran actor Mammooty, Dr. S.K.M. Mailanandan, Vellappally Natesan, Dr. Dattatreya Nori, and tennis legend Vijay Amritraj. Former Union Minister Shibu Soren received the honour posthumously.
 - » **Padma Shri:** Indian cricketer Rohit Sharma, actor-director R. Madhavan, women's hockey goalkeeper Savita Punia, and several other distinguished personalities were honoured with the award.
- The Padma Awards are announced annually on the occasion of Republic Day. For 2026, the President had approved a total of 131 Padma Awards.

Nobel Laureate Physicist François Englert Passes Away

- Renowned Belgian theoretical physicist François Englert, whose pioneering work explained one of the greatest mysteries of the universe, the origin of the mass of fundamental particles, passed away on 18 June 2026 at the age of 93 in Uccle, Belgium. His groundbreaking research fundamentally transformed the understanding of the Standard Model of Particle Physics.
- In 1964, Englert, along with his collaborator Robert Brout, independently proposed a theory explaining how elementary particles acquire mass. For this pioneering contribution, he shared the 2013 Nobel Prize in Physics with British physicist Peter Higgs.
- Englert's theoretical work laid the foundation for the historic discovery of the Higgs boson, popularly known as the "God Particle," at CERN on 4 July 2012. This discovery confirmed the mechanism through which fundamental particles obtain mass, marking a milestone in modern physics.
- Born on 6 November 1932, François Englert belonged to a Jewish family. During the Second World War, he was forced to conceal his identity and lived in several orphanages to escape Nazi persecution.

Chennai Petroleum Corporation Limited Granted Navratna Status

- Chennai Petroleum Corporation Limited (CPCL) has been granted Navratna status by the Government of India. Operating under the Ministry of Petroleum and Natural Gas, the company was previously classified as a Miniratna Category-I enterprise. With this upgrade, CPCL has

become the 28th Navratna Central Public Sector Enterprise (CPSE) in the country. It is one of India's leading oil refining companies and a subsidiary of Indian Oil Corporation Limited (IOCL).

- Following the upgrade, the CPCL Board can now approve investments of up to ₹1,000 crore or 15% of the company's net worth in a single project without seeking prior approval from the Government. Earlier, expenditures exceeding ₹500 crore required approval from the IOCL Board, a restriction that has now been removed. The company will also enjoy greater operational autonomy to establish joint ventures (JVs) and create new subsidiaries abroad.

Tushar Mehta Reappointed as Solicitor General of India

- The Central Government has reappointed senior advocate Tushar Mehta as the Solicitor General (SG) of India for another three-year term, effective from 1 July 2026. Following the approval of the Appointments Committee of the Cabinet (ACC), he will continue in office until 30 June 2029.
- First appointed in October 2018, this marks Mehta's fourth consecutive term as Solicitor General. He has now become the second longest-serving Solicitor General of India, after C.K. Daphtary. Along with this decision, the Government also extended the tenure of five Additional Solicitors General (ASGs) appearing before the Supreme Court for another three years.
- The Solicitor General is the second-highest law officer of the country and represents the Central Government in important legal matters before the courts. Unlike the Attorney General, the Solicitor General is a statutory office governed by the Law Officers (Conditions of Service) Rules, 1987.

'Khurasani Imli' (Baobab Fruit) Receives GI Tag

- The famous 'Khurasani Imli' (Baobab fruit) of the historic town of Mandu in Dhar district, Madhya Pradesh, has recently been granted the prestigious Geographical Indication (GI) tag. The fruit comes from the giant Baobab tree, a species native to Africa.
- It is believed that Afghan and Arab traders introduced the Baobab tree to Mandu during the reign of Sultan Mahmud Khilji in the 14th century. Popularly known as the "Upside-down Tree," the Baobab can store up to 120,000 litres of water in its trunk. Mandu is home to India's largest natural population of Baobab trees, with more than 1,000 trees.
- The light green fruit has a sweet-and-sour taste. Local tribal communities, particularly the Bhil and Bhilala, have traditionally used its pulp, seeds, and bark to treat diabetes, digestive disorders, and fever. The fruit is also rich in Vitamin C and antioxidants.
- In India, GI tags are granted under the Geographical Indications of Goods (Registration and Protection) Act, 1999. This recognition is expected to increase the income of Mandu's tribal communities, facilitate global marketing of the product, and promote the conservation of this endangered heritage tree.

UK Prime Minister Keir Starmer Resigns

- Just 23 months after leading the Labour Party to a historic landslide victory in the July 2024 General Election, British Prime Minister Sir Keir Starmer announced his resignation on 22 June 2026. His decision came amid growing internal rebellion within the party and a sharp decline in his public approval ratings.

- The political crisis intensified after more than 100 Labour Members of Parliament (MPs) openly revolted against Starmer's leadership. Many MPs believed that under his leadership, the party would be unable to win the next general election. Public dissatisfaction had been mounting for several months, primarily due to his policies on immigration, controversial green energy targets, and his government's inability to effectively address the country's ongoing cost-of-living crisis. In addition, repeated policy U-turns significantly damaged his credibility.
- Starmer will continue as the caretaker Prime Minister until the Labour Party elects a new leader. With his resignation, he has become the sixth British Prime Minister in the past decade to leave office before completing a full term, reflecting the prolonged political instability at 10 Downing Street.

India Wins the FIH Women's Nations Cup 2026

- The Indian Women's Hockey Team created history by winning the FIH Women's Nations Cup 2026 title on 21 June 2026. In the thrilling final held in Chile, India defeated New Zealand by 2-0 to clinch the championship.
- With this historic triumph, India has secured direct qualification for the upcoming season of the FIH Pro League, the highest level of international field hockey. Qualifying for the Pro League marks a major milestone for Indian women's hockey, as it features competition among the world's top-ranked teams.
- The Indian team remained unbeaten throughout the tournament, displaying outstanding teamwork, skillful dribbling, and exceptional goalkeeping. Their remarkable performance not only highlighted India's growing stature in international hockey but also generated renewed enthusiasm for women's sports across the country.

Indian Coast Guard Inducts Its First Indigenous Hovercraft H-561

- The Indian Coast Guard (ICG) inducted its first indigenously developed hovercraft, H-561, in Goa on 18 June 2026, strengthening India's coastal security capabilities. The Air Cushion Vehicle (ACV) marks a significant achievement under the 'Make in India' initiative and reflects the country's growing self-reliance in defence manufacturing.
- The state-of-the-art hovercraft has been built by Chowgule & Company Pvt. Ltd. at its Rassaim Shipyard in Goa. It is the first of six indigenous hovercraft being constructed for the Indian Coast Guard.
- The H-561 is capable of operating at high speed in shallow waters, sandy beaches, marshlands, and mudflats, where conventional boats cannot function effectively.
- Its primary roles include coastal patrolling, maritime surveillance, counter-terrorism operations, and rapid search and rescue (SAR) missions during emergencies and natural disasters. The induction of the hovercraft not only reduces India's dependence on foreign imports but also significantly enhances maritime security and surveillance across challenging coastal terrains.

Punjab's Qadian-Beas Railway Line Project Revived

- The Qadian-Beas Railway Line Project in Punjab has been revived after nearly a century. According to Union Minister of State for Railways Ravneet Singh Bittu, the 39.68-kilometre broad-gauge railway corridor will be constructed at an estimated cost of ₹ 1,400 crore.
- The new railway line will directly connect Qadian in Gurdaspur district with Beas in Amritsar

district. The route will include stations at Dhapai, Ghuman, Butala, and Sathiala.

- The project was originally approved during the British era in 1928–29 and is now being revived. The strategically important route will be equipped with the indigenous Kavach train protection system, along with 11 major bridges, 121 minor bridges, and two crossing stations.
- The railway line is expected to promote religious tourism, particularly to Dera Beas and Ghuman, while also serving as a strategic alternative corridor to the Amritsar–Pathankot railway route.

UAE Imposes Complete Ban on Social Media Use for Children Under 15

- The United Arab Emirates (UAE) has imposed a complete ban on social media use by children below the age of 15 to strengthen digital child protection. The landmark proposal was approved by the UAE Cabinet, chaired by Sheikh Mohammed bin Rashid Al Maktoum, making the UAE the first Arab country to introduce such a stringent law.
- Children under the age of 15 will no longer be allowed to create personal social media accounts, and parental consent will not be accepted as an exception.
- Social media companies will now be required to implement strict age verification mechanisms using Artificial Intelligence (AI) and digital identity systems, instead of relying solely on users' self-declared date of birth.
- All global and domestic technology platforms have been given 12 months to comply with the new regulations and remove existing underage accounts. Companies violating the rules may face substantial administrative fines and partial or complete restrictions on their services.
- The initiative aims to protect children from cyberbullying, mental health challenges, and other online threats.

Sarvam AI Becomes India's Latest Unicorn

- Bengaluru-based independent AI startup Sarvam AI has become India's 130th unicorn after raising US\$234 million in its Series B funding round. Following the investment, the company's post-money valuation has reached approximately US\$1.5 billion, making it one of India's most valuable deep-tech startups.
- The funding round was led by leading Indian IT company HCLTech, which invested US\$150 million to acquire a 10.46% stake in the company. Other investors included Bessemer Venture Partners, Khosla Ventures, and Peak XV Partners.
- Founded in 2023 by Vivek Raghavan and Pratyush Kumar, Sarvam AI plans to utilise the funds to develop indigenous and sovereign AI models for India, expand its computing infrastructure, and accelerate research in Agentic AI and cybersecurity.
- The company's success reflects the growing strength of India's technology ecosystem and its expanding global presence in the field of Generative AI (GenAI).

Hitesh Rameshchandra Joshi Appointed CMD of GIC Re

- The Appointments Committee of the Cabinet (ACC) has officially appointed Hitesh Rameshchandra Joshi as the new Chairman and Managing Director (CMD) of the General Insurance Corporation of India (GIC Re).
- His full-time appointment came into effect on 16 June 2026. He will serve in the position until

30 September 2028, the date of his retirement, or until further orders.

- Before his regular appointment, Joshi had been serving as the company's Acting CMD and Executive Director since October 2025. He succeeds N. Ramaswamy, who retired in September 2025.
- Hitesh Joshi holds a postgraduate degree in Accountancy from the University of Mumbai and a Master's degree in Financial Management from the Jamnalal Bajaj Institute of Management Studies. He has more than three decades of experience in the insurance sector.
- GIC Re is India's only national reinsurance company and ranks as the ninth-largest reinsurance company in the world.

Appointment of the New Chairperson and Members of the National Statistical Commission

- In June 2026, the Government of India appointed a new Chairperson and three part-time members to the National Statistical Commission (NSC). The move aims to strengthen India's statistical system and enhance the credibility and reliability of official data.
- Former Director of the Indian Institute of Management (IIM) Calcutta, Dr. Saibal Chattopadhyay, has been appointed as the part-time Chairperson of the Commission. Prof. Shubhabrata Das of IIM Bangalore, retired Indian Statistical Service (ISS) officer Satyendra Bahadur Singh, and Dr. Madhavan Mukund, Director of the Chennai Mathematical Institute, have been appointed as part-time members.
- **About the National Statistical Commission (NSC)**
 - » The Commission was established on 1 June 2005 based on the recommendations of the Rangarajan Commission.
 - » It consists of a part-time Chairperson, four part-time members, an ex-officio member (CEO of NITI Aayog), and the Secretary of the Commission.
 - » It is responsible for formulating national policies and quality standards for official statistics and coordinating statistical activities among Central Ministries and State Governments.
- The newly appointed leadership is expected to ensure more accurate, transparent, and timely statistical data for economic and social policymaking, thereby strengthening the country's development planning.

19th Mumbai International Film Festival (MIFF 2026)

- The 19th Mumbai International Film Festival (MIFF 2026), Asia's premier festival dedicated to non-feature films (documentaries, short fiction, and animation), was successfully held in Mumbai from 15 to 21 June 2026.
- Organised by the National Film Development Corporation (NFDC) under the Ministry of Information and Broadcasting, the seven-day festival showcased a record 346 films from 46 countries.
- For the first time in the festival's history, an AI Cinema Hackathon was introduced to promote emerging technologies in filmmaking, reflecting the spirit of the 'Create in India' initiative. The festival also featured special sections dedicated to Marathi cinema and cinema from Northeast India. At the closing ceremony, Maharashtra Governor Jishnu Dev Varma presented the prestigious Konch (Conch Shell) Awards:
 - » **Golden Conch (Best International Documentary):** Silver (Poland)
 - » **Silver Conch (Best International Short Fiction):** Under the Snow

» **Silver Conch (Best International Animation):** Maya's Song

- The festival marked another significant milestone in strengthening India's creative economy by promoting documentaries and short films on the global stage.

Investment Rules Simplified for NRIs and Foreign Investors

- In June 2026, the Reserve Bank of India (RBI) introduced a landmark amendment under the Foreign Exchange Management Act (FEMA), significantly simplifying and liberalising foreign investment regulations. The primary objective is to make investments in Indian financial markets easier for Non-Resident Indians (NRIs), Overseas Citizens of India (OCIs), and Foreign Portfolio Retail Individual Investors (PROIs).
- Key Changes Introduced:
 - » **Higher Investment Limit:** Foreign individual investors can now acquire up to 10% equity in a listed Indian company without SEBI registration, compared to the previous limit of 5%.
 - » **Increased Aggregate Limit:** The combined investment ceiling for all NRIs and OCIs in a single Indian company has been increased to 24%.
 - » **Dedicated Banking Channel:** Investors are now permitted to maintain a Repatriable Rupee Account, enabling them to remit the entire sale proceeds or investment gains abroad after payment of applicable taxes.
 - » **New Reporting Category:** To improve transparency, banks have introduced a new reporting category called Individual Foreign Investor (IFI).
- The reforms are expected to encourage greater inflows of global capital into the Indian stock market and further strengthen the country's economic growth.

General Dhiraj Seth Appointed the 31st Chief of the Army Staff

- General Dhiraj Seth assumed charge as the 31st Chief of the Army Staff (COAS) of the Indian Army on 30 June 2026. He succeeded General Upendra Dwivedi, who retired after completing 40 years of distinguished military service. Prior to assuming the office of Army Chief, General Seth served as the Vice Chief of the Army Staff (VCOAS).
- He is the first officer from the Armoured Corps in nearly three decades to become the Army Chief. Commissioned into the 2nd Lancers in December 1986, General Seth has extensive operational experience, having commanded both the South Western Command and the Southern Command on India's western front.
- After taking over, he unveiled the 'Vijay' Vision for the Indian Army, aimed at transforming the force into a modern, self-reliant, and technology-driven military capable of meeting future warfare challenges.
- During his distinguished four-decade military career, he has been awarded the Param Vishisht Seva Medal (PVSM) and the Uttam Yudh Seva Medal (UYSM) for his exceptional service.

India–Nepal UPI–NPI Digital Payment Corridor

- India and Nepal have launched a cross-border peer-to-peer (P2P) money transfer system, directly linking India's Unified Payments Interface (UPI) with Nepal's National Payment Interface (NPI). The digital payment corridor became officially operational on 6 June 2026.
- The system has been jointly developed by NPCI International Payments Limited (NIPL) and the Nepal Clearing House Limited (NCHL).

- The new corridor enables citizens of both countries to transfer money instantly, securely, and at low cost through mobile applications. It is expected to reduce remittance costs for migrant workers while allowing Indian tourists to make digital payments without carrying cash or dealing with expensive currency exchange services.
- The initiative is expected to strengthen bilateral trade, tourism, and economic cooperation between India and Nepal. After Singapore, Nepal has become the second country to successfully integrate with India's UPI for cross-border peer-to-peer digital payments, demonstrating the growing global acceptance of India's Digital Public Infrastructure (DPI).

India Becomes the World's Largest Ship Recycling Nation in 2025

- According to a recent report by the United Nations Conference on Trade and Development (UNCTAD), India emerged as the world's largest ship recycling nation in 2025. India's share in global ship recycling increased from 30.1% in 2024 to 35.4% in 2025, while its recycling capacity rose from 1.86 million Gross Tons (GT) to 2.99 million Gross Tons (GT). With this achievement, India has met the target set under the Maritime India Vision (MIV) 2030 ahead of schedule.
- A significant contribution to this success has come from the Alang-Sosia Ship Recycling Yard in Gujarat, which accounts for nearly 97% of India's ship recycling activities. Government initiatives such as the Recycling of Ships Act, 2019, the Ship-breaking Credit Note Scheme, and the effective implementation of environmentally sustainable recycling standards have accelerated the growth of this sector.
- This achievement is regarded as a major milestone in strengthening India's maritime economy, generating employment, boosting steel production, promoting the circular economy, and advancing green and sustainable development.

Project GANGA

- In June 2026, the Government of Uttar Pradesh launched Project GANGA, a landmark digital initiative aimed at transforming connectivity in rural areas. GANGA, which stands for Government Assisted Network for Growth and Advancement, seeks to provide last-mile high-speed broadband connectivity to villages across the state.
- Launched by Chief Minister Yogi Adityanath in Lucknow, the project represents a major step towards bridging the digital divide between rural and semi-urban areas.
- Under the project, nearly 2 million rural households are targeted to be connected with fiber-based high-speed internet ("Ganga Fiber") over the next two to three years. In the initial phase, the initiative is being implemented across 21 districts, with plans to expand it to all 57,000 Gram Panchayats in the state.
- The project is being supported by OneOTT Entertainment Limited (OIL), the broadband arm of the Hinduja Group, which is serving as the Government's knowledge partner on a 'No Profit, No Loss' basis.
- A key feature of the initiative is the development of local rural youth as Digital Service Providers (DSPs), creating more than 100,000 direct and indirect employment opportunities in rural areas.
- The State Government is also providing interest-free loans of up to Rs.5 lakh under the Mukhyamantri Yuva Udyami Yojana to support these entrepreneurs. Notably, 50% participation has been reserved for women entrepreneurs, encouraging greater female participation in the

rural digital economy.

- The project is expected to bring telemedicine, digital education, and e-governance services to rural households, paving the way for a digital and economic transformation in Uttar Pradesh.

Renowned Filmmaker Bharathiraja Passes Away

- Veteran Tamil filmmaker, director, and actor Bharathiraja passed away in Chennai on 10 June 2026 at the age of 84. He had been suffering from age-related ailments and respiratory complications for a prolonged period.
- Bharathiraja is widely credited with transforming Tamil cinema by moving film production out of closed studio sets and portraying the natural beauty and social realities of rural life. He made his directorial debut in 1977 with the acclaimed film 16 Vayathinile.
- During his distinguished career spanning over five decades, he directed nearly 40 films, including acclaimed works such as Sigappu Rojakkal and Karuthamma.
- In recognition of his exceptional contribution to Indian cinema, he received six National Film Awards, four Filmfare Awards, and was honoured with the Padma Shri by the Government of India in 2004.
- Following an announcement by the Government of Tamil Nadu, Bharathiraja was laid to rest with full State Honours at his farmhouse in Theni district.

India–United Kingdom Announced CETA

- India and the United Kingdom (UK) have announced that the Comprehensive Economic and Trade Agreement (CETA) will come into effect on 15 July 2026. The agreement is regarded as one of India's most comprehensive Free Trade Agreements (FTAs).
- Under the agreement, both countries have agreed to reduce or eliminate tariffs on most goods, encourage investment, expand trade in services, and facilitate the movement of professionals.
- The agreement will provide Indian exporters with improved market access in sectors such as textiles, leather, gems and jewellery, engineering goods, agricultural products, and marine products. The UK, in turn, is expected to benefit from increased exports of automobiles, premium manufactured goods, and beverages.
- The accompanying Double Contribution Convention (DCC) will relieve Indian professionals working in the UK from the burden of making double social security contributions.
- The agreement is expected to strengthen bilateral trade, investment, employment generation, and supply chains, while enhancing India's competitiveness in global trade.

Saurabh Vijay Appointed CEO of the IndiaAI Mission

- Senior IAS officer Saurabh Vijay assumed additional charge as the Chief Executive Officer (CEO) of the IndiaAI Mission in June 2026. He is currently serving as the Chief Executive Officer of the Unique Identification Authority of India (UIDAI).
- A 1998-batch IAS officer of the Maharashtra cadre, Saurabh Vijay succeeds Abhishek Singh as the CEO of the mission. At the same time, Sudeep Srivastava, Joint Secretary in the Ministry of Electronics and Information Technology (MeitY), has been appointed as the Chief Operating Officer (COO) of the IndiaAI Mission.
- An engineering graduate in Civil Engineering from IIT Delhi, Saurabh Vijay has extensive experience in public finance, governance, and the World Bank.

- His dual responsibility is aimed at creating stronger synergy between India's Digital Public Infrastructure (Aadhaar) and the country's rapidly evolving Artificial Intelligence (AI) ecosystem.
- The IndiaAI Mission was approved by the Central Government in March 2024 with a financial outlay of Rs.10,371.92 crore. Its key objectives include expanding computing infrastructure, developing sovereign AI capabilities, and building indigenous Large Language Models (LLMs).
- This appointment is considered an important step towards positioning India as a global leader in the development of responsible and trustworthy Artificial Intelligence.

India Wins the Men's Under-18 Asia Cup 2026 Title

- The Indian Men's Hockey Team won the Men's Under-18 Asia Cup 2026 title by defeating hosts Japan 4–1 in the final held in Kakamigahara, Japan. With this victory, India claimed the prestigious continental trophy for a record third time.
- Star forward Ashish Tanti Purty starred in the final by scoring a hat-trick (three goals). He also finished as the highest scorer of the tournament with 13 goals. Team captain Ketan Kushwaha scored India's fourth goal, sealing the title-winning victory. For his outstanding performances throughout the tournament, Ayush Rajak was named the Best Goalkeeper.
- In the same tournament, the Indian Women's Under-18 Hockey Team also delivered an impressive performance by defeating South Korea 3–0 to secure the bronze medal.
- Prime Minister Narendra Modi congratulated both teams on their historic achievements. Hockey India also announced a cash reward of Rs.3 lakh for each player of the gold medal-winning men's team and Rs.1.5 lakh for each member of the support staff.

India's Seventh Regional Meteorological Centre (RMC) Inaugurated in Jammu

- On 5 June 2026, Union Minister Dr. Jitendra Singh formally inaugurated India's seventh Regional Meteorological Centre (RMC) in Jammu. The centre marks a significant step towards strengthening weather forecasting services across the North-Western Himalayan region.
- The RMC will provide meteorological services to the hilly and plain regions of Jammu & Kashmir, Ladakh, and Himachal Pradesh. It has been integrated with high-capacity X-band Doppler Weather Radars and Automatic Weather Stations (AWSs).
- The centre will issue accurate early warnings for natural disasters such as cloudbursts, flash floods, avalanches, and landslides, which are common in the Himalayan region.
- It will provide real-time weather information to border security forces, local farmers, the aviation sector, and pilgrims visiting the Amarnath and Vaishno Devi shrines.
- The Jammu RMC is India's seventh Regional Meteorological Centre, following those in New Delhi, Mumbai, Chennai, Kolkata, Guwahati, and Nagpur. The Government is also planning to establish the next Regional Meteorological Centre in Lucknow.

Five New Non-Permanent Members Elected to the UN Security Council

- On 3 June 2026, the United Nations General Assembly (UNGA) elected Austria, Kyrgyzstan, Portugal, Trinidad and Tobago, and Zimbabwe as the five new non-permanent members of the United Nations Security Council (UNSC) for the 2027–2028 term.
- Their two-year tenure will begin on 1 January 2027 and continue until 31 December 2028.

They will replace Denmark, Greece, Pakistan, Panama, and Somalia, whose terms are ending.

- The newly elected members represent different regional groups:
 - » Austria and Portugal – Western European Group
 - » Kyrgyzstan – Asia-Pacific Group
 - » Trinidad and Tobago – Latin American and Caribbean Group
 - » Zimbabwe – African Group
- In the election, Germany failed to secure a seat, while Kyrgyzstan defeated the Philippines for the Asia-Pacific seat.
- The UN Security Council consists of 15 members, including five permanent members, the United States, the United Kingdom, France, Russia, and China, each possessing veto power, and 10 non-permanent members elected for two-year terms. Every year, five of the non-permanent members are replaced. These elected members play a crucial role in decisions relating to international peace and security.

Neelkanth Mishra Appointed India's Next Executive Director at World Bank

- The Government of India has appointed noted economist Neelkanth Mishra as India's next Executive Director at the World Bank. He will serve a three-year term at the institution's headquarters in Washington, D.C.
- Mishra succeeds former IAS officer Parameswaran Iyer in this important position. As Executive Director, he will represent not only India, but also the South Asian constituency comprising Bangladesh, Bhutan, and Sri Lanka.
- Prior to this appointment, Neelkanth Mishra served as the Global Head of Research and Whole-time Director at Axis Capital. He has also been a part-time member of the Economic Advisory Council to the Prime Minister (EAC-PM).
- With extensive expertise in financial markets, economic policy and global research, Mishra is expected to play a significant role in strengthening India's economic diplomacy, infrastructure development agenda, and poverty alleviation initiatives at the World Bank.

Acting President of Venezuela Delcy Rodríguez Visits India

- Delcy Rodríguez, the Acting President of Venezuela, paid an official visit to India from 3 to 7 June 2026. During the visit, she held bilateral talks with Prime Minister Narendra Modi at Hyderabad House in New Delhi.
- The discussions focused on the following six key pillars of cooperation:
 - » Energy security and critical minerals
 - » Agriculture and food security
 - » Technology, science, and innovation
 - » Healthcare and pharmaceuticals
 - » Renewable energy
 - » People-to-people ties
- Rodríguez was accompanied by Venezuela's Ministers responsible for Foreign Affairs, Economy and Finance, Science and Technology, Communication, and Transport.
- This marked her sixth visit to India. Venezuela is India's third-largest supplier of crude oil, after Russia and the United Arab Emirates.
- Following the capture of former President Nicolás Maduro during the U.S. military intervention

(Operation Absolute Resolve) in January 2026, the Supreme Court of Venezuela appointed then Vice President Delcy Rodríguez as the country's Acting President.

- This was Rodríguez's first visit to India after Venezuela's political transition, and it reflects India's growing engagement with countries of the Global South.

Lionel Messi Receives the Princess of Asturias Award for Sports 2026

- Argentine football legend Lionel Messi was honoured with the prestigious Princess of Asturias Award for Sports in June 2026. He has become the first individual footballer in the world to receive this distinguished honour. Previously, the award had only been presented to football teams, such as Spain's national team in 2010, or shared among multiple recipients.
- The jury, constituted by Spain's Princess of Asturias Foundation, selected Messi not only for his extraordinary sporting career—which includes a record 47 major titles, making him the most successful footballer in history—but also for his humanitarian work through the Leo Messi Foundation, which supports education and healthcare for underprivileged children. His exemplary sportsmanship, humility, and conduct on and off the field were also recognised.
- The Princess of Asturias Awards are regarded as one of the most prestigious civilian honours in the Spanish-speaking world. The previous recipient of the Sports Award in 2025 was American tennis legend Serena Williams.

Army Uniforms–2026 Policy

- The Indian Army has introduced the Army Uniforms–2026 policy, replacing its previous dress regulations. The new 174-page dress code has been designed to modernise military attire while eliminating symbols and traditions associated with the British colonial era.
- To improve uniformity among the Army, Navy, and Air Force, a common uniform numbering system has been introduced. Military uniforms have been categorised into four main types: Ceremonial, Working, Mess, and Combat.
- For formal civilian functions, the traditional Indian Bandhgala (Bandi Jacket) has been approved as official attire. Carrying a ceremonial sword during parades is no longer mandatory for reviewing officers and has been made optional. The pouch belt has been removed from the mess dress, and colonial-era terms such as "Royal" have been eliminated from military insignia. The maximum permissible moustache length has been fixed at 12 centimetres.
- The policy also introduces stricter guidelines for women personnel. While on duty, the use of make-up, nail polish, and nose pins has been completely prohibited. However, for formal civilian occasions, women personnel are permitted to wear modest sarees or kurtas.
- The policy is scheduled to be fully implemented by June 2029, marking a significant step towards the modernisation and indigenisation of the Indian Army.

NASA Officially Concludes the MAVEN Mars Mission

- On 3 June 2026, NASA officially declared the end of its historic MAVEN (Mars Atmosphere and Volatile Evolution) mission. Communication with the spacecraft was unexpectedly lost on 6 December 2025 while it was passing behind Mars. After six months of unsuccessful recovery attempts, NASA's review board concluded that the spacecraft was beyond recovery.
- Launched in 2013, MAVEN entered Mars' orbit in 2014 and was tasked with studying the loss of the Martian atmosphere into space. The mission helped scientists understand how Mars,

once believed to have been potentially habitable, transformed into the cold and arid planet seen today.

- MAVEN provided the first direct evidence that solar winds and radiation stripped away Mars' dense atmosphere over billions of years. It also discovered a unique type of proton aurora in the Martian atmosphere.
- Beyond its scientific objectives, the spacecraft served as a vital communications relay for NASA's Curiosity and Perseverance rovers operating on the Martian surface. Although originally designed for a one-year primary mission, MAVEN remained operational for more than eleven years, far exceeding its planned lifespan.

Canada Suspended from ICC Membership

- The International Cricket Council (ICC) has suspended the membership of Cricket Canada with immediate effect due to serious violations related to governance, financial mismanagement, and anti-corruption regulations. The decision was taken during the ICC Board Meeting held in Ahmedabad in June 2026.
- The action followed an investigative documentary by the Canadian Broadcasting Corporation (CBC), which alleged match-fixing, financial corruption, administrative irregularities, and threats of violence within Cricket Canada's administration. These revelations prompted the ICC Anti-Corruption Unit (ACU) to launch an investigation, after which the ICC suspended direct funding to Cricket Canada.
- However, to safeguard the interests of players, the ICC announced that Canada's men's and women's national teams would continue to participate in ICC tournaments. Their travel and training expenses will now be funded directly by the ICC through a controlled financial mechanism, instead of being routed through the national board.
- Cricket Canada has accepted the decision and committed to implementing a comprehensive reform plan. The suspension will be lifted only after the organisation fulfils all the conditions laid down by the ICC's Normalization Committee.

RBI Monetary Policy Committee Keeps Repo Rate at 5.25%

- The Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI) has decided to keep the repo rate unchanged at 5.25% for the third consecutive policy meeting.
- The Committee maintained a neutral monetary policy stance, citing concerns over global geopolitical tensions, uncertainty in energy prices, and potential inflationary risks.
- At the same time, the RBI revised its macroeconomic projections by lowering the GDP growth forecast for FY 2026–27 to 6.6%, while increasing the Consumer Price Index (CPI) inflation forecast to 5.1%.
- According to the RBI, maintaining a balance between price stability and economic growth remains the primary policy objective. Since the repo rate remains unchanged, banks' borrowing costs are unlikely to change immediately, reducing the possibility of significant changes in loan and deposit interest rates in the near future.
- The decision is considered an important step towards preserving India's macroeconomic stability amid an uncertain global economic environment.

General N.S. Raja Subramani Appointed as India's New CDS

- General N.S. Raja Subramani officially assumed office as India's third Chief of Defence Staff (CDS) and Secretary of the Department of Military Affairs (DMA) on 31 May 2026. He succeeded General Anil Chauhan in the position.
- His primary focus will be to strengthen jointness among the Army, Navy, and Air Force, accelerate the implementation of theatre commands (theaterisation), and promote the integration of indigenously developed defence systems across the armed forces. After assuming office, General Subramani emphasised the Prime Minister's 'JAI' vision, which stands for Jointness, Atmanirbharta (Self-Reliance), and Innovation.
- Commissioned into the Garhwal Rifles in 1985, General Subramani is regarded as an expert on India's Pakistan and China border affairs. During his distinguished military career, he has served as the Vice Chief of the Army Staff (VCOAS) and as a Military Adviser in the National Security Council Secretariat (NSCS).
- The post of Chief of Defence Staff (CDS) was created in December 2019. General Bipin Rawat was India's first CDS. The CDS is a four-star military officer who serves as the Principal Military Adviser to the Defence Minister.

Satwik-Chirag Create History by Winning the Singapore Open 2026

- Indian badminton pair Satwiksairaj Rankireddy and Chirag Shetty created history by winning the men's doubles title at the Singapore Open 2026.
- In the final held on 31 May 2026, the Indian duo defeated Indonesia's Fajar Alfian and Muhammad Shohibul Fikri 18–21, 21–17, 21–16 to claim the championship.
- The victory is particularly significant as Satwik and Chirag became the first Indian doubles pair to win the prestigious Singapore Open title. It also ended their two-year wait for a BWF World Tour title. This triumph marked the ninth BWF World Tour title of their career and their third Super 750 title.
- Earlier in the semifinals, the Indian pair had produced a major upset by ending the 34-match winning streak of the world No. 1 South Korean pair. With this title victory, Satwik and Chirag also received a prize money of US\$74,000, providing a significant boost to their confidence ahead of upcoming international tournaments.

Veteran Playback Singer Suman Kalyanpur Passes Away

- Renowned Indian playback singer Suman Kalyanpur passed away in Mumbai on 31 May 2026 at the age of 89. She had been suffering from age-related ailments for a prolonged period.
- In recognition of her exceptional contribution to Indian music, the Government of India honoured her with the Padma Bhushan, the country's third-highest civilian award, in 2023. She was accorded full State Honours during her last rites in Mumbai.
- Suman Kalyanpur was one of the most respected and celebrated playback singers of the 1960s and 1970s. Throughout her illustrious career, she recorded more than 3,000 songs in over 11 languages, including Hindi, Marathi, Bengali, Gujarati, and Assamese.
- Her melodious voice was often compared with that of the legendary Lata Mangeshkar. She was especially admired for her timeless duets with legendary singers such as Mohammed Rafi, Mukesh, and Mahendra Kapoor. Some of her most popular songs include "Aaj Kal Tere Mere Pyar Ke Charche," "Na Na Karte Pyar Tumhi Se Kar Baithe," and "Tumne Pukara Aur Hum Chale Aaye," which continue to be cherished by generations of music lovers.
- Her passing marks the end of a golden era in Indian playback music.

MCQs Based on Current Affairs

1. Consider the following statements regarding Babesiosis, a disease recently reported in the news in the context of Asiatic lion cubs in Gir:

1. It is a viral disease primarily affecting the respiratory tract of wild cats.
2. The causative agent is a microscopic protozoan parasite that infects and destroys red blood cells (RBCs).
3. It is a vector-borne disease transmitted through the bite of infected ticks.

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

2. Consider the following statements regarding the RudraM-II missile:

1. It is an air-to-surface anti-radiation missile primarily designed to destroy enemy radar and communication systems.
2. It features a dual-guidance system that utilizes an Imaging Infrared (IIR) seeker to maintain target tracking even if the enemy turns off their radar.
3. It has a speed capability of up to Mach 5.5 and can engage targets within a stand-off range of 300 km.

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

3. Consider the following statements regarding the circulation of Counterfeit Currency and Fake Indian Currency Notes (FICN) in India:

1. According to the Reserve Bank of India's (RBI) Annual Report for FY26, the detection of counterfeit notes has shown a continuous upward trend with Rs.500 notes accounting for the vast majority of detected cases.
2. The production and circulation of high-quality FICN is treated as a terrorist act and is legally punishable under the Unlawful Activities (Prevention) Act (UAPA).
3. Counterfeiting primarily impacts micro-

economic indicators but does not pose a systemic threat to the integrity of the broader national monetary 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

4. With reference to the Indian Armed Forces, consider the following statements regarding the office of the Chief of Defence Staff (CDS):

1. The post of CDS was officially created through an executive mandate in 2019, with General Bipin Rawat serving as the country's first CDS.
 2. The CDS functions as the administrative head and Secretary of the Department of Military Affairs (DMA) under the Ministry of Defence.
 3. The creation of the CDS office has altered the constitutional position of the President of India, who now exercises supreme command through the CDS.
- Which of the statements given above are correct?

- A: 1 and 2 only
B: 1 and 3 only
C: 2 and 3 only
D: 1, 2, and 3

5. Consider the following statements regarding the vulture species in India:

1. All the 'Critically Endangered' resident vulture species in India, such as the White-rumped Vulture and Slender-billed Vulture, are protected under Schedule I of the Wildlife Protection Act, 1972.
2. The Red-headed Vulture, despite being Critically Endangered on the IUCN Red List, is not listed under Schedule I of the Wildlife Protection Act, 1972.
3. The Himalayan Griffon and Cinereous Vulture are both listed under Schedule I of the Wildlife Protection Act, 1972.

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

6. Consider the following statements about the India–Oman Comprehensive Economic Partnership Agreement (CEPA):

- Under the agreement, Oman provides duty-free access to nearly 98% of its tariff lines, covering the vast majority of India's exports to Oman.
- Sensitive agricultural and dairy products, as well as gold and silver bullion, have been fully excluded from tariff concessions on the Indian side to protect domestic producers.
- This is India's first-ever Free Trade Agreement (FTA) with a member country of the Gulf Cooperation Council (GCC).

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

7. With reference to the Asiatic Lion (*Panthera leo persica*), consider the following statements:

- They are exclusively found in the Saurashtra region of Gujarat, primarily in the Gir National Park.
- Under the Wildlife Protection Act (WPA) of 1972, they fall under Schedule I, granting them the highest level of legal protection.
- Their restricted geographic concentration makes them highly vulnerable to single epidemic outbreaks.

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

8. Consider the following statements regarding Mission "Senehjori":

- It is a joint cluster-based initiative launched by the Ministry of Development of North Eastern Region (MDoNER) and the Government of Assam.
- The mission aims to double the financial

returns of Muga silk rearers and weavers to over Rs.50,000 per kilogram.

- It features a digital traceability system that allows global consumers to verify the Geographical Indication (GI) authenticity of their purchase.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 2 only
 C: 2 and 3 only
 D: 1, 2, and 3

9. Consider the following statements regarding the historical and geographical context of the India–Nepal boundary dispute:

- The 1816 Treaty of Sugauli defined the Kali (Mahakali) River as the western boundary of Nepal.
- The core of the boundary disagreement is the lack of clarity regarding the exact source of the Mahakali River.
- Nepal claims that the river originates from Kalapani, whereas India considers the origin to be Limpiyadhura.

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

10. Consider the following statements regarding Flex Fuel Vehicles (FFVs):

- Flex Fuel Vehicles can operate on petrol, ethanol, or any blend of the two without requiring engine modifications by the user.
- Ethanol blending helps reduce dependence on crude oil imports and provides additional income opportunities for farmers.
- India achieved nationwide E20 ethanol blending by March 2025.

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

11. Consider the following statements regarding

India-Australia relations:

1. The Comprehensive Strategic Partnership between India and Australia was established in 2020.
 2. AUSINDEX is a bilateral naval exercise conducted between India and Australia.
 3. Australia maintains a Liaison Officer at the Information Fusion Centre-Indian Ocean Region (IFC-IOR) located in Gurugram.
- 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

12. Consider the following statements regarding the BrahMos Missile System:

1. It is a "fire-and-forget" ballistic missile that follows a high, arched trajectory.
 2. It uses a two-stage propulsion system consisting of a solid rocket booster and a liquid-fuel ramjet engine.
 3. It can be launched from multiple platforms including submarines, ships, aircraft, and land-based systems.
- 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

13. With reference to India's presence in the QS World University Rankings 2027, consider the following statements:

1. India has the second-highest number of globally ranked universities in the world, trailing only the United States.
 2. The Indian Institutes of Technology (IITs) account for the vast majority of India's highest-performing institutions in the ranking.
 3. The QS rankings reflect that India's higher education presence has declined significantly in terms of the total number of featured institutions over the last decade.
- 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

14. Consider the following statements regarding the Jayaprakash Narayan Bird Sanctuary (Surha Taal), recently designated as India's 100th Ramsar Site:

1. It is an artificial perennial reservoir built to support agriculture in the Gangetic plains.
2. It is connected to the Ganga River through a water channel known as the Kathar Nala.
3. It serves as a vital wintering habitat for migratory birds traversing the Central Asian Flyway.

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

15. Consider the following statements regarding the Monetary Policy Committee (MPC):

1. The MPC was given a statutory basis through an amendment to the RBI Act, 1934 in 2016.
2. The MPC consists of six members, including three external members nominated by the Government of India.
3. In the event of a tie during voting, the RBI Governor has a casting vote.

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

16. Consider the following statements regarding the Nilgiri Tahr:

1. It is endemic to the Western Ghats and is the State Animal of Tamil Nadu.
 2. It is classified as Endangered on the IUCN Red List and is protected under Schedule I of the Wildlife (Protection) Act, 1972.
 3. It is primarily found in tropical montane grasslands and shola forest ecosystems.
- 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

17. Consider the following statements about the PM E-DRIVE (Prime Minister Electric Drive Revolution in Innovative Vehicle Enhancement) Scheme:

1. It is a Centrally Sponsored Scheme implemented by the Ministry of Heavy Industries.
2. It features an e-Voucher system for Aadhaar-authenticated digital subsidy disbursement to ensure transparency.
3. The scheme provides incentives for the procurement of electric buses as well as electric trucks linked to the scrapping of old diesel vehicles.

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

18. Consider the following statements regarding the ordinance-making power and recent developments in the Supreme Court:

1. Under Article 124(1) of the Indian Constitution, the power to determine the number of judges in the Supreme Court is vested exclusively in the Parliament.
2. Through the Supreme Court (Number of Judges) Amendment Ordinance, 2026, the sanctioned strength of the Supreme Court has been increased from 34 to 38.
3. Under Article 123, an Ordinance promulgated by the President has the same force and effect as a Parliament-passed law, but it automatically expires if not approved within six weeks of the Parliament reassembling.

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

19. Which of the following are salient features of

the Protection of Children from Sexual Offences (POCSO) Act, 2012?

1. It applies to all children below the age of 18, irrespective of their gender.
2. Under the Act, consent given by a minor to any sexual act is legally invalid.
3. Mandatory reporting of suspected child sexual abuse is required only for family members.

Select the correct answer using the code given below:

- A: 1 and 2 only
 B: 1 and 3 only
 C: 2 and 3 only
 D: 1, 2, and 3

20. Consider the following statements about India's Pharmaceutical Sector:

1. India supplies more than half of the World Health Organization's (WHO) global vaccine requirements.
2. India hosts the highest number of US FDA-approved pharmaceutical manufacturing plants outside of the United States.
3. Conventional small-molecule drugs constitute the largest revenue generator, while biologics and biosimilars are the fastest-growing segment.

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

21. Consider the following statements regarding the findings of the SIPRI Yearbook 2026:

1. All nine recognized nuclear-armed states are actively modernizing and expanding their nuclear arsenals.
2. India officially holds the highest number of deployed nuclear warheads among South Asian countries.
3. According to the report, India remains the world's second-largest arms importer.

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

22. Consider the following statements regarding the payload instruments on the Chandrayaan-3 mission:

1. RAMBHA-LP is designed to measure the electron density and temperature of the lunar near-surface plasma.
2. ChaSTE measures the thermal properties of the lunar surface near the polar region.
3. ILSA measures the seismic activity around the lunar landing site.

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

23. Consider the following statements regarding the Zojila Tunnel:

1. It is Asia's longest bi-directional single-tube road tunnel located at a high altitude.
2. The tunnel connects Ganderbal in Jammu & Kashmir with Dras in Ladakh.
3. It lies exclusively along National Highway-1 (NH-1).
4. It is being constructed using the Cut and Cover method.

Which of the statements given above is/are correct?

- A: 1 and 2 only
 B: 1, 3 and 4 only
 C: 1, 2 and 3 only
 D: 1, 2, 3 and 4

24. Consider the following statements regarding Foreign Currency Non-Resident (Bank) [FCNR(B)] deposits:

1. These accounts allow NRIs to deposit funds in foreign currencies without converting them into Indian Rupees.
2. The exchange rate fluctuation risk is borne by the depositor.
3. The interest earned on FCNR(B) deposits is taxable in India.

How many of the statements given above are correct?

- A: Only one
 B: Only two

C: All three

D: None

25. Consider the following statements regarding India's inward remittances:

1. Despite traditional dominance, the share of Gulf (GCC) countries in India's total inward remittances has witnessed a decline in recent years.
2. Advanced economies, such as the United States and the United Kingdom, have now emerged as the single largest regional contributors to India's remittances.
3. Remittances are classified under the "capital account" of the Balance of Payments (BoP) because they bring direct foreign exchange into the country.

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

26. With reference to India's space sector reforms, consider the following statements:

1. The Indian Space Policy, 2023 provides regulatory clarity for private participation in the space sector.
2. IN-SPACE is responsible for promoting and authorizing non-governmental participation in space activities.
3. IN-SPACE functions as a commercial arm of ISRO for marketing space technologies.

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

27. Consider the following statements regarding the Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994:

1. The Act explicitly prohibits the disclosure of the foetus's sex by doctors or diagnostic centres.
2. Under the Act, diagnostic techniques are permitted only for detecting specific genetic abnormalities or chromosomal disorders.

3. Courts can take cognizance of offences under this Act solely upon a complaint made by the Appropriate Authority or an authorized officer.

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

28. Consider the following statements regarding the recently launched Land Port Management System (LPMS) – VINIMAY:

1. It is a unified digital platform developed by the Land Ports Authority of India (LPAI) for cross-border logistics and passenger processing.
2. It facilitates an Electronic Single Window for clearances and integrates with national portals and regulatory agencies.
3. The platform is applicable only to land border checkpoints shared with India's BIMSTEC member nations.

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

29. With reference to the Land Ports Authority of India (LPAI), consider the following statements:

1. It is a statutory body established under the Ministry of Home Affairs.
2. It is mandated to develop and manage Integrated Check Posts (ICPs) along India's international land borders.
3. It serves as the implementing authority for the Border Area Development Programme (BADP).

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

30. With reference to India's multi-layered Ballistic Missile Defence (BMD) programme, consider

the following statements:

1. The Prithvi Air Defence (PAD) is designed for endo-atmospheric interception, destroying targets within the Earth's atmosphere.
 2. The Advanced Air Defence (AAD) is an exo-atmospheric interceptor that engages missiles outside the Earth's atmosphere.
 3. The newer interceptor systems like AD-1 and AD-2 are designed to counter Intermediate-Range Ballistic Missiles (IRBMs) and Intercontinental Ballistic Missiles (ICBMs).
- Which of the statements given above is/are correct?

- A: 1 and 2 only
B: 3 only
C: 1 and 3 only
D: 1, 2 and 3

31. Consider the following statements regarding India's multi-layered air defence architecture:

1. The S-400 Triumf forms the outermost long-range defence layer of India's air defence network.
2. Project Kusha is an indigenous long-range air defence programme being developed to counter aircraft, drones, cruise missiles, and hypersonic weapons.
3. Directed Energy Weapons (DEWs) are part of the medium-range defence layer in India's air defence architecture.

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

32. Which of the following are included in the four new institutional initiatives adopted under the recently adopted BRICS 'Indore Declaration'?

1. BRICS Network of Centres of Excellence on Agro-Ecology and Regenerative Agriculture
 2. Global Forum on Farmers' Rights in Seed Systems
 3. BRICS AgriN (Agro Inputs, Genetic Resources and Information Network)
 4. BRICS Land Restoration Partnership
- Select the correct answer using the code given below:

- A: 1 and 2 only

- B: 1,2 and 3 only
 C: 1, 3 and 4 only
 D: 1, 2, 3 and 4

33. Consider the following statements about "DengiAll", recently seen in the news:

1. It is an indigenous tetravalent dengue vaccine developed in India.
2. It is developed entirely on the mRNA technology platform.
3. It contains weakened forms of all four dengue virus subtypes.

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

34. Consider the following statements regarding China's non-fossil energy target:

1. China has announced a target of generating 50% of its electricity from non-fossil energy sources by 2030.
2. Non-fossil energy sources include nuclear, hydropower, solar, and wind energy.
3. Under the Paris Agreement, countries are required to adopt identical renewable energy targets.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: 1 and 3 only
 D: 1, 2 and 3

35. Consider the following statements regarding recent developments in India-Bangladesh relations:

1. India has resumed issuing tourist visas to Bangladeshi nationals.
2. Tourist visas constitute an important instrument for promoting people-to-people relations between neighbouring countries.
3. India and Bangladesh share the longest international land boundary that India has with any neighbouring country.

Which of the statements given above are correct?

- A: 1 and 2 only

- B: 2 and 3 only
 C: 1 and 3 only
 D: 1, 2 and 3

36. Consider the following statements regarding the National Organ and Tissue Transplant Organisation (NOTTO):

1. NOTTO functions under the Ministry of Health and Family Welfare.
2. NOTTO serves as the national apex body for organ donation and transplantation in India.
3. The Transplantation of Human Organs and Tissues Act, 1994 provides the legal framework for organ transplantation in India.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 2 and 3 only
 C: 1 and 3 only
 D: 1, 2 and 3

37. With reference to the Netra Airborne Early Warning and Control (AEW&C) system, consider the following statements:

1. Netra AEW&C is developed by the Centre for Airborne Systems (CABS), a laboratory under DRDO.
2. It is mounted on the indigenous HAL Tejas aircraft platform.
3. Its Active Electronically Scanned Array (AESA) radar provides 240-degree surveillance coverage.

Which of the statements given above are correct?

- A: 1 and 2
 B: 1 and 3
 C: 2 and 3
 D: 1,2 and 3

38. Consider the following statements regarding the Drop Shipping business model:

1. In a drop shipping model, the seller is not legally required to hold physical inventory of the products they sell.
2. Under Indian law, drop shipping platforms are entirely exempt from consumer grievance redressal responsal mechanisms since they do not own the goods.

3. Drop shippers in India are exempt from Goods and Services Tax (GST) registration if they do not physically stock the items they market.

Which of the statements given above is/are correct?

- A: 1 only
 B: 2 and 3 only
 C: 1 and 3 only
 D: 1, 2 and 3

39. Consider the following statements regarding the recently tested Long Range Land Attack Cruise Missile (LRLACM):

1. It is an indigenous, surface-launched subsonic cruise missile.
2. It uses an indigenous turbofan engine.
3. It operates outside the atmosphere for most of its flight trajectory.
4. It possesses Terrain Following and Terrain Hugging capabilities.

Select the correct answer using the code given below:

- A: 1 and 2 only
 B: 1, 2 and 4 only
 C: 1, 2 and 3 only
 D: 1, 2, 3 and 4

40. Consider the following statements regarding Cruise Missiles and Ballistic Missiles:

1. Cruise missiles remain powered by their engines for most of their flight duration.
2. Ballistic missiles generally follow a predictable trajectory.
3. Cruise missiles are relatively difficult to detect by radar because they fly at low altitudes.
4. Ballistic missiles possess more advanced terrain-following capabilities than cruise missiles.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 1, 2 and 3 only
 C: 2, 3 and 4 only
 D: 1, 2, 3 and 4

41. Consider the following statements regarding the Indian Ocean Rim Association (IORA):

1. It is an alliance exclusively focused on

maritime security and counter-piracy operations.

2. It operates strictly on the principle of open regionalism, emphasizing economic and technical cooperation without rigid political alignment.
3. Both India and China are full member states of the association.
4. Its Secretariat and headquarters are located in Mauritius.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 2 and 4 only
 C: 1, 2 and 3 only
 D: 1, 2, 3 and 4

42. Consider the following statements regarding the QS World University Rankings 2027:

1. No Indian institution features in the global top 100 overall, largely due to weaker performances in academic reputation and internationalisation.
2. The Indian Institute of Technology (IIT) Delhi became India's top-ranked institution, driven by strong scores in employer reputation and research impact.
3. Among the evaluation parameters used by QS, "Citations per Faculty" evaluates teaching quality rather than research productivity.

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

43. With reference to India's defence exports and the BrahMos missile, consider the following statements:

1. The Philippines was the first foreign buyer to sign an official deal with India for the BrahMos missile system.
2. The BrahMos missile is a joint venture between India's Defence Research and Development Organisation (DRDO) and Russia.
3. India holds a minority stake (less than 50%) in BrahMos Aerospace, the company

producing the missile.

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

44. Consider the following statements regarding India's Defence Production sector for FY 2025–26:

1. The total defence production surpassed Rs.1.5 lakh crore, with the private sector's share remaining below 10%.
2. Defence Public Sector Undertakings (DPSUs) still account for the majority of the total defence manufacturing output.
3. Defence exports have touched a new record high, crossing Rs.35,000 crore.

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

45. With reference to the features and provisions of the India–UK Comprehensive Economic and Trade Agreement (CETA), consider the following statements:

1. The agreement covers more than 99% of tariff lines in goods trade and provides UK market access for traditional Indian agricultural and dairy products.
2. The Double Contribution Convention (DCC) is an annexed social security agreement that exempts Indian professionals working in the UK from paying UK National Insurance for a specific period.
3. The UK maintains a massive trade surplus with India and will eliminate tariffs on almost all Indian goods exports under this deal.

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

46. Consider the following statements regarding the regulatory framework for digital platforms in India:

1. Under Section 69A of the Information Technology (IT) Act, 2000, the Government of India can block online content in the interest of sovereignty, security, and public order.
2. The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, require significant messaging platforms to enable mechanisms to trace the "first originator" of information.
3. If a social media intermediary fails to comply with lawful government takedown directives, it is stripped of its "safe harbour" protection under Section 79 of the IT Act.

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

47. With reference to the Kali Tiger Reserve, consider the following statements:

1. It is located in the Uttara Kannada district of Karnataka.
2. It was formerly known as the Dandeli-Anshi Tiger Reserve and was renamed after the Kali River in 2015.
3. It was declared a Tiger Reserve under Project Tiger in 2007 after the merger of Dandeli Wildlife Sanctuary and Anshi National Park.
4. It lies in the Eastern Ghats and forms a wildlife corridor with Andhra Pradesh.

Which of the statements given above are correct?

- A: 1 and 2 only
- B: 1, 3 and 4 only
- C: 1, 2 and 3 only
- D: 1, 2, 3 and 4

48. Consider the following statements regarding the Western Ghats and the Zoological Survey of India (ZSI):

1. The Western Ghats extend for about 1,600 km and are recognized as a UNESCO World Heritage Site.
2. The Western Ghats occupy less than 6% of

India's land area but support over 30% of its biodiversity.

3. The Zoological Survey of India (ZSI) was established in 1916 and functions under the Ministry of Environment, Forest and Climate Change.

4. The primary mandate of ZSI is the management of tiger reserves and national parks in India.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 1, 2 and 4 only
 C: 1, 2 and 3 only
 D: 1, 2, 3 and 4

49. With reference to the MAHASAGAR Vision, consider the following statements:

- MAHASAGAR stands for Mutual and Holistic Advancement for Security and Growth Across Regions.
- It builds upon India's earlier SAGAR doctrine.
- It aims to promote maritime security, Blue Economy, disaster resilience, and regional connectivity.
- It is exclusively a military initiative for the Indian Ocean Region.

Which of the statements given above are correct?

- A: 1, 2, and 3 only
 B: 1 and 4 only
 C: 2 and 3 only
 D: 1, 2, 3 and 4

50. Consider the following statements regarding India–Seychelles Relations:

- Seychelles is located in the Western Indian Ocean along important Sea Lines of Communication (SLOCs).
- India and Seychelles conduct the biennial Exercise LAMITYE.
- During the 2026 State Visit of PM modi, Seychelles decided to join the Coalition for Disaster Resilient Infrastructure (CDRI).
- India strengthened Seychelles' maritime capabilities by gifting the Fast Attack Vessel PS Lespwar.

Which of the statements given above are correct?

- A: 1 and 2 only
 B: 2, 3 and 4 only
 C: 1, 2, 3 and 4
 D: 1, 3 and 4 only

ANSWER

1	C
2	D
3	A
4	A
5	A
6	A
7	D
8	D
9	A
10	D

11	D
12	C
13	B
14	C
15	D
16	D
17	C
18	D
19	A
20	D

21	B
22	D
23	C
24	A
25	A
26	A
27	D
28	A
29	A
30	B

31	A
32	B
33	C
34	A
35	D
36	D
37	B
38	A
39	B
40	B

41	B
42	A
43	A
44	C
45	A
46	D
47	C
48	C
49	A
50	C



फिर लहराया परचम

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सभी सफल अभ्यर्थियों को हार्दिक शुभकामनाएँ

