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FEBRUARY 2026

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MAINS UPSC CSE IAS Exam 2026

Monthly Magazine

★ **Most Important Current Affairs Topics for CSE Mains 2026**

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PREFACE

Dear Students,

Understanding and organizing Civil Services Exam relevant Current affairs in a crisp and concise manner is essential for success in the Civil Services exam. Our exclusive CSE Mains current affairs magazine will fulfil that need in your preparation.

Features

- Crisp, Clear and insightful analysis on key Current Affairs issues.
- Important issues segregated according to CSE Main Exam syllabus.
- Content written in question and answer format for clarity, easy recollection and coherence while writing the main examination.
- Exam relevant topics curated from The Hindu and Indian Express.

All the best
R.C.Reddy IAS Study Circle

INDEX

GS I - INDIAN HERITAGE AND CULTURE, HISTORY AND GEOGRAPHY OF THE WORLD AND SOCIETY

A. INDIAN CULTURE

I. Art Forms, Literature and Architecture

1. Civilisational Pride of India

Why in the news?

- Civilisational assertion is increasingly invoked in political discourse, raising questions about whether it promotes unity or deepens polarisation.
- **Historical Foundations of Indian Civilisation Ancient Intellectual Traditions**: Texts such as the Vedas and Upanishads encouraged philosophical questioning and multiple interpretations of truth, while Buddhism and Jainism introduced ethical universalism and compassion, showing that diversity of thought was intrinsic to early India.
- **Medieval Cultural Synthesis**: The Bhakti and Sufi movements reduced social hierarchies and emphasised devotion over dogma, fostering cultural intermingling and shared spiritual spaces across communities.
- **Modern Constitutional Vision**: The Constitution of India institutionalised justice, liberty, equality and fraternity, transforming civilisational pluralism into enforceable rights and democratic governance structures.
- **Civilisational Self-Assertion: Competing Approaches Inclusive Assertion**: Recognises the primacy of majority traditions while simultaneously affirming equal dignity and contributions of minorities, thereby aligning heritage with constitutional morality.
- **Exclusionary Assertion**: Portrays history as a continuous conflict between communities, which simplifies complex historical processes and risks legitimising social exclusion.
- **Mythic Politics vs Developmental Governance**: When symbolic issues dominate discourse, attention shifts away from employment generation, public health systems and educational reform, weakening state capacity.
- **Implications for Governance and Public Policy Institution Building**: Effective civilisational pride should manifest in strengthening institutions such as the judiciary, legislature and independent regulatory bodies to uphold rule of law.
- **Human Development Priorities**: Investment in education, healthcare and skill development converts abstract cultural pride into tangible socio-economic progress.
- **Social Cohesion and Economic Growth**: Inclusive societies foster trust, reduce transaction costs and attract global partnerships, thereby enhancing long-term development.

Shared Civic Future and Democratic Ethics Equal Citizenship in Practice:

- **Dialogue and Deliberative Democracy**: Encouraging reasoned debate over identity-based mobilisation strengthens democratic culture and reduces polarisation.
- **Balancing Heritage with Modern Aspirations**: Pride in civilisation should motivate scientific temper, innovation and institutional reform to address contemporary challenges such as inequality and climate change.

Challenges to Inclusive Civilisational Assertion Communal Polarisation:

- **Selective Historical Narratives**: Oversimplification of historical interactions can distort public understanding and deepen mistrust.
- **Global and Diplomatic Implications**: As a plural democracy, India's international standing depends on maintaining internal inclusivity and rule-based governance.

Way Forward

- **Reinforce Constitutional Morality**: Civilisational pride must align with principles of secularism, fundamental rights and accountability embedded in the constitutional framework.
- **Promote Inter-Community Engagement**: Educational curricula, cultural exchanges and civil society initiatives can nurture mutual understanding and reduce prejudice.
- **Translate Pride into Public Good**: Focus on poverty alleviation, social justice and institutional transparency ensures that pride serves collective welfare rather than sectional interests.

B. INDIAN SOCIETY

I. Role of Women and Women's Organization, Population and Associated Issues, Poverty and Developmental issues, Urbanization, their problems and their remedies.

1. Data on Sanitation Workers in Central Government

Why in the news?

- More than 66% of the Group C *safai karmacharis* (sanitation workers) employed in the Union government come from the Scheduled Castes (SC), Scheduled Tribes (ST), and Other Backward Classes (OBC), show data on reservation in the annual report for 2024-25 from the Department of Personnel and Training (DoPT).

Taking count

The Personnel Ministry, in its latest report, has published the representation of SCs, STs and OBCs in the posts and services of the Union government, as per data received from 80 Ministries and departments

Group	Total no. of employees	SC	ST	OBC
A	1,19,178	16,920 (14.2%)	7,793 (6.54%)	22,807 (19.14%)
B	3,64,307	59,006 (16.20%)	27,789 (7.63%)	79,952 (21.95%)
C (excluding sanitation workers)	27,27,930	4,56,925 (16.75%)	2,43,872 (8.94%)	7,44,527 (27.29%)
C (sanitation workers)	40,737	14,971 (36.75%)	3,331 (8.18%)	8,614 (21.15%)
Total	32,52,152	5,47,822 (16.84%)	2,82,785 (8.7%)	8,55,900 (26.32%)

Findings of the Report

- **High Share in Sanitation Posts**: Over 66% of Group C safai karmacharis belong to Scheduled Castes, Scheduled Tribes and Other Backward Classes, highlighting occupational concentration.

- **Data Gap and Trend Shift**: This is the first comprehensive dataset since 2018-19 covering over 32 lakh employees across 80 Ministries and Departments.
- **Group-wise Representation (2024 Data) Group A Posts**: Scheduled Castes at 14.2%, Scheduled Tribes at 6.54%, and Other Backward Classes at 19.14%, indicating under-representation of Other Backward Classes compared to the 27% quota.
- **Group B Posts**: Scheduled Castes at 16.2%, Scheduled Tribes at 7.63%, and Other Backward Classes at 21.95%, reflecting closer alignment with prescribed quotas but still gaps for Other Backward Classes.
- **Group C Posts (Excluding Sanitation Workers)**: Scheduled Castes at 16.75%, Scheduled Tribes at 8.94%, and Other Backward Classes at 27.29%, showing near fulfilment of quotas in lower cadres.
- **Constitutional and Legal Framework Articles 15(4) and 16(4)**: Enable the State to make special provisions for advancement of socially and educationally backward classes and reservation in public employment.
- **Article 335**: Balances claims of Scheduled Castes and Scheduled Tribes with efficiency of administration.
- **Reservation Policy in Direct Recruitment**: 15% for Scheduled Castes, 7.5% for Scheduled Tribes, 27% for Other Backward Classes and 10% for Economically Weaker Sections as per Union government norms.
- **Absence of Economically Weaker Sections Data**: Despite 10% reservation, representation figures for Economically Weaker Sections are not provided.

Occupational Segregation Concern High Concentration in Sanitation Roles:

- **Caste Linked Occupation:** More than two-thirds of safai karmacharis belonging to reserved categories indicates persistence of caste-linked occupational patterns.
- **Vertical vs Horizontal Mobility**: While numerical representation improves in Group C, upward mobility to Group A remains limited.
- **Equity vs Equality Debate**: Mere numerical fulfilment does not ensure substantive equality in higher decision-making posts.

2. Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM)

Why in the news?

- DAY-NRLM is in the news as the government begins appraisal for 2026–31, focusing on autonomy of Cluster-Level Federations and credit deepening reforms.

About DAY NRLM

- It is a flagship poverty alleviation and women empowerment programme, launched in 2011 by the Union Ministry of Rural Development.
- It aims to reduce rural poverty by enabling poor households, especially women to access sustainable livelihoods through strong, community-based institutions.

Core Objective of Deendayal Antyodaya Yojana–National Rural Livelihoods Mission (DAY-NRLM)

- **Poverty Reduction through Social Mobilisation**: Organise rural poor households into Self-Help Groups to build collective strength and bargaining power.
- **Enhancing Sustainable Livelihoods**: Promote diversified and gainful self-employment and wage opportunities for increased household incomes.
- **Financial Inclusion and Credit Access**: Facilitate affordable and timely credit through bank linkage and financial literacy.
- **Women Empowerment and Leadership**: Strengthen women's agency in economic, social and political spheres through community institutions.

- **Institution Building and Self-Reliance**: Develop strong grassroots federations to ensure long-term, community-owned development processes.

Outcomes of the scheme

- **Scale and Outreach**: Around 10 crore households mobilised into 91 lakh Self-Help Groups (SHGs), federated into 5.35 lakh Village Organisations and 33,558 Cluster-Level Federations.
- **Financial Deepening**: SHGs leveraged over ₹11 lakh crore bank credit with low Non-Performing Assets of 1.7%, reflecting strong credit discipline.
- **Rise of Lakhpati Didis**: Over two crore women now earn more than ₹1 lakh annually, indicating income enhancement.
- **Holistic Empowerment**: Economic inclusion has translated into social and political participation of rural women.

Institutional Structure

- **Self-Help Groups (SHGs):** Small groups (10–20 women) that promote savings, internal lending, and collective action.
- **Village Organisations (VOs):** Federations of SHGs at the village level that coordinate activities, resolve issues, and implement schemes.
- **Cluster-Level Federations (CLFs):** Sub-block level, formally registered bodies that anchor livelihoods, financial services, social action, and convergence with government programmes.

C. GEOGRAPHY

I. Key Natural Resources

1. Coking Coal as Critical & Strategic Mineral

Why in the news?

- The Central Government amended the First Schedule of Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act) to classify coking coal as a Critical and Strategic Mineral.

Strategic Importance of Coking Coal

- **Resource Availability**: India holds about 37.37 billion tonnes of coking coal
- resources, largely concentrated in eastern States.
- **Exploration and Quality Constraints**: Limited deep-seated exploration and beneficiation challenges restrict optimal utilisation of domestic reserves.
- **Infrastructure Bottlenecks**: Inadequate logistics and evacuation systems impede efficient mining and distribution.
- **Steel Sector Dependency**: Coking coal is essential for blast furnace-based steel production, forming the backbone of infrastructure and manufacturing growth.
- **Rising Import Dependence**: Imports increased from 51.20 million tonnes in 2020–21 to 57.58 million tonnes in 2024–25, with nearly 95% demand met externally.
- **Foreign Exchange and Vulnerability**: High import reliance exposes India to global price volatility and geopolitical supply disruptions.

Economic and Federal Implications

- **Faster Clearances and Ease of Doing Business**: Streamlined approvals aim to accelerate exploration and mining activities.

- **Exemption from Public Consultation**: Mining of critical minerals is exempt from mandatory public hearings, reducing procedural delays.
- **Use of Degraded Forest Land**: Compensatory afforestation flexibility supports faster operationalisation of projects.
- **Boost to Private Investment**: Special status encourages private participation in exploration, advanced technologies, and beneficiation.
- **Employment Generation**: Expanded mining operations create jobs across extraction, logistics, and steel value chains.
- **Cooperative Federalism**: Though auctions may be conducted by the Centre, fiscal revenues continue to flow to States, preserving federal balance.

Way Forward

- **Environmental Safeguards**: Exemptions from public consultation necessitate stronger regulatory oversight to prevent ecological degradation.
- **Technological Upgradation**: Investment in coal washing and low-emission technologies is essential for sustainable steel production.
- **Diversification Strategy**: Parallel efforts in green steel and alternative technologies must complement domestic coking coal expansion.

2. Illegal Rat-Hole Mine in Meghalaya

Why in the news?

- The recent explosion in an illegal rat-hole coal mine in East Jaintia Hills district of Meghalaya, which claimed 18 lives, has once again exposed the persistent governance failures surrounding hazardous mining practices despite regulatory bans.

Blast site: A videograb of the mine where the explosion occurred in East Jaintia Hills on Thursday. PTI

Background of Rat-Hole Mining in Meghalaya

- **Nature of Practice**: Rat-hole mining involves digging narrow horizontal tunnels (4–5 feet high) where miners squat and extract coal manually.
- **Regulatory Ban**: The National Green Tribunal imposed a blanket ban on coal mining and transportation in 2014, later upheld by the Supreme Court.

- **Judicial Oversight**: The High Court of Meghalaya constituted the Justice (Retd.) B.P. Katakey Committee to monitor illegal mining and environmental restoration.

Causes Behind Persistent Illegal Mining

- **Economic Compulsion:** High daily wages (up to ₹2,000) attract poor labourers, many from neighbouring Assam.
- **Alternative Livelihood:** Limited alternative livelihood opportunities in the region.
- **Weak Enforcement and Political Patronage:** Inadequate monitoring of remote mining areas.
- **Administrative and Institutional Gaps:** Poor compliance with the Mines and Minerals (Development and Regulation) Act and safety norms.

Broader Implications

- **Human Security Concerns:** Repeated loss of lives reflects neglect of labour safety and dignity.
- **Environmental Degradation:** Rat-hole mining causes deforestation, river pollution, and land subsidence.
- **Crisis of Rule of Law:** Continued violations despite judicial bans weaken institutional credibility.

Way Forward

- Strict enforcement of the ban with accountability for officials enabling illegal mining.
- Alternative livelihood generation through skill development and rural industrialisation.
- Transparent monitoring using satellite mapping and technology-driven surveillance.
- Community engagement to discourage hazardous informal mining practices.
- Time-bound action on recommendations of oversight committees.

II. Important Geophysical Phenomena

1. Global Warming and Coral Reefs

Why in the news?

- Rising temperatures and nutrient pollution have increased algal blooms, altering ocean colour and disrupting marine food webs.

Biological Basis of Colour Adaptation

- **Role of Pigments in Survival**: Colouration aids camouflage, thermoregulation, mate attraction and predator avoidance, making it central to evolutionary fitness.
- **Melanin Reduction under Warming**: Reduced deposition of eumelanin and pheomelanin leads to lighter body colours, helping species prevent overheating.
- **Bogert's Rule and Gloger's Rule**: Cold-blooded species tend to be darker in colder climates, while warm-blooded animals show darker shades in humid regions.

Species-Level Changes and Evolutionary Responses

- **Industrial Melanism Parallel**: Like peppered moth adaptation during industrial pollution, present-day species are altering pigmentation to survive environmental stress.
- **Insect and Bird Colour Shifts**: Studies show ladybirds, dragonflies and urban birds becoming lighter or duller due to heatwaves and heavy metal pollution.
- **Impact on Reproduction**: Colour shifts may improve survival but reduce mating success, affecting long-term population viability.

Urbanisation, Pollution and Plant Pigments

- **Heavy Metal Deposition**: Pollutants such as lead may bind with melanin, producing darker plumage in urban bird populations.
- **Decline in Carotenoids**: Urban plants produce fewer red and yellow pigments, reducing attractiveness to pollinators.
- **Ultraviolet Pigment Alteration**: Flowers are modifying ultraviolet signals to withstand radiation, potentially affecting pollination networks.

Marine Ecosystems under Stress

- **Coral-Algae Symbiosis Breakdown**: Heat stress causes corals to expel symbiotic algae, leading to whitening and ecosystem collapse.
- **Loss of Biodiversity**: Bleached reefs lose structural complexity, reducing fish and invertebrate populations.
- **Algal Dominance and Hypoxia**: Excess blooms reduce water clarity and oxygen levels, intensifying marine degradation.

Way Forward

- **Need for Tropical Research**: Knowledge gaps in the Global South require comprehensive geographic monitoring of pigment shifts.
- **Habitat-Based Interventions**: Preserving shaded microhabitats and regulating coastal development can mitigate thermal stress.
- **Climate Mitigation and Pollution Control**: Reducing greenhouse gas emissions and improving water quality are essential to restore ecological balance.

GS 2 - GOVERNANCE, CONSTITUTION, POLITY, SOCIAL JUSTICE AND INTERNATIONAL RELATIONS

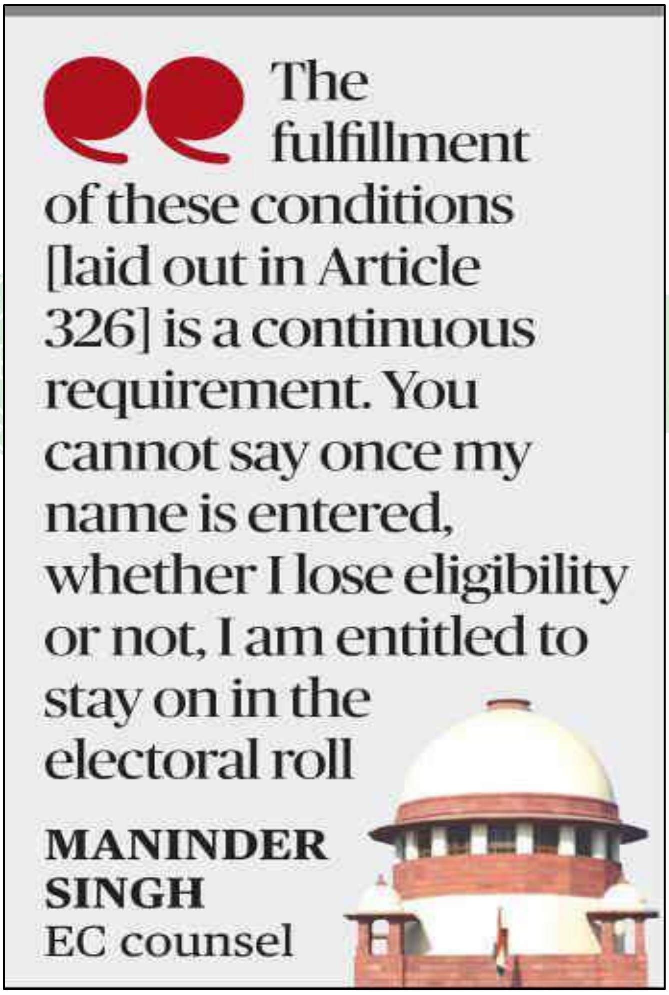
A. POLITY

I. Fundamental Rights, DPSPs and Fundamental Duties

1. Qualified Rights

Why in the news?

- The Election Commission argued before Supreme Court that the right to vote is a qualified statutory right, not an absolute or fundamental right, and is subject to verification under the Representation of the People Act, 1950.



- **Special** Intensive **Revision and Electoral Rolls**: The Election Commission of India informed the Supreme Court that even registered voters must continuously fulfil the eligibility conditions under Article 326 of the Constitution of India to remain on the electoral roll.

Meaning of Qualified Rights

- **Conditional Enjoyment of Rights**: Qualified rights are constitutional or legal rights that can be restricted by law on specific, reasonable grounds.

- **Not Absolute in Nature**: Their exercise is subject to limitations such as public order, morality, security of the State or statutory disqualifications.
- **Constitutional Basis of Qualified Rights Part III – Fundamental Rights Framework**: Most Fundamental Rights under Part Three of the Constitution are not absolute and permit the State to impose reasonable restrictions.
- **Article 13 and Rule of Law**: Any restriction must be authorised by law and consistent with constitutional principles, ensuring judicial review.
- **Doctrine of Proportionality**: Courts examine whether restrictions are necessary and balanced against individual freedoms.

Special Intensive Revision and Constitutional Framework of Electoral Rolls

- **Right to Vote as a Qualified Right Article 326 – Adult Suffrage**: Grants voting rights based on age, citizenship and absence of disqualification, making eligibility conditional.
- **Statutory Character**: The Supreme Court has held that the right to vote flows from statute and can be regulated by Parliament.
- **Reasonable Restrictions and Safeguards Grounds for Limitation**: Restrictions must serve legitimate aims such as maintaining electoral integrity or public order.
- **Statutory Backing under Representation of the People Act, 1950 Section 16 – Disqualifications**: Provides grounds such as non-citizenship, unsoundness of mind or corrupt practices for removal from the electoral roll.
- **Protection of Democratic Structure**: Judicial oversight ensures that qualified rights do not become tools for arbitrary exclusion.
- **Qualified Nature of Voting Right**: The right to vote is statutory and conditional, not an absolute fundamental right, and is governed by constitutional and legislative provisions.
- **Continuous Qualification Doctrine**: The Election Commission argued that eligibility is not a one-time requirement at the time of entry into the roll but must persist to retain the right to vote.
- **No Additional Threshold Argument**: The Election Commission clarified that the Special Intensive Revision does not introduce new criteria beyond Article 326 and statutory provisions.

Conclusion

The Special Intensive Revision reflects the tension between ensuring electoral integrity and protecting inclusive participation.

2. Right to be Forgotten

Why in the news?

- The Supreme Court issued notice on a plea challenging a December 2025 Delhi High Court ruling that ordered the removal of past news reports about a banker discharged in a money laundering case, raising questions on the scope of the “right to be forgotten” (RTBF).

What is the Right to be Forgotten?

- The “Right to be Forgotten” is the right to remove or erase content so that it’s not accessible to the public at large.
- It empowers an individual to have information in the form of news, video, or photographs deleted from internet records so it doesn’t show up through search engines, like Google in the present case.

Importance

- **Protection of Privacy:** It prevents lasting harm from outdated or irrelevant personal information.
- **Digital Dignity:** It ensures past mistakes or allegations do not cause permanent stigma.
- **Global Alignment:** It brings India in line with international standards like the EU’s GDPR.

- **Balanced Rights:** It helps balance individual privacy with press freedom and public interest.
- **Rehabilitation:** It supports rehabilitation and reintegration, especially for acquitted individuals or those who have served sentences.

Constitutional Issues Involved

- **Right to be Forgotten (RTBF)**
  - Recognised as part of the Right to Privacy under Article 21 in Justice K.S. Puttaswamy v. Union of India.
  - Aims to protect individuals from perpetual digital stigma.
  - Gains relevance in the age of permanent online archives.
- **Freedom of Speech and Press**
  - Guaranteed under Article 19(1)(a).
  - Includes the right to report on judicial proceedings and matters of public record.
  - Subject to reasonable restrictions under Article 19(2), including defamation.

The law on the Right to be Forgotten

- **Section 43A of the Information Technology Act, 2000** holds organisations liable to pay damages for failing to protect sensitive personal data.
- **The IT Rules, 2021** do not recognise the Right to Be Forgotten but they provide a grievance mechanism to seek removal of content exposing personal information.
- The **Digital Personal Data Protection Act, 2023** and the **DPDP Rules, 2025** together establish a citizen-centric data protection framework based on principles like consent, transparency, security and accountability.

Key Principles Emerging in India

- No automatic right to deletion merely due to acquittal or discharge.
- Courts assess public interest, sensitivity of data, time elapsed, and proportionality.
- Preference for anonymisation or de-indexing over complete erasure.

Way Forward

- Clear legislative guidelines balancing RTBF with press freedom.
- Structured proportionality standards for courts.
- Protection for journalistic and archival integrity while safeguarding individual dignity.

II. Federal structure of the Constitution

1. Issues Surrounding the Governor's Address

Why in the news?

- Recent controversies in Opposition-ruled States have revived debate on the scope of gubernatorial discretion, constitutional conventions, and the federal structure envisaged under the Constitution.

Recent Controversies in Opposition-Ruled States

- **Tamil Nadu**: Instances of omission of portions of the Cabinet-approved speech and later non-delivery of the address raise concerns of constitutional deviation.
- **Kerala**: Skipping select portions of the address prepared by the Council of Ministers reflects friction between the executive and the Governor.
- **Karnataka**: Delivery of a brief personal statement instead of the prepared address questions adherence to Article 176.

- **Pattern of Non-Compliance**: Increasing frequency of Governors bypassing established conventions indicates erosion of cooperative federal practices.

Historical Evolution
- **Government of India Act, 1935**: Section 63 allowed discretionary address by the Governor, but in practice speeches were prepared in consultation with the Council of Ministers after provincial autonomy in 1937.
- **Constituent Assembly Understanding**: The address was intended to reflect policies of the elected government, not the personal views of the Governor, reinforcing responsible government.

Constitutional Provisions
- **Article 175 of the Constitution of India**: Empowers the Governor to address the House or Houses of the State Legislature; it is discretionary and not mandatory in routine practice.
- **Article 176 of the Constitution of India**: Mandates the Governor to address the first session after general elections and the first session each year, outlining government achievements and policy priorities.
- **Motion of Thanks**: The Rules of Procedure provide for discussion on the address, ensuring legislative scrutiny of executive policies.
- **Article 159 of the Constitution of India**: Oath obligates the Governor to preserve, protect and defend the Constitution, binding the office to constitutional morality.

Judicial Interpretation
- **Shamsher Singh v. State of Punjab (1974)**: The Supreme Court held that the Governor is a constitutional head who must act on the aid and advice of the Council of Ministers except in limited discretionary matters.
- **Nabam Rebia v. Deputy Speaker (2016)**: Reiterated that functions under Article 175 and Article 176 are to be exercised on ministerial advice, limiting unilateral discretion.

Core Issue:
- **Appointment Mechanism**: Governor is appointed by the Union Government, often leading to perceptions of partisanship in Opposition-ruled States.
- **Federal Tensions**: Such actions strain Centre–State relations and undermine the principle of federalism, a part of the Basic Structure of the Constitution.
- **Erosion of Conventions**: Parliamentary democracy relies on conventions; deviation weakens institutional credibility and stability.

Recommendations of Commissions
- **Sarkaria Commission on Centre–State Relations (1983)**: Recommended consultation with the Chief Minister before appointment and selection of non-partisan individuals detached from active politics.
- **Punchhi Commission on Centre–State Relations (2007)**: Suggested fixed tenure security, clearer guidelines on discretionary powers, and structured consultation mechanisms.

Way Forward
- **Institutional Reform**: Consider constitutional amendment or statutory guidelines mandating consultation with Chief Ministers to reduce friction.
- **Codification of Conventions**: Clearly define obligation to read the Cabinet-approved address to avoid ambiguity.
- **Strengthening Cooperative Federalism**: Promote dialogue-based resolution between elected governments and Governors to maintain constitutional harmony.
- **Judicial Reinforcement**: Further clarity from the Supreme Court on consequences of non-compliance may deter future deviations.

2. Urban Challenge Fund

Why in the news?

- The Union Government has updated the Urban Challenge Fund, linking central assistance to market-based resource mobilisation by Urban Local Bodies.

Background of Urban Schemes

- **Atal Mission for Rejuvenation and Urban Transformation**: Several cities face delays and underutilisation of funds under ongoing infrastructure missions.
- **Swachh BharatMission Urban 2.0 and Smart Cities Mission**: Implementation gaps and incomplete projects reflect administrative and fiscal stress at the municipal level.

Fiscal Federalism and Devolution Concerns

- **Weak Financial Autonomy of Urban Local Bodies**: Despite the 74th Constitutional Amendment, fiscal powers remain inadequately devolved by States.
- **Dependence on Transfers**: Local revenues from property tax and user charges are insufficient and politically constrained.

Risks of Market-Linked Financing

- **Creditworthiness Challenges**: Many cities lack proper accounting systems and stable revenue bases to issue municipal bonds credibly.
- **Shift from Welfare to Bankability**: Emphasis on monetisable assets may sideline essential services such as slum formalisation and affordable housing.

Administrative Capacity Constraints

- **Underinvestment in Municipal Institutions**: Limited technical expertise and weak financial management hamper effective borrowing and utilisation.
- **Unclear Operational Guidelines**: Eligibility criteria and procedures of the Fund remain under examination, raising concerns of discretionary allocation.
- **Conditional Public Financing Model**: The Centre increasingly requires public institutions to leverage private capital rather than ensure baseline service guarantees.
- **Lessons from Other Sectors**: Experiences in higher education, health and power sectors show risks of debt accumulation and service inequities.

Implications for Urban Equity

- **Marginalisation of Weaker Cities**: Requirement to ‘earn’ funding may disadvantage smaller or poorer municipalities.
- **Need for Inclusive Urban Governance**: Protection for renters, low-income households and land record reforms are essential before aggressive market borrowing.

Way Forward

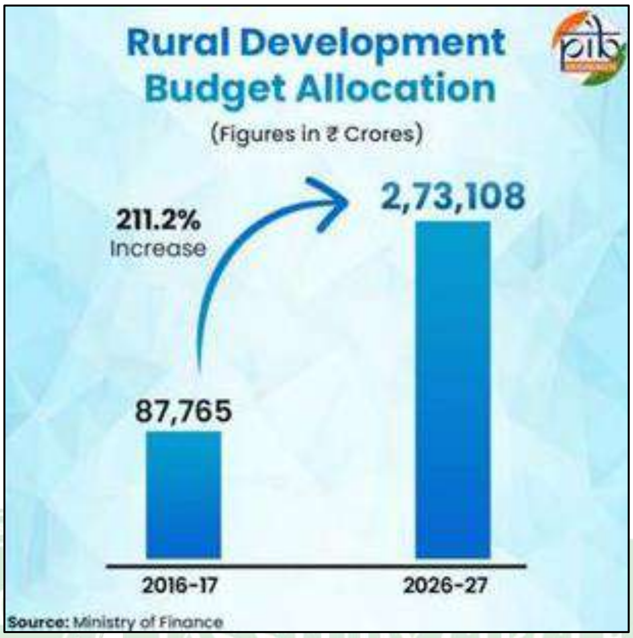
- **Strengthening Municipal Capacity First**: Robust accounting, transparent budgeting and predictable transfers should precede market access.
- **Balanced Financing Approach**: Market instruments must complement, not substitute, constitutional guarantees of urban service delivery.

III. Separation of Powers

1. Rural Transformation through Decentralization

Why in the news?

- Rural Development outlay increased from ₹87,765 crore in 2016–17 to ₹2.73 lakh crore in 2026–27, reflecting over 211% growth.



Decentralisation and Community-Led Governance

- **73rd Constitutional Amendment**: Institutionalised Panchayati Raj Institutions as vehicles of grassroots democracy and participatory planning.
- **Jan Bhagidari Approach**: Transition from beneficiary model to active community partnership in implementation and monitoring.
- **Fiscal Devolution Strengthened**: Transfers to Panchayats increased significantly under successive Finance Commissions, enhancing local autonomy.

Poverty Reduction and Social Protection Expansion

- **Decline in Multidimensional Poverty**: Poverty Headcount Ratio reduced to 11.28% in 2022–23, indicating sustained welfare gains.
- **Extreme Poverty Trends**: Extreme poverty declined to 5.3%, lower than global averages.
- **Expansion of Social Protection Coverage**: Coverage increased from 22% in 2016 to over 64% in 2025, supported by rising social sector expenditure.

Infrastructure-Led Rural Development

- **Housing Security under Pradhan Mantri Awas Yojana–Gramin**: 3.70 crore rural houses constructed, with allocations rising by over 266% since 2016–17.
- **Rural Roads Connectivity through Pradhan Mantri Gram Sadak Yojana**: Near-universal connectivity achieved, with allocations increasing by 51% over a decade.
- **Universal Electrification via Pradhan Mantri Sahaj Bijli Har Ghar Yojana**: Nearly 2.86 crore households electrified, ensuring last-mile energy access.

Water, Sanitation and Human Development Gains

- **Jal Jeevan Mission Achievements**: Rural tap water coverage expanded from 17% in 2019 to near universal levels by 2025.
- **Swachh Bharat Mission–Gramin Success**: Over 96% villages attained Open Defecation Free Plus status, improving sanitation outcomes.
- **Health and Nutrition Improvements**: Maternal and child mortality indicators show substantial long-term decline.

Women-Led Institutions and Livelihood Transformation

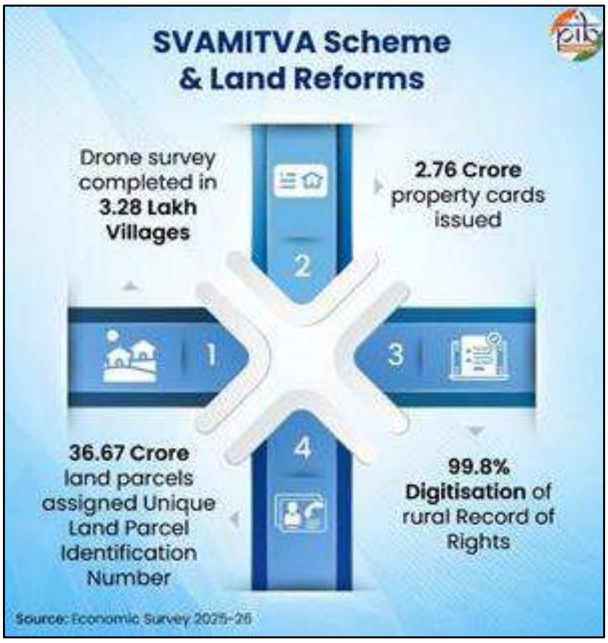
- **Deendayal Antyodaya Yojana–National Rural Livelihoods Mission**: Mobilised 10.05 crore women across 90.09 lakh Self-Help Groups, strengthening financial inclusion.
- **Community Resource Persons Network**: Over 9 lakh cadres support banking, agriculture, and nutrition services at grassroots.
- **Enterprise Promotion Initiatives**: Self-Help Entrepreneur Marts and Lakhpati Didi Programme encourage sustainable women-led enterprises.

Skill Development and Employment Reforms

- **Deen Dayal Upadhyaya Grameen Kaushalya Yojana**: Provides demand-driven skill training linked to placements for rural youth.
- **Rural Self Employment Training Institutes**: Nearly 59 lakh youth trained, promoting self and wage employment.
- **Viksit Bharat Guarantee for Rozgar and Ajeevika Mission–Gramin Act, 2025**: Guarantees 125 days of wage employment, integrating climate resilience and infrastructure priorities.

Digitalisation and Land Governance Reforms

- **SVAMITVA Scheme**: Drone-based mapping formalises rural property rights and improves access to credit.
- **Digital India Land Records Modernisation Programme**: Over 99% rural land records digitised, enhancing transparency.
- **Technology-Enabled Payments and Monitoring**: Aadhaar-based transfers and geo-tagging strengthen accountability and reduce leakages.



Inclusive Focus on Tribal and Vulnerable Communities

- **PM-Janjati Adivasi Nyaya Maha Abhiyan**: Targets Particularly Vulnerable Tribal Groups with infrastructure and scheme saturation.
- **Forest Rights Act Implementation**: Over 2.5 million forest titles distributed, strengthening community land rights.
- **Van Dhan Vikas Kendras**: Promote forest-based livelihoods for tribal communities.

IV. Parliament and State legislatures

1. MPLADS Funds

Why in the news?

- Recently, a controversy broke out over the use of MPLADS funds.

About MPLADS Scheme

- **Genesis and Nature of the Scheme**: The Members of Parliament Local Area Development Scheme was launched in 1993 as a Central Sector Scheme fully funded by the Government of India.
- **Core Objective**: Enables Members of Parliament to recommend works creating durable community assets such as roads, schools and drinking water facilities.
- **Annual Allocation**: Each MP can recommend works worth ₹5 crore per year, primarily within their constituency.

Arguments for Scrapping MPLADS

- **Violation of Separation of Powers**: The Members of Parliament Local Area Development Scheme blurs the line between legislature and executive, as lawmakers influence project implementation.
- **Erosion of Federal Principles**: Central allocation for local works may bypass State planning priorities and district-level institutional mechanisms.
- **Patronage and Political Incentives**: Funds can be used for clientelism, favouring politically aligned groups rather than objective development needs.

- **Duplication of Schemes**: Overlaps with existing Centrally Sponsored Schemes and State schemes reduce efficiency and coherence in public spending.
- **Accountability and Monitoring Deficits**: Weak auditing, delays and incomplete works raise concerns about transparency and quality control.
- **Uneven Utilisation and Capacity Gaps**: Variation in spending across MPs indicates lack of uniform capacity and planning expertise.
- **Opportunity Cost of Public Funds**: Allocating ₹5 crore per MP annually may divert resources from larger, strategically planned infrastructure projects.
- **Ethical and Constitutional Concerns**: Critics argue that legislators should focus on law-making and oversight rather than direct involvement in fund allocation.

Arguments Against Scrapping MPLADS

- **Addressing Local Development Gaps**: The Members of Parliament Local Area Development Scheme enables quick response to micro-level infrastructure needs often overlooked in large schemes.
- **Flexibility and Decentralised Prioritisation**: MPs can recommend context-specific works based on ground realities and constituency demands.
- **Creation of Durable Community Assets**: Funds are largely used for roads, school buildings, drinking water facilities and health infrastructure with long-term benefits.
- **High Utilisation Rates**: Data from successive Lok Sabhas indicate substantial fund utilisation, suggesting effective absorption capacity.
- **Supplementary to Existing Schemes**: MPLADS complements Centrally Sponsored and State schemes by filling last-mile and small-scale gaps.
- **Strengthening Democratic Accountability**: Visible local works enhance representative responsibility and connect legislative performance with developmental outcomes.
- **Provision for National Solidarity**: Guidelines permit limited allocation outside constituencies during disasters, promoting cooperative federalism.
- **Scope for Reform Instead of Abolition**: Improved transparency, social audits and digital monitoring can address concerns without discontinuing the scheme.

Way Forward

- **Enhancing Transparency and Accountability**: Institutionalise real-time disclosure, geotagging of assets and mandatory social and third-party audits.
- **Capacity Building and Professional Support**: Train Members of Parliament in project planning, outcome assessment and optimal fund utilisation.
- **Convergence with Local Planning**: Align MPLADS works with District Development Plans to avoid duplication and improve synergy.
- **Outcome-Oriented Monitoring**: Shift focus from mere fund utilisation to measurable developmental impact and timely completion.

2. 'Frontier Nagaland Territorial Authority' (FNTA)

Why in the news?

- The recent tripartite agreement between the Union Government, the Government of Nagaland, and the Eastern Nagaland Peoples' Organisation (ENPO) marks a significant step towards addressing long-standing developmental and political concerns in eastern Nagaland through the creation of the Frontier Nagaland Territorial Authority (FNTA).

Background and Rationale

- **Regional Imbalance**: Eastern districts such as Tuensang, Mon, Kiphire, Longleng, Noklak, and Shamator have historically lagged in infrastructure, connectivity, and socio-economic indicators.
- **ENPO's Demand**: The Eastern Nagaland Peoples' Organisation had been demanding a separate "Frontier Nagaland" state citing neglect and uneven development.
- **Negotiated Federal Solution**: Instead of bifurcation, the Centre adopted a decentralised institutional mechanism within the state framework.

Key Features of the Agreement

- **Creation of FNTA**: Establishment of a territorial authority covering six eastern districts.
- **Devolution of Powers**: Transfer of 46 subjects to FNTA, enhancing administrative and functional autonomy.
- **Mini-Secretariat**: A dedicated administrative structure headed by an Additional Chief Secretary/Principal Secretary.
- **Financial Arrangement**: Proportional sharing of development outlay based on population and geographical area.
- **Protection of Constitutional Safeguards**: The agreement explicitly safeguards Article 371A, which protects Naga customary laws, land, and resource rights.

Significance of the Arrangement

- **Strengthening Asymmetric Federalism:** Reinforces India's flexible federal design by accommodating regional aspirations within constitutional boundaries.
- **Developmental Acceleration:** Financial autonomy and decentralised decision-making can address local infrastructure deficits.
- **Conflict Resolution and Political Stability:** Reduces separatist tendencies by providing institutional recognition of regional identity.
- **Economic Empowerment:** Optimum resource utilisation and grassroots planning may enhance economic participation of tribal communities.

Challenges and Concerns

- **Implementation Deficit**: Effective devolution depends on clarity in administrative control and fiscal flows.
- **Political Coordination**: Harmonious functioning between the state government and FNTA is essential.
- **Expectations Management**: Balancing autonomy with state unity will require sustained dialogue.

Way Forward

- Ensure transparent fiscal transfers and measurable development indicators.
- Build local administrative capacity within FNTA.
- Institutionalise periodic Centre–State–FNTA coordination mechanisms.
- Integrate FNTA development plans with broader Northeast connectivity initiatives.

3. No-Confidence Motion Against Speaker of Lok Sabha

Why in the news?

- The Opposition has moved a no-confidence motion against Lok Sabha Speaker Om Birla, alleging procedural bias and denial of discussion space in the House

Constitutional Basis for Removal

- **Article 94 of the Constitution of India**: Article 94(c) provides that the Speaker or Deputy Speaker of the House of the People can be removed by a resolution passed by a majority of all the then members of the House.

- **Scope Limited to Lok Sabha**: This provision applies only to the Lok Sabha and not to the Rajya Sabha or Council of States.

Grounds for Vacation of Office

- **Cessation of Membership**: Under Article 94(a), the Speaker vacates office if they cease to be a member of the House.
- **Resignation Provision**: Under Article 94(b), the Speaker may resign by writing addressed to the Deputy Speaker.

Procedure for Moving the Resolution

- **Written Notice Requirement**: A member must submit a written notice to the Secretary-General of the Lok Sabha, signed by at least two members.
- **Mandatory Notice Period**: A minimum of fourteen days' notice must be given before the resolution can be moved.

Admission and Leave of the House

- **Inclusion in List of Business**: After the notice period, a motion seeking leave to move the resolution is listed for consideration.
- **Support of Fifty Members**: At least fifty members must rise in support for the motion to be admitted for discussion.

Discussion and Voting Process

- **Time-bound Consideration**: If admitted, the resolution must be taken up within ten days from the date leave is granted.
- **Majority Requirement**: Removal requires a majority of all the then members of the Lok Sabha, not merely those present and voting.

Rules Governing the Motion

- **Rules 200 to 203 of Rules of Procedure and Conduct of Business in Lok Sabha**: These rules prescribe procedural safeguards and stages for removal.
- **Specific Charges Requirement**: Rule 200A mandates that charges must be precise, specific, and free from defamatory or argumentative language.

Role of the Speaker During Proceedings

- **Right to Participate**: The Speaker has the right to speak and participate in the proceedings when the resolution is under consideration.
- **Limited Voting Right**: The Speaker can vote in the first instance but does not have a casting vote in case of a tie during such proceedings.

Historical Precedents

- **Ganesh Vasudev Mavalankar (1954)**: The first Speaker of the Lok Sabha faced a no-confidence motion but retained office.
- **Hukam Singh (1966) and Balram Jakhar (1987)**: Similar motions were moved but none resulted in removal.

Significance for Parliamentary Democracy

- **Ensuring Accountability of Presiding Officer**: The provision reflects the principle that even constitutional authorities remain accountable to the House.

- **Protection Against Arbitrary Removal**: Stringent notice and majority requirements safeguard institutional stability and neutrality of the Chair.

V. The Judiciary

1. Death Penalty in India

Why in the news?

- The Supreme Court has not confirmed a single death penalty in the past three years, according to an annual statistics report on death penalties in India, published by the Square Circle Clinic, a criminal justice initiative at the NALSAR University of Law, Hyderabad.

Findings of the Report

- **Supreme Court's Restrained Approach**: The Supreme Court of India has not confirmed any death sentence in the past three years, reflecting heightened judicial caution.
- **Rising Acquittals in 2025**: Ten death row prisoners were acquitted in 2025, the highest in a decade, signalling appellate scrutiny of trial court errors.
- **Large Number of Death Sentences by Trial Courts**: Sessions Courts imposed 1,310 death sentences between 2016–2025, with 128 in 2025 alone.
- **High Court and Supreme Court Review Patterns**: Of 842 High Court decisions, only 8.31% confirmed death sentences, while many were acquitted or commuted.
- **No Affirmation by Apex Court**: Among cases confirmed by High Courts and decided by the Supreme Court, none were ultimately upheld.
- **Error Correction Function**: High acquittal and commutation rates indicate significant flaws in trial-level conviction and sentencing standards.
- **Death Row Statistics and Delays**: As of December 31, 2025, 574 prisoners remain on death row, with average incarceration before acquittal exceeding five years.
- **Psychological and Human Costs**: Prolonged uncertainty and delayed justice raise concerns under Article 21 of the Constitution.
- **Procedural Violations at Sentencing Stage**: Despite guidelines in Manoj vs State of Madhya Pradesh and Vasanta Sampat Dupare vs Union of India, mitigation hearings and psychological evaluations were ignored in most 2025 cases.

- **Inadequate Sentencing Hearings**: Sentencing often followed conviction within days, limiting meaningful defence representation.
- **Emerging Alternative Sentencing Trend**: Increasing use of life imprisonment without remission reflects judicial preference for alternatives to capital punishment.

Conclusion:
The data highlight systemic deficiencies at the Sessions Court level, reinforcing the need for stricter procedural safeguards and re-evaluation of death penalty jurisprudence in India.

2. The Need for Diversity in the Judiciary

Why in the news?
- A Rajya Sabha Member of Parliament has introduced a Bill seeking constitutional amendment to ensure diversity in judicial appointments and establish regional benches of the Supreme Court of India.

Constitutional Provisions on Judicial Appointments
- **Article 124 and Article 217 of the Constitution of India**: Judges of the Supreme Court and High Courts are appointed by the President after consultation with the Chief Justice of India and other constitutional authorities.
- **Article 130 of the Constitution of India**: Provides that the seat of the Supreme Court shall be in Delhi or at such other place as decided by the Chief Justice of India with presidential approval.

Evolution of the Collegium System
- **First Judges Case - S.P. Gupta v. Union of India (1981)**: Upheld primacy of the executive in judicial appointments.
- **Second Judges Case - Supreme Court Advocates-on-Record Association v. Union of India (1993)**: Established the collegium system giving primacy to the judiciary to safeguard independence.
- **Reaffirmation in Presidential Reference**: The Third Judges Case (1998) clarified the collegium's composition and procedure, strengthening judicial primacy.
- **Functioning of Collegium**: The Chief Justice of India and senior judges recommend appointments, with limited scope for executive objection.

National Judicial Appointments Commission and Its Invalidation
- **99th Constitutional Amendment Act, 2014**: Created the National Judicial Appointments Commission comprising judicial and executive members.
- **Supreme Court Judgment in Supreme Court Advocates-on-Record Association v. Union of India (2015)**: Struck down the National Judicial Appointments Commission as violating the basic structure doctrine of judicial independence.

Concerns Regarding Diversity
- **Underrepresentation in Higher Judiciary**: Scheduled Castes, Scheduled Tribes, Other Backward Classes, women and minorities remain inadequately represented.
- **Merit versus Social Inclusion Debate**: While merit is emphasised, lack of diversity raises questions about inclusiveness and social legitimacy.

Regional Benches and Access to Justice
- **Geographical Barriers to Supreme Court Access**: Concentration in Delhi limits accessibility for litigants from distant regions.

- **Proposal for Regional Benches**: Suggests benches in New Delhi, Kolkata, Mumbai and Chennai to hear all matters except constitutional cases.

Way Forward
- **Reform within Collegium Framework**: Judiciary must voluntarily incorporate diversity considerations in recommendations.
- **Broad-based Appointments Mechanism**: A restructured National Judicial Appointments Commission with balanced safeguards may reconcile independence and accountability.
- **Phased Establishment of Regional Benches**: The Supreme Court may exercise powers under Article 130 to enhance access and reduce pendency.

VI. Constitutional and Non-Constitutional Bodies, Statutory, regulatory and quasi-judicial bodies

1. Independence of the Election Commission

Why in the news?
- The Opposition alliance has resolved to initiate removal proceedings against the Chief Election Commissioner amid allegations of electoral irregularities.

Constitutional Status and Mandate
- **Article 324 of the Constitution of India**: Provides for a permanent Election Commission of India with powers of superintendence, direction and control over elections to Parliament, State Legislatures, President and Vice-President.
- **Basic Structure Doctrine in Indira Gandhi v. Raj Narain (1975)**: Free and fair elections were recognised as part of the basic structure, reinforcing institutional independence.

Appointment Process and Legal Controversy
- **Chief Election Commissioner and other Election Commissioners (Appointment, Conditions of Office and Terms of Office) Act, 2023**: Establishes a selection committee comprising the Prime Minister, a Union Minister and the Leader of Opposition.
- **Deviation from Anoop Baranwal v. Union of India (2023)**: The Supreme Court had directed inclusion of the Chief Justice of India in the selection panel, which was later excluded by legislation.

Removal Safeguards and Institutional Autonomy
- **Protection under Article 324(5) read with Article 124(4)**: The Chief Election Commissioner can be removed only through a process similar to that of a Supreme Court judge on grounds of proved misbehaviour or incapacity.
- **Judges (Inquiry) Act, 1968 Procedure**: Requires minimum parliamentary signatures, constitution of an inquiry committee, and adherence to principles of natural justice.

Position of the Chief Election Commissioner
- **Multi-Member Commission in T. N. Seshan v. Union of India (1995)**: The Supreme Court upheld the validity of a multi-member Election Commission ensuring collective decision-making.
- **Chairperson Role under Article 324(3)**: The Chief Election Commissioner acts as Chairman, promoting consensus while retaining institutional hierarchy.

Concerns Regarding Electoral Integrity

- **Allegations of Voter List Manipulation**: Claims of targeted deletion of minority and Opposition-supporting voters challenge the credibility of adult franchise under Article 326.
- **Impact on Democratic Legitimacy**: Procedural improprieties in electoral rolls may erode public trust in constitutional institutions.

Political Dimension and Democratic Responsibility

- **Parliamentary Motion and Majority Constraint**: Though removal motion is constitutionally permissible, passage depends on parliamentary arithmetic.
- **Need to Avoid Politicisation of Institutions**: Sustaining respect for constitutional bodies is essential to preserve institutional credibility and democratic balance.

Way Forward

- **Strengthening Transparency in Electoral Processes**: Robust audit mechanisms and judicial oversight can reinforce public confidence.
- **Preserving Balance between Authority and Liberty**: Indian democracy thrives on safeguarding institutional independence while ensuring accountability within constitutional limits.

B. GOVERNANCE

I. Government policies and Interventions

1. Convention Against Cybercrime

Why in the news?

- India, along with the United States, Japan and Canada, did not sign the Convention, highlighting divisions in global cyber governance frameworks.

Background

- **Adoption by the United Nations General Assembly (2024)**: The Convention against Cybercrime, adopted in December 2024 with support from 72 countries, is the first multilateral criminal justice treaty negotiated in over two decades.
- **Origins in 2017 Resolution**: Initiated through a proposal led by Russia, negotiations involved eight formal sessions and multiple consultations with civil society and private actors.
- **India's Non-Signature**: India, along with the United States, Japan and Canada, refrained from signing, reflecting divergences in global cyber governance approaches.

Competing Frameworks of Cyber Governance

- **Budapest Convention on Cybercrime (2001)**: A European-led framework with 76 parties, excluding Russia and China, and limited to invited states, raising concerns of non-inclusivity.
- **United Nations Convention against Cybercrime**: Open to all states, but marked by geopolitical divisions despite broader participation.
- **European Union's Position**: The European Union supported the Convention to retain influence in implementation, as definitions mirror aspects of the Budapest framework.
- **United States' Reservations**: Concerns over broad definitions of "serious crimes" that may enable misuse against journalists, activists and political opponents.

- **Russia–China Convergence**: Viewed the Convention as an opportunity to reshape cyber norms and counter Western-dominated governance structures.

India's Stand

- **Active Negotiation but Limited Gains**: India engaged substantively but proposals on stronger sovereign control over citizens' data were not incorporated.
- **Institutional Autonomy Concerns**: India remains cautious about ceding regulatory discretion in sensitive domains like cross-border data access.
- **Erosion of Norm-Setting Influence**: Compared to its leadership in climate negotiations through the Group of Seventy-Seven (G77), India's impact in cyber rulemaking appears constrained.
- **Balancing Multiple Alignments**: Divisions across platforms such as the Quad and Five Eyes indicate complex geopolitics, limiting bloc-based strategies.

Principles–Practice Rift in International Law

- **Ambiguity in Definition of Cybercrime**: The Convention's broad scope allows signatories flexibility, potentially stretching criminal categories beyond consensus areas.
- **Human Rights Safeguards**: Procedural protections are linked to domestic legal frameworks, leading to uneven implementation standards.
- **Divergence Between Norms and Regulation**: Universal principles like user safety often translate into divergent regulatory models across jurisdictions.
- **Illustrative Domestic Example**: India's proposed watermarking of Artificial Intelligence-generated content seeks user protection but adopts a highly prescriptive compliance model.

Implications for India

- **Need for Technical Capacity Building**: Effective engagement requires investment in cyber forensics, digital evidence standards and cross-border cooperation mechanisms.
- **Strategic Norm Entrepreneurship**: India must articulate balanced positions integrating sovereignty, security and civil liberties.
- **Domestic Regulatory Reform**: Harmonising criminal law, data protection frameworks and cyber enforcement institutions is essential.
- **Multi-Level Diplomacy**: Active participation in multilateral, plurilateral and bilateral forums is necessary to safeguard institutional autonomy.

Conclusion

India's ability to shape and adapt to polycentric digital governance will depend on strengthening domestic institutions and sustained diplomatic engagement.

2. Constitutional Recognition to Denotified Tribes

Why in the news?

- DNT communities seek a separate Census 2027 column for constitutional recognition, aiming to end historical misclassification and access long-denied welfare benefits.

Historical Context: From "Criminals" to "Denotified"

- **The 1871 Criminal Tribes Act:** This law classified entire communities as "born criminals," subjecting them to constant surveillance and restricted movement.

- **The 1952 Repeal:** On August 31, 1952, the Act was repealed, and these groups were "denotified." However, the social stigma and administrative neglect persisted.
- **The "Misclassification" Issue:** Over the decades, most DNTs were absorbed into the SC, ST, or OBC categories. Community leaders argue this was "politics" that diluted their unique struggles.

Core Demands for Census 2027

- **A Separate Column and Code:** Without a dedicated column in the Census forms, leaders fear their data will be "lost" within the broader SC/ST/OBC categories. A separate code ensures accurate counting of the population, which is essential for targeted policy-making.
- **A New Constitutional Schedule:** The ultimate goal is a **separate Schedule**—similar to those for Scheduled Castes and Scheduled Tribes. This would provide:
  - Clear legal recognition.
  - Protection from being "outcompeted" by more dominant groups within the existing SC/ST/OBC quotas.

The Challenge of "Graded Backwardness"

- **The Logic:** Even among the marginalized, some tribes are more disadvantaged than others.
- **The Idate Commission (2017):** Identified 1,200 tribes but noted that 267 DNT communities remain entirely unclassified, leaving them without any access to affirmative action.

Steps taken by government

- **Scheme for Economic Empowerment of DNTs (SEED):** The scheme was launched in 2022 for the welfare of Denotified, Nomadic and Semi Nomadic Communities. The components of the Scheme for Economic Empowerment of DNTs are;
  - To provide good quality coaching for DNT candidates to enable them to appear in competitive examinations;
  - To provide Health Insurance to them;
  - To facilitate livelihood initiative at community level; and
  - To provide financial assistance for construction of houses for members of these communities.

3. Regulating Social Media Without Curtailing Digital Rights

Why in the news?

- Incidents of child self-harm have triggered calls for social media ban to children.
- **Global Regulatory Trends**: Countries like Australia and Spain have proposed or implemented under-16 bans, relying on strict age verification and penalties.

- **Limitations of a Blanket Ban Approach Technical Porosity and Virtual Private Networks**: Adolescents can bypass age restrictions through Virtual Private Networks, pushing them to unregulated digital spaces.
- **Surveillance and Privacy Risks**: Mandatory identity-linked age verification may undermine informational privacy recognised in Justice K.S. Puttaswamy v. Union of India (2017).
- **Democratic Deficit in Policymaking**: Youth voices are rarely included in regulatory design, leading to exclusionary frameworks such as rigid consent-gating under the Digital Personal Data Protection Act, 2023.
- **Gendered Digital Divide**: With lower female Internet access, bans may disproportionately restrict girls' digital mobility in patriarchal households.

Constitutional and Legal Dimensions

- **Right to Privacy under Article 21**: The Supreme Court of India recognised privacy as a fundamental right, requiring proportional and narrowly tailored restrictions.

- **Freedom of Speech under Article 19(1)(a)**: Digital access forms part of expressive freedom, and blanket prohibitions must satisfy reasonableness under Article 19(2).
- **Limitations of Information Technology Act, 2000 Framework**: Overreliance on notice-and-takedown mechanisms centralises censorship without addressing structural platform incentives.

Towards a Balanced Regulatory Framework

- **Duty of Care Obligations**: Legally enforceable safety standards for platforms can mandate algorithmic accountability and child-protection safeguards.
- **Digital Competition Law**: Addressing market concentration reduces engagement-driven harms embedded in platform design.
- **Independent Expert Regulator**: Oversight must be autonomous rather than executive-controlled to ensure transparency and accountability.
- **Evidence-Based Policymaking**: Publicly funded Indian research across class, caste, gender, and region should guide regulation.

Way Forward: Building a Healthy Media Ecology

- **Digital Literacy and Parental Engagement**: Education-based interventions promote responsible usage rather than prohibition.
- **Targeted, Proportionate Regulation**: Context-specific safeguards protect minors without undermining rights.
- **Youth-Centric Policymaking**: Involving adolescents in consultations ensures democratic legitimacy and practical effectiveness.

II. Important Aspects of Governance (RTI, Citizen Charter etc)

1. Data Act and RTI Act

Why in the news?

- Petitions challenging the amendment to the Right to Information Act, 2005 through Section 44(3) of the Digital Personal Data Protection Act, 2023 have been referred to a Constitution Bench.

Background

- **Right to Privacy Judgment in Justice K.S. Puttaswamy vs Union of India (2017)**: The Supreme Court declared privacy a fundamental right under Articles 21 and 19, directing the State to create a data protection framework.
- **Enactment of Digital Personal Data Protection Act, 2023**: Parliament enacted the law in 2023 to regulate processing of personal data by data fiduciaries and protect data principals.

Right to Information Act, 2005 and Existing Safeguards

- **Objective of Right to Information Act, 2005**: It operationalises transparency and accountability by enabling citizens to access information from public authorities.
- **Original Section 8(1)(j) Safeguard**: Personal information was exempt only if unrelated to public interest or causing unwarranted invasion of privacy, subject to larger public interest override.
- **Amendment through Section 44(3) of Digital Personal Data Protection Act Blanket Exemption Provision**: The amendment removes the public interest test and grants absolute exemption to all personal information.
- **Absence of Legislative Justification**: The Statement of Objects and Reasons does not clarify the necessity or proportionality of this change.

Why is Blanket Exemption Problematic?

- **Violation of Proportionality Principle**: Fundamental rights restrictions must satisfy legality, necessity, and proportionality; absolute exemption fails the balancing test.
- **Undermining Public Interest Doctrine**: Earlier framework ensured privacy protection while permitting disclosure in cases of overriding public interest.
- **Risk of Overbroad Interpretation**: Broad phrasing may allow denial of information loosely connected to individuals, affecting transparency in governance.
- **Effect on Anti-Corruption Efforts**: Civil society and media investigations may be obstructed due to denial of critical information.

Way Forward

- **Reference to Constitution Bench**: The Supreme Court has referred petitions challenging the amendment, recognising constitutional sensitivity.
- **Need for Harmonious Construction**: Privacy and transparency must be balanced rather than treated as mutually exclusive rights.
- **Restoring Public Interest Override**: Reinstating the earlier Section 8(1)(j) formulation would preserve equilibrium between privacy and accountability.
- **Clarification of 'Personal Information'**: Judicial guidelines can define its contours to prevent misuse and ensure democratic transparency.

C. SOCIAL JUSTICE

I. Welfare Schemes for Vulnerable Sections

1. NAMASTE Scheme

Why in the news?

- The Ministry of Social Justice and Empowerment has undertaken enumeration under the NAMASTE (National Action for Mechanised Sanitation Ecosystem) scheme to formalise and protect sanitation workers.

About the Scheme

- **Scope of Coverage**: 1.52 lakh waste-pickers across 35 States and Union Territories have been profiled and validated by Urban Local Bodies.
- **Definition of Waste-Pickers**: Informal workers engaged in collection and recovery of recyclable solid waste for livelihood, now being brought into formal recognition systems.
- **Social Composition and Caste Dimension**: 84.5% of enumerated waste-pickers belong to Scheduled Castes, Scheduled Tribes and Other Backward Classes, highlighting caste-linked occupational vulnerability.
- **Gender Profile**: Women constitute nearly 48.7% of waste-pickers, indicating feminisation of informal waste labour.
- **State-Level Variations**: In Delhi and Goa, General category workers form a majority, showing regional social differences.
- **Link with Manual Scavenging and Sewer Work**: About 89,000 sewer and septic tank workers have also been enumerated, most from marginalised communities.
- **Constitutional and Social Justice Dimension**: The data reflects continuing caste-based occupational stratification, raising concerns under Articles 14, 17 and 21 of the Constitution.
- **Policy Significance**: Enumeration enables access to protective equipment, social security benefits, and targeted welfare interventions.

Types of waste

- **Wet waste** includes kitchen waste, vegetables, fruit peels, meat, flowers, etc., which shall be composted or processed through bio-methanation at the nearest facility.
- **Dry waste** comprises plastic, paper, metal, glass, wood and rubber, etc., and shall be transported to Material Recovery Facilities (MRFs) for sorting and recycling.
- **Sanitary waste** includes used diapers, sanitary towels, tampons and condoms, etc., which shall be securely wrapped and stored separately.
- **Special care waste** includes paint cans, bulbs, mercury thermometers and medicines, etc., which shall be collected by authorised agencies or deposited at designated collection centres

II. Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

1. Public Spending on Health in India

Why in the news?

- The issue is in the news due to declining Union health spending despite National Health Policy 2017 targets and post-pandemic rollback.

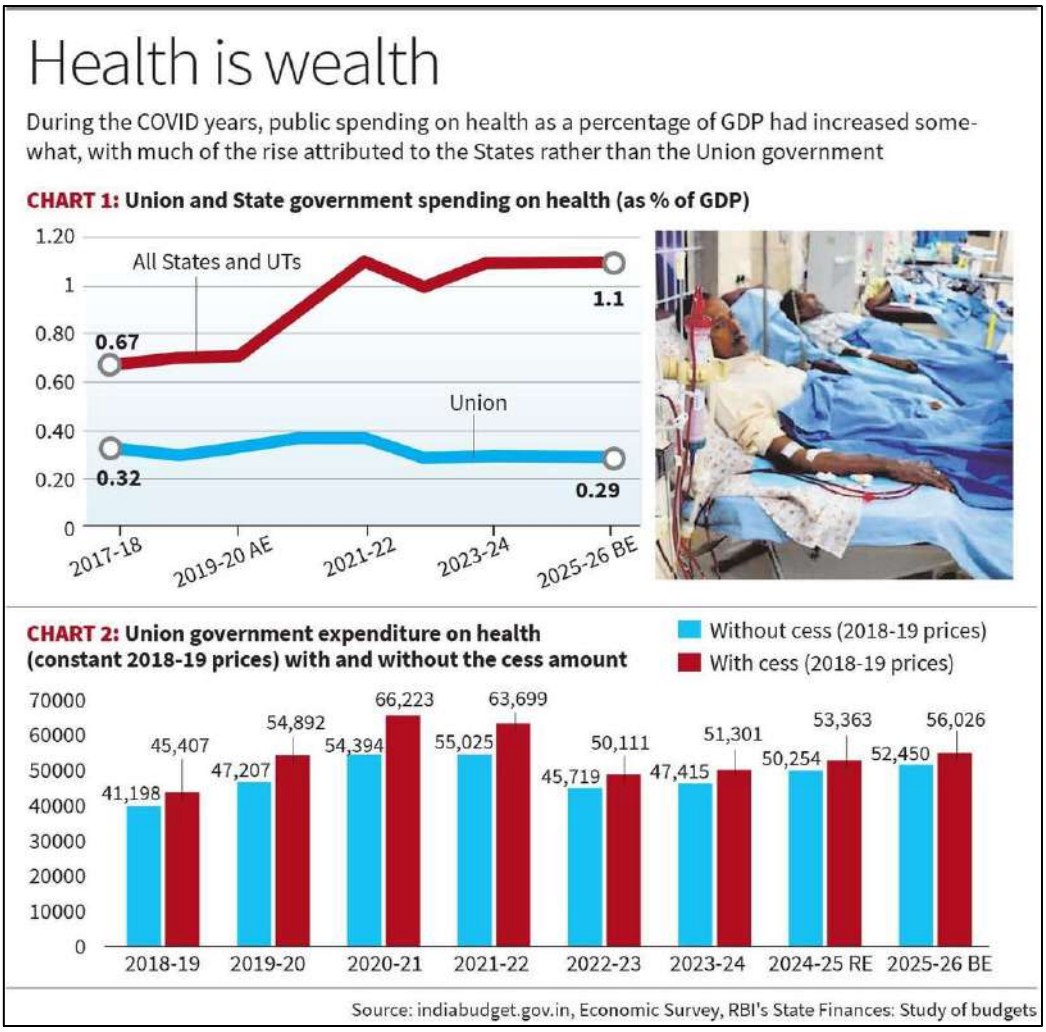
Background and Policy Commitment

- **National Health Policy 2017 (NHP 2017)**: The policy aimed to raise public health expenditure to 2.5% of Gross Domestic Product (GDP) by 2025 and increase the Union share to 40% of total public spending.
- **Target vs Reality**: Despite the 2025 deadline passing, Union health expenditure remains around 0.29% of GDP, far below the proposed 1% contribution.

Trends in Public Health Expenditure

- **State Governments' Efforts**: Health and family welfare spending by States rose from 0.67% of GDP in 2017–18 to about 1.1% in 2025–26 Budget Estimates, indicating sustained post-pandemic prioritisation.

- **Union Government Trend**: Union spending increased moderately during COVID-19 but declined afterward from 0.37% of GDP in 2020–21 to 0.29% in 2025–26 Budget Estimates.
- **Budgetary Share Decline**: The share of health in the total Union Budget fell from 2.26% to about 2.05%, reflecting reduced fiscal priority.



Health and Education Cess (HEC) Concerns

- **Introduction of HEC**: The Health and Education Cess, introduced in 2018–19 at 4% of taxable income, was intended to expand health and education spending.
- **Utilisation Gap**: A significant portion of collections is not exclusively used to expand health services, limiting additionality in public health financing.
- **Declining Transfers to States**: The share of Union health expenditure transferred to States under Centrally Sponsored Schemes declined from nearly 76% in 2014–15 to about 43% in 2024–25 Budget Estimates.
- **Implications for Federalism**: As health is primarily a State subject, reduced fiscal transfers strain service delivery and reflect growing centralisation of resources.

International Comparison and Structural Concerns

- **Low Per Capita Spending**: India's public health expenditure per capita remains significantly lower than countries such as Bhutan, Sri Lanka, Thailand, and other BRICS nations.
- **Out-of-Pocket Burden**: Low public provisioning increases household out-of-pocket expenditure, deepening inequalities in access to healthcare.

Way Forward

- **Enhancing Fiscal Commitment**: Gradual scaling of Union expenditure toward at least 1% of GDP is necessary to meet National Health Policy goals.
- **Strengthening Cooperative Federalism**: Greater and predictable transfers to States are essential for primary healthcare strengthening.
- **Ensuring Additionality of Cess**: Health and Education Cess proceeds must transparently augment, not substitute, core health allocations.

2. Menstrual Health Part of Right to Life

Why in the news?

- The Supreme Court declared that the right to menstrual health and access to menstrual hygiene management (MHM) measures in educational institutions is part of the fundamental right to life and dignity under Article 21 of the Constitution.

Directions Issued by the Court

- **Functional Gender-Segregated Toilets**: States and Union Territories must ensure proper toilets in all government and private schools.
- **Free Oxo-Biodegradable Sanitary Napkins**: Schools must provide sanitary napkins free of cost, preferably via vending machines within toilet premises.
- **Establishment of MHM Corners**: Schools must create Menstrual Hygiene Management corners with spare uniforms, innerwear, and disposal materials.
- **Accountability Mechanism**: Government schools face state liability for non-compliance, while private schools risk de-recognition under the Right to Education framework.

Constitutional Dimensions

- **Article 21 – Right to Life and Dignity**: The Court expanded Article 21 to include menstrual health, linking dignity with conditions free from humiliation and exclusion.
- **Right to Privacy and Bodily Autonomy**: Lack of MHM facilities was held to violate privacy and decisional autonomy of girl children.
- **Substantive Equality**: Menstrual poverty was recognised as a gender-specific barrier undermining equal access to education.

Impact on Education and Human Capital

- **Absenteeism and Dropouts**: Inadequate facilities force adolescent girls into absenteeism or unsafe practices, impairing educational continuity.
- **Long-Term Consequences**: Disruptions in primary and secondary education have lasting socio-economic effects.
- **Right to Education Act Linkage**: The judgment reinforced compliance with Section 19 of the Right to Education Act, mandating separate and functional sanitation facilities.
- **Men in Menstruation**: The Court emphasised sensitisation of male teachers and students to prevent stigma and harassment.
- **From Sanitation to Autonomy**: MHM was defined not merely as sanitation, but as enabling bodily autonomy and decisional freedom.

Conclusion

The judgment affirms that a girl child cannot be forced to choose between education and dignity, embedding menstrual health within constitutional morality and gender justice.

3. Biopharma Push in Union Budget 2026–27

Why in the news?

- The Union Budget 2026–27 places biopharmaceuticals at the core of healthcare and manufacturing strategy.

Biopharma SHAKTI Initiative

- **Dedicated National Programme**: Biopharma Strengthening and Harnessing Advancement for Knowledge, Technology and Innovation (Biopharma SHAKTI) has an outlay of Rs. 10,000 crore over five years.
- **End-to-End Ecosystem Development**: The initiative aims to support research, manufacturing, and global competitiveness in biologics.
- **Reduction of Import Dependence**: Focus is on strengthening domestic capabilities in high-value biologic medicines.

Human Resource and Institutional Strengthening

- **Expansion of National Institutes of Pharmaceutical Education and Research (NIPERs)**: Three new institutes and upgradation of seven existing ones aim to build specialised talent.
- **Skilling and Regulatory Expertise**: Training in research, manufacturing, and regulatory science enhances sector readiness.

Clinical Research and Regulatory Reforms

- **1,000 Accredited Clinical Trial Sites**: A nationwide network will enhance India's capacity for advanced biologics trials.
- **Strengthening Central Drugs Standard Control Organisation (CDSCO)**: Enhanced scientific staffing aims to align approval timelines with global standards.
- **Regulatory Credibility**: Improved efficiency supports faster evaluation of complex biologics and boosts investor confidence.

Existing Policy Support for Biopharma

- **National Biopharma Mission (NBM)**: Launched in 2017 with World Bank support, it promotes vaccines, biosimilars and diagnostics innovation.
- **Biotechnology Industry Research Assistance Council (BIRAC)**: Established in 2012, it funds startups through grants, equity support and incubation.
- **Promotion of Research and Innovation in Pharma-MedTech (PRIP)**: With Rs. 5,000 crore outlay, it supports research in new drugs, biosimilars and medical devices.

Emerging Biotechnology Policies

- **BioE3 Policy**: Biotechnology for Economy, Environment and Employment promotes sustainable biomanufacturing and precision therapeutics.
- **Bio-RIDE Scheme**: Biotechnology Research Innovation and Entrepreneurship Development integrates research, entrepreneurship and biomanufacturing support.
- **Moving Up the Value Chain**: India transitions from generics manufacturing to innovation-driven biologics production.
- **Global Competitiveness**: Integrated support across research, regulation and manufacturing enhances export potential.
- **Affordable Access to Advanced Therapies**: Domestic production lowers costs of biologics for chronic and complex diseases.

Conclusion

The Union Budget 2026–27, through Biopharma SHAKTI and complementary schemes, marks a coordinated effort to build a resilient, innovation-led biopharma industry capable of advancing public health and economic growth.

4. Global Aid Cuts and Public Health Risks: Findings from IS Global Study

Why in the news?

- A study by Barcelona Institute for Global Health, published in The Lancet Global Health, warns that reduced Official Development Assistance (ODA) could cause 22.6 million additional deaths by 2030.

Findings of the Study

- **Vulnerable Regions**: Sub-Saharan Africa faces the highest risk, while 21 Asian countries including India may see reversal of health gains.
- **Global Spread of Impact**: The 93 affected low- and middle-income countries account for nearly 75% of the world's population.
- **Achievements of Official Development Assistance (ODA)**: Between 2002–2021, ODA reduced child mortality by 39% and HIV/AIDS deaths by 70%.
- **Control of Communicable Diseases**: Deaths due to malaria and nutritional deficiencies declined by 56%, reflecting strong public health investments.
- **System Strengthening Role**: ODA supported vaccination, maternal care, and primary health infrastructure in vulnerable economies.
- **Recent Decline in Aid Flows**: In 2024, major donors such as the United States, the United Kingdom, France and Germany reduced contributions.
- **Risk of Development Reversal**: Experts warn that shrinking aid budgets threaten Sustainable Development Goals (SDGs) and decades of health progress.

Impacts

- **Link with Sustainable Development Goals (SDGs)**: Reduction in Official Development Assistance (ODA) directly threatens SDG-3 (Good Health), SDG-1 (No Poverty) and SDG-10 (Reduced Inequalities), widening North–South disparities.
- **Impact on India's Developmental Priorities**: Though India has reduced aid dependence, external assistance still supports health innovation, climate adaptation and multilateral programmes.
- **Geopolitical Implications**: Shrinking Western aid may create space for emerging donors like China to expand influence through alternative financing models.
- **Health Security Concerns**: Weakening disease-control systems could heighten risks of pandemics, antimicrobial resistance and cross-border health threats.
- **Need for South–South Cooperation**: Platforms such as BRICS and India's development partnerships can supplement traditional aid flows.
- **Role of Multilateral Institutions**: Agencies like the World Health Organization and the World Bank may need enhanced funding coordination to mitigate shocks.

Conclusion

The study underscores that development assistance remains a critical global health intervention, and sustained financing is essential to prevent large-scale mortality and inequality.

5. AYUSH in Union Budget 2026–27

Why in the news?

- The Union Budget 2026–27 has accorded a significant fiscal and institutional push to the AYUSH sector, signalling a transition from a complementary public health initiative to a globally oriented, regulated healthcare and wellness industry.

Key Budget Proposals to Expand Accessibility

- **New All-India Institutes of Ayurveda:** Proposal to establish three new institutes on the model of All India Institute of Medical Sciences.
- **Strengthening the National AYUSH Mission**
  - Allocation hiked by 66% to ₹1,300 crore.
  - Modernisation of AYUSH hospitals and dispensaries.
  - Co-location of AYUSH units within primary and district hospitals.
  - Upgradation of facilities towards preventive health.
- **Regulatory and Quality Infrastructure**
  - Funds to upgrade pharmacies and drug-testing laboratories.
  - Support for WHO Global Traditional Medicine Centre at Jamnagar to develop global standards.
- **Technology and Agriculture Support**
  - Launch of multilingual AI assistant "Bharat-VISTAAR" to assist medicinal plant farmers.
  - Real-time advisory on cultivation, certification, and export markets.

Scientific and Regulatory Concerns

- **Evidence and Clinical Validation:** Critics argue many AYUSH therapies lack rigorous randomised controlled trials. Raises concerns about empirical validation.
- **Safety Issues:** Reports of heavy metals (lead, mercury) in certain products.
- **Mixopathy Debate:** Controversy over authorisation of Ayurveda graduates to perform surgical procedures.

Way Forward

- Invest in large-scale clinical trials to build credible evidence.
- Strengthen pharmacovigilance and heavy-metal testing.
- Clearly delineate scope of practice between systems.
- Align export ambitions with global safety and documentation norms.

6. Human Papillomavirus (HPV) Vaccination Programme

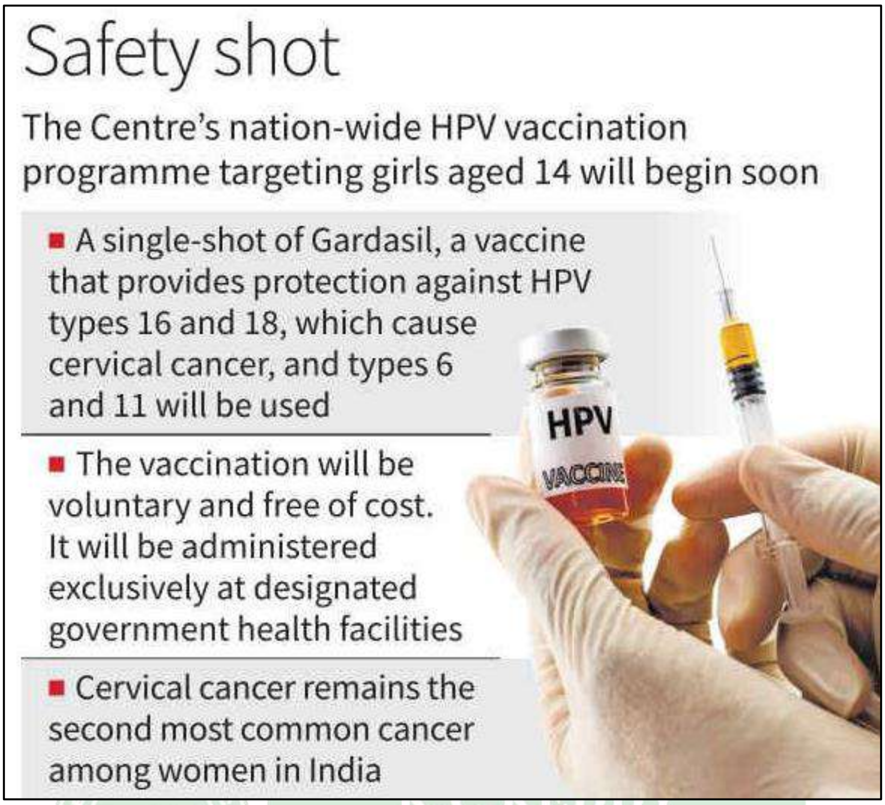
Why in the news?

- The Government of India is set to introduce a free and voluntary Human Papillomavirus vaccination programme targeting 14-year-old girls.

About Human Papillomavirus and Disease Burden

- **Cervical Cancer in India**: Cervical cancer is the second most common cancer among Indian women, with nearly 80,000 new cases and over 42,000 deaths annually.
- **Causative Link with HPV**: Persistent infection with high-risk HPV types 16 and 18 accounts for over 80% of cervical cancer cases.
- **Use of Gardasil Vaccine**: India will administer the quadrivalent Gardasil vaccine protecting against HPV types 6, 11, 16 and 18.

- **Single-Dose Effectiveness**: Scientific evidence supports that a single dose provides robust and durable protection in the recommended age group.



Global Context and Policy Backing

- **Global Adoption of Single-Dose Schedule**: Over 90 countries have implemented single-dose HPV vaccination with proven reduction in infections and pre-cancerous lesions.
- **Recommendation by National Technical Advisory Group on Immunisation**: India's rollout is guided by expert advice and global best practices.

Significance

- **Preventive Public Health Strategy**: Early vaccination before potential exposure can substantially reduce cervical cancer incidence.
- **Advancing Universal Health Coverage**: Free and equitable access strengthens preventive healthcare under national immunisation efforts.

D. INTERNATIONAL RELATIONS

I. India & World

1. 2026 Delhi Declaration

Why in the news?

- India hosted the second Foreign Ministers' meeting with the League of Arab States after a decade amid US–Iran tensions and intra-Gulf rivalries.

About Arab League

- **Establishment and Nature**: The League of Arab States was established in 1945 in Cairo as a regional intergovernmental organisation of Arab countries.
- **Membership**: Comprises 22 member states from West Asia and North Africa, promoting collective Arab interests.
- **Objectives**: Strengthen political, economic, cultural and security cooperation among member states.
- **Principle of Sovereignty**: Upholds respect for sovereignty, territorial integrity and non-interference in internal affairs.
- **Institutional Structure**: Includes the Council of the League, specialised ministerial committees and a permanent Secretariat headquartered in Cairo.
- **Role in Regional Conflicts**: Engages in mediation and peace initiatives, including the Arab Peace Initiative (2002) on Israel–Palestine.
- **Economic and Developmental Cooperation**: Promotes trade integration, joint investments and coordination in energy and infrastructure sectors.
- **Contemporary Relevance**: Acts as a key diplomatic platform shaping collective Arab responses to regional crises and global geopolitical shifts.

Highlights of the 2026 Delhi Declaration

- **Reaffirmation of Sovereignty and Territorial Integrity**: Emphasises unity of Sudan, Somalia and Libya while rejecting external interference.
- **Balanced Gulf Engagement**: Reflects calibrated diplomacy amid evolving differences between Saudi Arabia and the United Arab Emirates.
- **Condemnation of Attacks in Red Sea**: Explicitly condemns Houthi attacks on maritime navigation and supports unity of Yemen.
- **Support for Palestinian Statehood**: Reiterates backing for the Arab Peace Initiative (2002) and a two-state solution based on pre-1967 borders for Palestine.
- **Cautious Approach on Syria and Iran**: Limited reference to Syria and no explicit mention of US military build-up around Iran, indicating strategic restraint.
- **Silence on United States Board of Peace**: Avoids endorsing new US-led peace frameworks while supporting de-escalation in Gaza.
- **Economic and Institutional Cooperation**: Strengthens collaboration with the League of Arab States across economy, energy, education, media and culture.
- **Commitment to Stability and Non-Interference**: Reinforces India's normative emphasis on sovereignty, regional stability and strategic autonomy in West Asia.

Economic and Institutional Cooperation

- **Five Pillars of Engagement:**
  - Economy,
  - Energy,
  - Education,
  - Media and
  - Culture.

- **Robust Trade Linkages**: India-Arab trade exceeds US$240 billion, underpinning pragmatic cooperation.
- **Transactional but Stable Diplomacy**: Partnerships remain issue-based, insulated from ideological blocs.

Position on Regional Conflicts

- **Sovereignty and Territorial Integrity**: The Declaration reaffirmed unity of Sudan, Somalia and Libya, rejecting external interference.
- **Balancing Intra-Gulf Rivalries**: Implicitly navigates tensions between Saudi Arabia and the UAE without naming camps.
- **Condemnation of Civilian Atrocities**: Aligns with internationally recognised governments in conflict zones.

II. Bilateral, Regional and Global Groupings and Agreements

1. India–US Trade Deal 2026

Why in the news?

- The interim U.S.-India trade deal follows U.S. tariff actions linked to India's Russian oil imports. India's decision to reduce tariffs and address non-tariff barriers signals a policy shift with implications for agricultural protection and strategic autonomy.

Importance of Policy Shift

- **Tariff Reduction Commitment:** India agreed to reduce tariffs on multiple U.S. industrial and agricultural goods despite maintaining higher average tariffs during earlier phases of trade tension.
- **Policy Contrast:** Marks departure from India's protectionist posture adopted after U.S. tariffs of 25% on imports from India and additional penalties linked to Russian oil imports.
- **Strategic Timing:** Agreement concluded amid U.S. domestic trade assertiveness and global tariff disputes involving China and Brazil.
- **Political Sensitivity:** Occurs after public assurances that farmers' interests would be protected in any trade arrangement.
- **Energy Shift:** In a major diplomatic concession, India has agreed to halt/significantly reduce the purchase of Russian crude oil.
- **"Buy American" Policy:** India has committed to a stronger **"Buy American" stance** for government and large-scale industrial procurements.

Significance of India - US Tariff Rationalization
For India

- **Boost to Indian Exports:** The reduction to 18% restores competitiveness for Indian exporters. Sectors like **textiles**, **apparel** and **pharmaceuticals**.
- **Competitive Edge**: At 18%, India now faces a more favorable rate than regional competitors like Vietnam (20%), Bangladesh (20%), and China (30-35%).
- **Economic Stability:** The deal removes the uncertainty of a trade war, likely stabilizing the Rupee and encouraging FDI back into Indian manufacturing.

For US

- **Nuclear & Tech Exports:** The deal paves the way for US companies to enter India's nuclear power sector (enabled by the SHANTI Act, 2025) and defense manufacturing.
- **Data Center Dominance:** As presented in Union Budget 2026-27, Tax holidays for foreign companies setting up data centers in India directly benefit US tech giants like Google, Microsoft, and Amazon, cementing their dominance in India's digital infrastructure.
- **Energy Exports:** In FY25, India's crude oil import dependence rose to 88.2% compared with 87.4% and 85.5% during FY24 and FY23.

India's Agricultural Sovereignty and Farmer Protection

- **Agricultural Sensitivity:** India committed to eliminate or reduce tariffs and non-tariff barriers on selected U.S. farm products, including dairy and poultry-linked segments.
- **Non-Tariff Barriers (NTBs):** U.S. has long objected to India's sanitary and phytosanitary standards and restrictions on GM food imports.
- **GM Policy Concerns:** India has historically restricted Genetically Modified (GM) food imports; any dilution alters long-standing regulatory stance.
- **Food Security Implications:** Agricultural trade liberalisation affects MSP framework and rural livelihood stability.

India's Global Standing

- **Global South Leadership:** India previously resisted unilateral sanctions pressure; retreat affects credibility.
- **Multi-Alignment Strategy:** Balances U.S., Russia, and developing nations; over-compliance narrows options.
- **Precedent Risk:** Accepting trade-linked geopolitical conditions institutionalises coercive diplomacy.
- **Long-Term Diplomacy:** Undermines perception of India as an independent pole in emerging multipolar order.

Conclusion

The durability of this partnership will depend not on transactional concessions, but on mutual respect for sovereign decision-making within an evolving multipolar order.

III. Important International Institutions, agencies and fora

1. International Solar Alliance

Why in the news?

- The United States government announced withdrawal from 66 international organisations, including the International Solar Alliance, citing national interest considerations.

International Solar Alliance: Background and Objectives

- **Establishment in 2015**: The International Solar Alliance was launched by India and France during the Conference of Parties 21 in Paris to promote affordable solar energy in developing countries.
- **Headquarters in Gurugram, India**: The Alliance is headquartered in India, reflecting India's leadership role in solar diplomacy.
- **Membership and Scope**: With over 120 member countries, it supports solar adoption through risk mitigation, capacity building, and facilitating finance rather than direct project execution.

Financial Impact of United States Exit

- **Limited Budgetary Effect**: The United States contribution was around 1% of the Alliance's total funds, making immediate financial disruption minimal.
- **Continuity of Programmes**: Ongoing training, technical assistance, and project facilitation initiatives are expected to continue without interruption.
- **Confidence and Signalling Effect**: Withdrawal may affect investor sentiment and multilateral climate confidence despite limited fiscal implications.

Impact on India's Solar Manufacturing Capacity

- **Strong Domestic Manufacturing Base**: India's solar module capacity reached nearly 144 gigawatts, with solar cell manufacturing at around 25 gigawatts and expanding.
- **Limited Dependence on United States Supply Chains**: India does not rely on the United States for key solar equipment, reducing vulnerability to policy shifts.
- **China's Dominance in Global Supply Chain**: China accounts for around 70% of global solar cell production, and India continues to import Photovoltaic modules from China.
- **No Immediate Tariff Impact**: Domestic electricity tariffs and project costs remain unaffected due to stable supply chains and domestic demand.

Impact on Investments in India

- **Domestic Demand-Driven Projects**: Most solar projects are backed by long-term power purchase agreements with state utilities and central agencies.
- **Diverse Funding Sources**: Indian banks, multilateral institutions, and global funds continue to invest based on India's growth prospects rather than United States participation.
- **Employment Stability**: Jobs in manufacturing, installation, and operations are largely domestic and insulated from United States policy shifts.
- **Potential Export Opportunities**: If the United States seeks alternatives to Chinese supply chains, Indian manufacturers may benefit subject to bilateral trade negotiations.

Impact on African and Developing Countries

- **Dependence on Climate Finance**: Many African and small island nations rely heavily on concessional loans and international cooperation for solar expansion.
- **Reduced Climate Engagement by Major Economy**: Withdrawal by a large economy may make lenders cautious and slow project approvals in vulnerable regions.
- **Indirect Impact on Indian Firms Abroad**: Slower project implementation in developing markets could affect Indian companies expanding overseas.

Geopolitical and Strategic Implications

- **India's Climate Leadership Role**: The International Solar Alliance remains a key instrument of India's outreach to the Global South and climate diplomacy.
- **Increased Responsibility for India and France**: With the United States stepping back, leadership and resource mobilisation responsibilities intensify.
- **Fragmentation of Global Climate Governance**: The move reflects a broader trend of selective engagement by major powers in multilateral institutions.

Way Forward

- **Strengthening South–South Cooperation**: India can deepen partnerships with African and Asian countries to sustain solar deployment momentum.
- **Mobilising Alternative Climate Finance**: Leveraging multilateral development banks and private capital will be crucial to offset confidence gaps.
- **Enhancing Domestic Value Chains**: Continued investment in integrated solar manufacturing will consolidate India's strategic autonomy.
- **Diplomatic Engagement with United States**: Bilateral cooperation in clean energy can continue outside multilateral frameworks to minimise disruption.

2. Gulf Cooperation Council (GCC)

Why in the news?

- Representatives of India and the six-nation Gulf Cooperation Council (GCC) signed the Terms of Reference for negotiations on a free trade agreement (FTA).

GCC Framework

- **Member Countries:** Gulf Cooperation Council comprises Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE.
- **Trade Significance:** The bloc's total merchandise trade with India exceeds India's trade with the EU and the U.S.

Economic Significance for India

- **Trade Expansion and Market Access:** Greater free flow of goods and services will reduce tariff and non-tariff barriers. Enhanced export opportunities for Indian pharmaceuticals, textiles, food processing, IT, and engineering goods.
- **Energy Security and Diversification:** GCC nations are key suppliers of crude oil and natural gas. The FTA can ensure stable, predictable, and diversified energy supplies, reducing vulnerability to global disruptions.
- **Investment Flows and Sovereign Funds:** GCC countries possess large sovereign wealth funds seeking stable investment destinations.
- **Employment and Diaspora Gains:** Millions of Indian workers are employed in GCC countries.

Challenges and Considerations

- Balancing domestic industry protection with liberalisation commitments.
- Addressing services trade, labour mobility, and standards harmonisation.
- Managing oil price volatility and geopolitical tensions in West Asia.

Way Forward

- Adopt a phased tariff reduction strategy.
- Ensure labour welfare safeguards within trade commitments.
- Align FTA provisions with India's Make in India and energy transition goals.

3. New Strategic Arms Reduction Treaty (New START)

Why in the news?

- The New Strategic Arms Reduction Treaty (New START) expired on 5th February 2026, bringing to an end the last legally binding nuclear arms control agreement between the United States and Russia.

Background

- **Treaty Origins in Diplomatic Reset**: The New Strategic Arms Reduction Treaty emerged during the late-2000s rapprochement between the United States and Russia to stabilise strategic competition.
- **Entry into Force and Duration**: Effective from February 5, 2011, it was extended once until February 5, 2026, before ultimately expiring.
- **Warhead and Delivery Limits**: It capped deployed strategic nuclear warheads at 1,550 and imposed limits on launchers and delivery systems.
- **Verification and Transparency Measures**: The treaty allowed 18 annual on-site inspections, mandated data exchanges, and established a bilateral consultative commission.

Persistent Frictions and Strategic Disputes

- **Missile Defence Concerns**: Russia argued that United States missile defence systems could undermine mutually assured destruction by weakening retaliatory capability.
- **Conventional Prompt Global Strike Debate**: The United States was concerned that conventional ballistic missile systems were counted under nuclear ceilings.
- **Emergence of Novel Russian Systems**: Systems like Sarmat and Avangard were included under treaty definitions, but Poseidon and Burevestnik fell outside its scope.
- **Impact of Ukraine Conflict**: Escalation in 2023 led Russia to suspend participation, citing hostile Western actions and inspection constraints.

Consequences of Expiry:

- **Strategic and Security Implications Absence of Legally Binding Limits**: For the first time since 1972, no bilateral treaty restricts United States and Russian strategic arsenals.
- **Loss of Verification Architecture**: With inspections halted, reliance shifts to unilateral intelligence methods, increasing risks of misperception.
- **Entanglement of Nuclear and Non-Nuclear Systems**: Cyber capabilities and non-contact warfare tools threaten nuclear command and control without crossing nuclear thresholds.
- **Erosion of Predictability**: Strategic stability now suffers more from uncertainty than from mere numerical expansion of warheads.
- **Changing Power Structures**: Emerging multipolarity and renewed great-power rivalry have weakened commitment to bilateral arms control.
- **Demand for Inclusion of China**: United States leadership has argued that future treaties must include China due to its expanding arsenal.
- **Resurgence of Imperialist and Mercantilist Tendencies**: Territorial assertiveness and tariff wars reflect a return to competitive geopolitics.
- **Erosion of Trust Post-Ukraine Conflict**: Strategic suspicions have stalled negotiations and undermined verification mechanisms.

Forward

- **Restoration of Transparency Measures**: Re-establishing data exchanges and confidence-building steps between United States and Russia can stabilise relations.
- **From Bilateral to Multilateral Frameworks**: Future negotiations must include emerging nuclear powers to reflect contemporary realities.
- **Addressing Discriminatory Concerns**: Non-proliferation arrangements should balance obligations between nuclear and non-nuclear states.
- **Confidence-Building and Transparency**: Restoring verification, data exchange and hotlines can stabilise deterrence relationships.
- **Reimagining Strategic Stability**: Arms control must adapt to cyber threats, hypersonic systems and space militarisation.

4. International Energy Agency (IEA)

Why in the news?

- The International Energy Agency at its recent ministerial meeting in Paris welcomed progress on India's request for full membership.

About the International Energy Agency

- **Origin after 1973 Oil Crisis**: Established in 1974 in response to the oil embargo during the Yom Kippur War to ensure energy security among industrial nations.
- **Organisation of Economic Cooperation and Development Linkage**: Membership has historically been restricted to members of the Organisation of Economic Cooperation and Development.

Shift in the Role of IEA

- **Expansion Beyond Oil Security:** It has moved from a narrow focus on oil supply security to covering all major energy sources including gas, coal, nuclear and renewables.
- **Climate Change and Energy Transition:** Decarbonisation, net-zero pathways and clean energy transitions have become central to its mandate.
- **Critical Minerals Focus:** The IEA has launched a Critical Minerals Programme to address supply chain risks linked to renewable energy and electric mobility.
- **Rise of Emerging Economies:** The global energy landscape has shifted with emerging economies such as China, India and Brazil becoming major energy producers and consumers.

India's quest for membership

- **Energy Security Concerns**: As a major energy importer, India seeks stronger integration into global emergency response mechanisms.
- **Influence in Energy Transition Discourse**: Membership would enhance India's role in clean energy technologies, decarbonisation pathways and critical minerals governance.
- **Role in Decision-Making**: Full membership would give India voting rights and a say in shaping global energy security and transition policies.
- **Growing Energy Demand**: India is projected to witness the fastest growth in energy demand over the next three decades due to rapid urbanisation and industrialisation.

Legal and Structural Hurdles

- **Restriction to Organisation of Economic Cooperation and Development Members**: The International Energy Agency's founding framework limits full membership to Organisation of Economic Cooperation and Development countries.
- **Need for Institutional Amendment**: Granting India membership would require amendment of the Agency's legal charter or creation of an exception.
- **Enhanced Bilateral Engagement**: India's membership request has featured in strategic discussions with key partners including the United States.

Way Forward

- **Reform of Membership Criteria**: Updating eligibility norms would reflect contemporary energy realities and enhance legitimacy.
- **Strengthening Multilateral Energy Governance**: India's inclusion would make the International Energy Agency more representative and responsive to global energy transition challenges.

GENERAL STUDIES - 3

A. INDIAN ECONOMY

I. Indian economy issues relating to planning, mobilization of resources

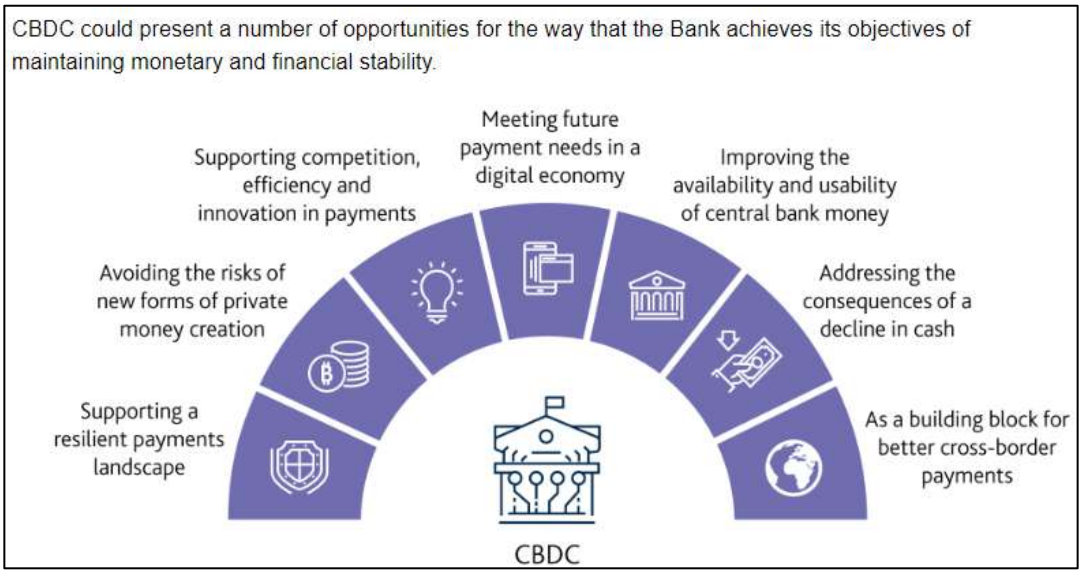
1. RBI PUSH FOR BRICS DIGITAL CURRENCY LINKAGE

Why in News?

- The **Reserve Bank of India (RBI)** has suggested that BRICS nations explore cooperation on **Central Bank Digital Currencies (CBDCs)** for cross-border payments.

What are CBDCs?

- **CBDCs** are digital versions of a country's official currency issued by its central bank.
- Example: India's **e-rupee**.
- Stored in **digital wallets**, unlike balances in bank accounts.
- Different from UPI (which transfers balances) and from cryptocurrencies (which are unregulated and volatile).
- CBDCs are **government-backed, stable, and regulated**



Benefits of CBDC-Based Cross-Border Payments

- **Faster and cheaper transactions** by reducing intermediaries.
- **Lower fees and quicker settlements** in international trade.
- **Transparency** through blockchain-based records, aiding anti-money laundering efforts.
- **Programmability**: Digital money can be designed for specific uses (time-bound, sector-specific).

Strategic Advantage

- **Reduced Dependence on Dollar-Dominated Systems**: Less reliance on the **SWIFT network**, which is controlled by Western economies. Promotes financial autonomy for BRICS nations.
- **Facilitates Trade with Sanctioned Countries**: Enables smoother transactions with nations facing **international sanctions**, bypassing restrictions linked to dollar settlements.

- **Strengthens BRICS Financial Cooperation**: Creates a **shared digital payment framework** among member nations. Enhances trust, integration, and long-term economic collaboration within BRICS.
- **Boosts Efficiency in Trade Settlements**: Faster, cheaper, and more transparent cross-border transactions.

Challenges

- **Regulatory Differences Across Countries**: Each BRICS nation has its own legal, financial, and technical frameworks.
- **Risk of Financial Instability**: Sudden and large capital flows through digital platforms may destabilise domestic markets.
- **Cybersecurity Vulnerabilities**: Digital currency systems are exposed to risks of hacking, malware, and technical failures.
- **Geopolitical Risks**: The U.S. may perceive BRICS CBDC cooperation as an attempt to weaken the dollar's dominance.

Way Forward

- **Start with Pilot Projects**: Implement small-scale trials among BRICS nations before moving to a full rollout. Helps identify technical, regulatory, and operational challenges early.
- **Strengthen Cybersecurity and Legal Frameworks**: Build robust safeguards against hacking, fraud, and system vulnerabilities.
- **Balance Economic Gains**: Promote the benefits of faster and cheaper transactions while managing global concerns.
- **Adopt a cautious approach** to avoid friction with dollar-dominated systems and major economies.

Conclusion

A BRICS-linked CBDC network could make global transactions **faster, cheaper, and more independent of the dollar**. However, India must proceed cautiously, ensuring regulatory alignment, technological security, and diplomatic balance.

2. NEW FISCAL RULE IMPLICATIONS FOR GROWTH AND SPENDING

Why in News?

- The **Union Budget 2026–27** is guided by a new fiscal rule that prioritises the **debt-to-GDP ratio** over the fiscal deficit.

India's Fiscal Framework and Debt Targets

- **Fiscal Discipline Legacy**: India has adhered to fiscal discipline since the **FRBM Act, 2003**, which set fiscal deficit targets.
- Fiscal deficit reduced from **9.2% of GDP in FY21 (pandemic peak)** to a targeted **4.4% in FY26**.
- **Shift in Fiscal Rule**: New framework shifts focus from fiscal deficit to **debt-to-GDP ratio**. **50% debt-to-GDP by 2031**, compared to FRBM's earlier **40% target**.
- **Current Debt Levels**: As of FY25, India's **general government debt** stands at **82% of GDP**, well above the new target.

Fiscal Strategy in FY27

- **Deficit Targets**: Primary deficit reduced from **0.8% (FY26)** to **0.7% (FY27)**. Fiscal deficit reduced from **4.4% (FY26)** to **4.3% (FY27)**.

- **Revenue Trends**: Non-debt receipts projected to fall to **9.3% of GDP** (from 9.5% in FY26). Decline mainly due to lower **GST and indirect tax collections**.
- **Expenditure Trends**: Total expenditure-to-GDP ratio reduced from **13.9% (FY26)** to **13.6% (FY27)**. Capital expenditure remains steady at **3.1% of GDP**.
- **Revenue expenditure cut sharply,** continuing the trend of favouring capital spending.

Impact on Development Expenditure

- Development expenditure (social sector + economic services) reduced to **5.7% of GDP (FY27)** from **6.1% (FY26)**.
- Rural development and agriculture spending declined to **1.2% of GDP (FY27)** from **1.5% (FY26)**.
- Major cuts in **rural employment programmes**.
- Positive demand effect of lower GST/indirect taxes offset by reduced rural/agricultural spending.

Key Concerns

- **Weak Investment Stimulus**; Corporate investment remains low due to global demand slowdown. Fiscal policy provides little support to revive private investment.
- **Distributional Imbalance**; Adjustment burden falls on **rural and social sector spending**. Corporate tax-to-GDP ratio remains unchanged at pre-COVID levels.

Significance

- New fiscal rule provides **greater fiscal space** compared to FRBM, but consolidation strategy continues.
- Cuts in rural/agricultural spending may undermine **employment, demand, and inclusive growth**.
- Raises debate on balancing **fiscal discipline with developmental priorities**.

Debt-To-GDP Ratio and Fiscal Deficit

Debt-to-GDP Ratio

- It measures a country's **total government debt** compared to its **Gross Domestic Product (GDP)**.
- **Formula**: **Debt-to-GDP Ratio**=Total Government DebtGDP×100
- **Purpose**: Shows how sustainable a country's debt is relative to the size of its economy.
- **Interpretation**:
  - A **high ratio** means the government may struggle to repay debt without affecting growth.
  - A **low ratio** indicates healthier fiscal space and better creditworthiness.
- **Example (India)**: India's debt-to-GDP ratio is targeted at **50% by 2031** under the new fiscal rule, compared to the earlier FRBM target of 40%.

Fiscal Deficit

Fiscal deficit is the **gap between the government's total expenditure and its total revenue (excluding borrowings)**.

- **Formula**: **Fiscal Deficit=**Total Expenditure−(Revenue Receipts+Non-debt Capital Receipts)
- **Purpose**: Indicates how much the government needs to borrow to meet its spending commitments.
- **Interpretation**:
  - A **higher fiscal deficit** means more borrowing, which can increase debt and inflationary pressures.
  - A **lower fiscal deficit** reflects better fiscal discipline.
- **Example (India)**: In **FY 2026**, India's fiscal deficit was **4.4% of GDP**, targeted to reduce to **4.3% in FY 2027** under the new fiscal consolidation plan.

Conclusion

The new fiscal rule strengthens fiscal discipline by focusing on debt sustainability, but its reliance on cutting rural and social sector spending risks undermining inclusive growth. A balanced approach is needed to ensure stability without sacrificing development priorities.

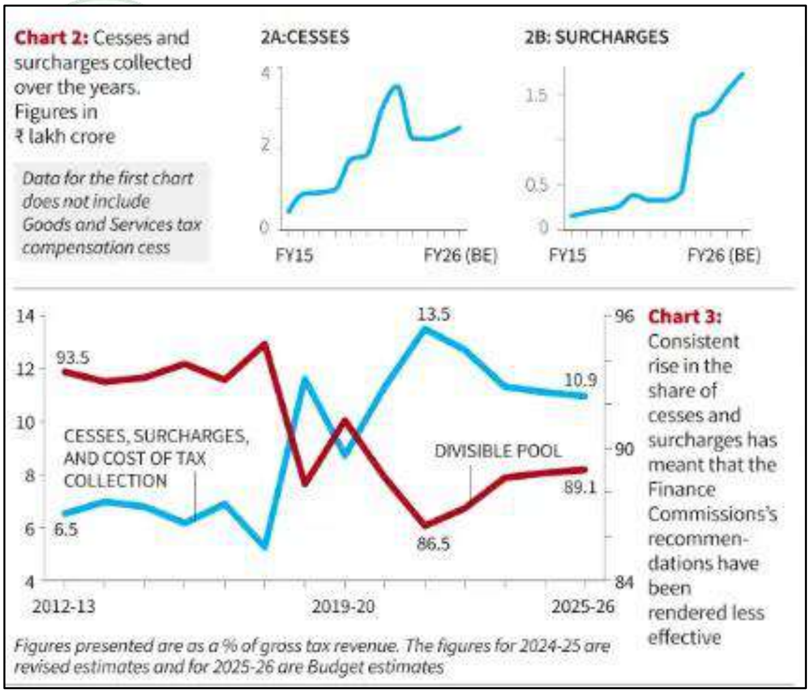
3. SIXTEENTH FINANCE COMMISSION AND FISCAL FEDERALISM

Why in News?

- The **Sixteenth Finance Commission (FC-16)** has recommended retaining the **States' share in the divisible pool at 41%** for 2026–31.

Fiscal Federalism

- **Refers to the financial relationship between the Union and the States**, ensuring fair distribution of tax revenues and grants so that both levels of government can meet their responsibilities.
- Ensures **equity and efficiency**: richer States contribute more, poorer States get support. Balances **national priorities** with **local needs**.
- Current debates highlight the **mismatch between responsibilities and resources**, making reforms in fiscal federalism urgent.
- States had demanded a higher share of 50%, citing fiscal stress under the GST regime. The mismatch has forced States to rely heavily on **market borrowings**.



Key Recommendations

- **Vertical Devolution**: States' share in central taxes retained at **41%**.
- **Horizontal Formula Changes**:
  - *Tax Effort* replaced with **Contribution to GDP**; weight raised from **2.5% (FC-15)** to **10%**.
  - **Demographic Performance** weight reduced, reflecting India's demographic dividend phase.
  - **Population Size** weight modestly increased.
- **Transfers to States**: Projected to rise by **12.2%** between FY26 (RE) and FY27 (BE).

- **Cesses & Surcharges**: FC-16 flagged shrinking divisible pool due to these levies but did not recommend their inclusion.

Implications

- **Industrialised States Gain Incrementally:** Tamil Nadu and Maharashtra argued for higher weightage to GDP contribution (15%), but FC-16 raised it only to **10% from 2.5% earlier**.
- **Dependence on Centrally Sponsored Schemes (CSS):** Total transfers to States are budgeted to rise **12.2% between FY26 (RE) and FY27 (BE)**. Of this increase, **₹1.2 lakh crore (42%) comes from CSS revenue transfers**, not from untied Finance Commission devolutions.
- **Fiscal Federalism Tilted Towards Centre:** Vertical devolution remains at **41%**, unchanged from FC-15, despite States demanding **50%**. Effective divisible pool is shrinking due to **cesses and surcharges**, which are excluded from devolution.

Challenges

- **Shrinking Divisible Pool** due to rising cesses and surcharges.
- **Mismatch of Responsibilities**: States bear welfare and development burdens but lack adequate fiscal space.
- **Dependence on Borrowings**: Market loans becoming the main adjustment tool.
- **Limited Autonomy**: CSS transfers restrict States' flexibility in spending.

Way Forward

- **Gradual Increase in Vertical Devolution**: Raise States' share of the divisible pool from **41% to 45% by 2031**. This would expand fiscal space for States, allowing them greater autonomy in development spending.
- **Inclusion of Cesses and Surcharges**: Currently, cesses and surcharges form nearly **18–20% of gross tax revenues** but are excluded from devolution.
- **Strengthening State-Level Fiscal Autonomy**: This enables alignment of spending with **local priorities** such as health, education, and infrastructure.

Vertical and Horizontal Devolution

Vertical Devolution

- Distribution of the net proceeds of Union taxes between the **Centre and all States combined**.
- **Purpose**: Ensures States get a fair share of national tax revenue.
- **Example**:
  - The **16th Finance Commission** recommended that **41% of the divisible pool of central taxes** be devolved to States for 2026–31.
  - This is vertical devolution because it defines the overall share of States versus the Centre.

Horizontal Devolution

- Distribution of the States' share of taxes **among individual States**.
- **Purpose**: Ensures equitable distribution based on criteria like population, income, area, and fiscal effort.
- **Example**:
  - Within the 41% share, each State's portion is decided using a formula.
  - The **16th Finance Commission** increased the weight of **"contribution to GDP" from 2.5% to 10%**, reduced demographic performance weight, and modestly raised population size weight.

This means industrialised States like Tamil Nadu and Maharashtra gain slightly more, while poorer States still receive significant transfers to avoid shocks.

Conclusion

FC-16 acknowledges fiscal stress but stops short of structural reforms. Restoring balance in fiscal federalism requires expanding States' share and reducing dependence on central schemes.

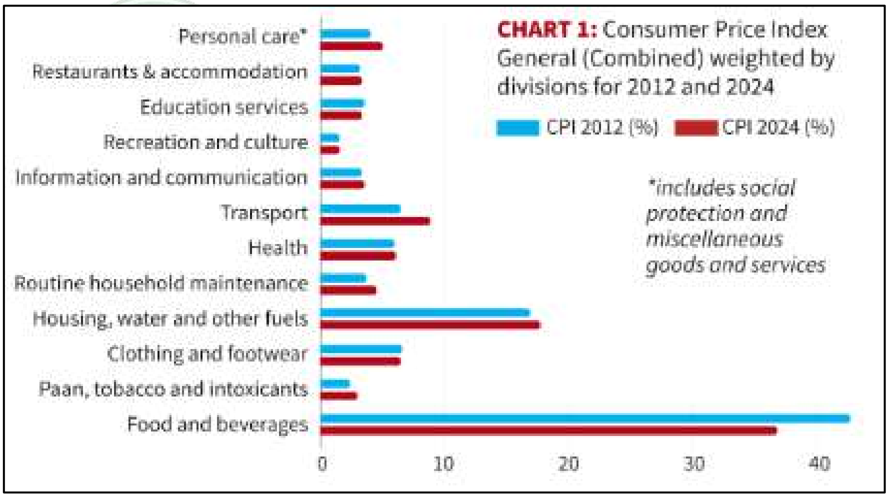
4. NEW CONSUMER PRICE INDEX (CPI) SERIES

Why in News?

- India has introduced a **new Consumer Price Index (CPI) base year 2024**, reorganising the consumption basket into 12 categories.

CPI base revision

- **Earlier Framework**: CPI classified household consumption into **six broad categories**. Services such as **health, education, and transport** were merged together, limiting analytical clarity.
- **Revised Framework**: CPI now has **12 categories**, aligned with **COICOP 2018 (Classification of Individual Consumption According to Purpose)**.
- **Shift in Weights**: **Food weight reduced**, reflecting declining share of food in modern household expenditure.
- **Housing and services weight increased**, capturing rising importance of urban living costs and service-based consumption.
- **CPI revision Enhances RBI's ability** to distinguish between **volatile food inflation** and **persistent service inflation**.



Relation between CPI and Inflation

- **Indicator of Inflation**: CPI acts as the **official measure of retail inflation** in India. Rising CPI indicates higher inflation; falling CPI indicates easing inflationary pressures.
- **Policy Relevance**: RBI uses CPI as the **nominal anchor** for inflation targeting under the **Flexible Inflation Targeting Framework (2016)**.
- **Headline vs. Core Inflation**: **Headline CPI** includes food and fuel, reflecting overall inflation. **Core CPI** excludes volatile items, showing underlying inflation trends.

State-Level Inflation Trends

- Top five States with highest inflation in January 2026: **Telangana (5%), Kerala (3.67%), Tamil Nadu (3.36%), Rajasthan (3.17%), Karnataka**.

- In services-heavy States, rising costs of **housing, health, education, transport, and personal care** drive inflation.
- Rajasthan's higher inflation reflects inclusion of **rural housing and utilities**, which were understated earlier.

Importance of CPI for RBI

- **Food vs. Services Inflation**: Food prices are highly volatile due to supply shocks (weather, global markets). Service prices are sticky and remain elevated for longer periods.
- **Role of New CPI**: Provides a clearer distinction between temporary food shocks and persistent service inflation. Helps RBI avoid overreaction to short-term food price spikes.
- **Policy Significance**: Enables accurate assessment of underlying inflation trends. Strengthens RBI's ability to frame effective monetary policy.
- **Monetary Policy Committee (MPC)** decisions are based on CPI trends, ensuring price stability while supporting growth.

Way Forward

- **Strengthen Data Collection and Transparency**: Ensure regular updates of household consumption surveys to keep CPI weights relevant.
- **Enhance Policy Coordination**: Use CPI insights to design targeted policies for controlling service inflation, especially in housing, health, and education.
- **Promote Public Awareness and Research**: Simplify CPI communication for citizens to understand inflation trends.
- **Encourage academic and policy** research on regional inflation differences to guide State-level interventions.

Consumer Price Index (CPI)

Measures changes in **retail prices** paid by consumers for a fixed basket of goods and services. Includes both **goods and services** (food, housing, health, education, transport, etc.). Reflects the **cost of living** for households. **Food and services** carry significant weight.

Example:

- If a basket of goods cost ₹100 in 2024 (base year) and ₹104.5 in 2026, CPI = 104.5.
- This means the same basket is now more expensive, showing how much life costs compared to the base year.

Wholesale Price Index (WPI)

Measures changes in **wholesale prices of goods** traded between businesses before reaching consumers. Includes only **goods Services are excluded.**

- **Weightage**: Industrial products, fuel, and raw materials have higher weight.
- **Example**:
  - If the wholesale price of steel rises from ₹50,000 per tonne to ₹55,000 per tonne, WPI reflects this increase.
  - It shows how input costs for industries are changing.

Conclusion

By giving more weight to housing and services, it captures the real cost of living more accurately. For policymakers, especially the RBI, this provides a clearer signal to differentiate between short-term food price changes and long-term service-driven inflation pressures.

5. RBI HOLDS INTEREST RATES STEADY

Why in News?

- Recently The Reserve Bank of India (RBI) has decided to keep the repo rate unchanged at 5.25% after a cumulative reduction of 125 basis points in 2025

Why Did the Monetary Policy Committee Pause Rate Cuts?

- The RBI had already reduced the repo rate by a total of 125 basis points in 2025, including a 25 bps cut in December.
- **Inflation projections remain favourable**, with CPI expected to stay close to **4% in the first half of FY26**, which is comfortably within the tolerance band.
- **Core inflation has been moderate**, even though precious metals contributed slightly to price pressures, showing that underlying inflationary trends are stable.
- **Domestic demand** continues to be strong, with household consumption projected to expand by **nearly 7% in FY26**.

Role of Trade Deals in Monetary Stability

- India has recently signed or concluded negotiations for trade agreements with the **United States, the European Union, Oman, and New Zealand**.
- These agreements are expected to provide a cushion against external shocks by boosting **exports and attracting investment flows**.
- The trade pact with the US is particularly significant, as it is likely to enhance **India's external sector resilience**.
- At the same time, **global geopolitical tensions** have intensified, which requires close monitoring by the central bank to safeguard monetary stability.

Updated Growth and Inflation Outlook

- The RBI has revised India's GDP growth forecast for FY26 upward to **7.4%**, compared to the earlier estimate of 7.3%.
- Government estimates also place real GDP growth slightly above 7.4%, showing **consistency between fiscal and monetary projections**.
- Inflation has been revised marginally upward due to **rising prices of precious metals**, but it remains anchored near the medium-term target of 4%.
- Overall, the economy is described as **strong, stable, and resilient**, with growth momentum intact.

Impact on Lending and Deposit Rates

- Borrowers with **repo-linked loans** will not see any immediate change in their EMIs, which ensures repayment stability and predictability.
- Banks may adjust **Marginal Cost of Funds based Lending Rate (MCLR)** depending on liquidity and funding conditions, but repo-linked lending rates remain steady.
- **Deposit rates** are expected to stay unchanged unless liquidity pressures intensify, which means fixed deposit returns will remain stable for now.
- The stability in lending and deposit rates helps banks plan their **balance sheets more effectively** and manage liquidity with greater certainty.

What Does the RBI's Approach Indicate?

- The pause reflects a **cautious stance**, signalling that there is no urgency to alter rates given stable growth and controlled inflation.

- It shows a **"wait-and-watch" approach**, particularly in light of global uncertainties and geopolitical risks.
- Fiscal measures announced in the Union Budget **complement the monetary stance**, ensuring coordinated support for economic growth.
- The decision reinforces **macroeconomic stability**, maintaining confidence in credit markets, repayment obligations, and overall financial discipline.

Conclusion

The RBI's decision to hold interest rates steady reflects a careful balance between domestic stability and external risks. **By pausing further rate cuts, the central bank signals confidence** in India's resilience while keeping policy flexibility intact to respond to future challenges.

II. Growth and Development, employment

1. SUSTAINING INDIA'S EXPORT MOMENTUM

Why in News?

- The **Economic Survey 2025-26** highlights that India can sustain its export growth by **diversifying into higher-value products and new markets**.

Current Global Trade Scenario

- The world economy is becoming **fragmented and cautious**, with countries prioritising domestic interests.
- **Protectionist policies** and **retaliatory tariffs** are reshaping trade flows.
- **Supply chains are being recalibrated** due to geopolitical tensions and national security concerns.
- Engagement is shifting from **multilateral agreements to bilateral deals**.

Observations from Economic Survey 2025-26

- **Export momentum** can be sustained through: **Diversification into sophisticated, higher-value products**.
- **Exploring new destinations** beyond traditional markets. **Targeted industrial policies** and **technological upgrades**. Building **export-driven ecosystems**.
- **The Trade Policy Uncertainty Index** and **Global Economic Policy Uncertainty Index** peaked in **April 2025**, reflecting instability in trade agreements and competition for rare earth minerals.
- **India's expanding network** of **Free Trade Agreements (FTAs)** provides reliable market access amid global uncertainty.

Challenges for India's Export Strategy

- **Rising Protectionism**: Countries are imposing tariffs and non-tariff barriers. WTO data (2025) shows global tariff actions increased by **12% year-on-year**.
- **Geopolitical Decoupling**: Strategic rivalry among major economies is leading to **fragmented supply chains**. India risks being caught in competing blocs.
- **Dependence on Low-Value Exports**: India's export basket is still dominated by **low-value goods** like textiles and raw materials. UNCTAD (2024) noted that **70% of India's exports are medium or low-tech products**, limiting competitiveness.

Way Forward

- **Diversify into High-Value Sectors**: According to EXIM Bank (2025), India's share in global electronics exports is just **1%**, offering huge scope.

- **Strengthen Trade Agreements**: Expand FTAs with **EU, ASEAN, and Africa** to secure stable market access. Economic Survey notes FTAs already support **$200+ billion trade flows**.
- **Boost Technology and R&:** Invest in **innovation and skill development** to move up the value chain. NITI Aayog (2025) recommends raising R&D spending from **0.7% of GDP to 2%** to match global peers.

Export promotion schemes

- **EPCG Scheme** – lets exporters import capital goods at zero duty to upgrade technology and boost production.
- **RoDTEP Scheme** – refunds hidden taxes and duties on exported products to keep Indian goods competitive.
- **Interest Equalisation Scheme** – provides cheaper credit to exporters, especially MSMEs, by subsidising loan interest.

Conclusion

India's export growth can be sustained only by **shifting towards high-value products, leveraging FTAs, and investing in technology**. With rising global uncertainty, a **strategic and diversified export policy** is essential to secure India's place in global trade.

2. REVISITING A TAX REFORM THAT UNDERPERFORMED

Why in News?

- The Union Budget 2026–27 has drawn attention for continuing earlier fiscal strategies despite revenue shortfalls.

Background

- **Budget 2025-26** introduced a major **income tax cut for the middle class**, expecting higher compliance and rising incomes to offset losses.
- Reality: Income tax collections fell short by **₹1.26 lakh crore**, GST collections also missed targets by **₹1.31 lakh crore**.
- Overall gross tax revenue shortfall: **₹1.92 lakh crore**.
- Result: **Expenditure cuts** across sectors including agriculture, education, health, rural and urban development, and even capital expenditure.

Budget 2026

- India faces a **current account surplus with the U.S. but deficit with China**.
- Risk: U.S. tariff war under President Trump could hurt exports, worsening external balances.
- Economic Survey acknowledged this risk (10% probability), but Budget planning assumed stability.

Features of Budget 2026

- Focus on **fiscal prudence and capital expenditure**.
- Supply-side measures for employment and **credit guarantees for MSMEs**.
- Continuation of earlier macroeconomic approach without major innovation.
- Heavy emphasis on **infrastructure capex** (highways, freight corridors) rather than **developmental capex** (health, education, agriculture).

Accessible Tourism

- **Accessibility Framework** – Kerala aims to integrate accessibility across the tourism value chain, from infrastructure to digital platforms, making tourism more inclusive and equitable.
- **Tourism Growth** – In 2024, the State recorded **2.25 crore domestic tourists**, generating revenue of over **₹49,000 crore**, surpassing pre-COVID levels.

- **New Experiences** – Kerala is introducing **seaplane, caravan, and heli-tourism** initiatives to diversify visitor experiences and attract more tourists.
- **Social Impact** – Responsible tourism has created **local job opportunities** and promoted **women's empowerment**, reflecting the State's inclusive development model.

Tax Devolution Share – 16th Finance Commission

- **States' Share Fixed** – Devolution share remains **41%**, as Centre's cesses and surcharges already reduced the divisible pool.
- **New Formula** – Population weightage raised to **17.5%**, demographic performance cut to **10%**, area reduced to **10%**, forest cover stays at **10%**, and per capita GSDP difference set at **42.5%**.
- **State Gains** – Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, and Telangana all see **higher shares** compared to earlier allocations.
- **Policy Signal** – Formula balances **equity and efficiency**, rewarding poorer States while adjusting demographic and area factors.

Criticisms

- **Employment Concerns**: Youth unemployment remains high; women's participation, especially in urban areas, is very low.
- **Capex Imbalance**: Infrastructure spending overshadowed social sector investments that generate jobs and demand.
- **Missed Opportunity**: No major focus on **pollution control**, despite public protests in Delhi making it a political issue.
- **Lack of Imagination**: Continued reliance on supply-side measures without boosting domestic demand.

Suggested Alternatives

- Relax hawkish fiscal stance for this uncertain year.
- Prioritise **employment-intensive development expenditure** (education, health, agriculture).
- Strengthen welfare spending with **multi-round demand effects**.
- Launch a **national mission against pollution**, addressing a pressing public concern.

Conclusion

The 2026 Budget continues earlier strategies despite revenue shortfalls, risking weak demand and missed social priorities. A more balanced approach focusing on jobs, welfare, and environmental action is essential for inclusive growth.

3. UNION BUDGET 2026-27 AND WELFARE RESPONSIBILITIES OF STATES

Why in News?

- The Union Budget 2026-27 marks a **shift in fiscal federalism**, with welfare spending increasingly pushed onto States while the Centre retains policy control.

Has Social Sector Spending Lost Priority?

- **Stagnant Share**: Social sector expenditure remains at ~**12% of total Union expenditure**, unchanged from previous years, despite rising welfare needs.
- **Health & Education**: Allocation increased by only **4% nominally**, translating to ~**2.3% real growth** after inflation.

- **Minimum Requirement**: At least **7% annual growth** is needed to maintain service levels, indicating effective stagnation.
- **Under-spending Trend**: Budget Estimates (BE) consistently exceed Revised Estimates (RE), showing that even allocated funds remain unspent.

Which Welfare Schemes Declined?
- **Urban Livelihoods (DAY-NULM)**: Allocation cut by **41%**.
- **Rural Development**: Reduced by **20%**, weakening livelihood and asset-creation programmes.
- **North-East Development**: Down by **24%**, affecting regional equity.
- **Jal Jeevan Mission**: Allocation fell sharply from **₹67,000 crore (2025-26 BE)** to **₹35,000 crore (2026-27 BE)**.
- **Housing Schemes**:
  - PMAY-Urban reduced from **₹54,832 crore (RE)** to **₹45,482 crore (BE)**.
  - PMAY-Rural declined from **₹79,794 crore** to **₹54,832 crore**.
- **Education Schemes (CSS)**: Allocation dropped from **₹5.41 lakh crore (2025-26 BE)** to **₹4.20 lakh crore (2026-27 BE)**.
- **Health Schemes**: Reduced from **₹5.48 lakh crore** to **₹4.57 lakh crore**.

Is Capital Expenditure Overshadowing Welfare?
- **Capex Bias**: Budget prioritises infrastructure, with **capital expenditure rising to ₹11.1 lakh crore**, a 16% increase.
- **Weak Demand**: Household purchasing power remains low, limiting multiplier effects of capex.
- **Employment Gap**: Capex growth has not generated adequate jobs, especially for educated youth.
- **Private Investment**: Remains muted, questioning assumptions of capex-led growth.
- **Slack in Economy**: Over **₹12 lakh crore** remains unspent or underutilised.

Welfare Burden Shifting to States
- **Budget Consolidation**: Formalises transfer of welfare responsibility to States.
- **Centre's Role**: Retains control through legislation and standards.
- **Revenue Constraint**: States receive only **34% of net tax revenues**, despite rising obligations.
- **Vertical Imbalance**: Centre dominates taxation, while States bear spending responsibilities.
- **Finance Commission Advice Ignored**: Cesses and surcharges continue, reducing divisible pool for States.

Do States Have Fiscal Capacity?
- **Limited Autonomy**: States remain dependent on Central transfers.
- **Declining Share**: States' share in Central taxes fell from **₹1.32 lakh crore (2025-26 BE)** to **₹1.29 lakh crore (2026-27 BE)**.
- **Expenditure Pressure**: Welfare responsibilities expand without matching fiscal space.
- **Uneven Capacity**: Risk of regional disparities in welfare outcomes due to varying fiscal strength.

Governance Challenges in Welfare Delivery
- **Demand Weakness**: Poor purchasing power reduces welfare impact.
- **Supply Gaps**: Public provisioning remains inadequate.
- **Human Capital Stress**: Underinvestment in health and education affects productivity.
- **Structural Unemployment**: Skills mismatch persists.
- **Income Stagnation**: Low wages constrain inclusive growth.

Conclusion

The Union Budget 2026-27 reflects a **structural shift in India's welfare model**. Unless vertical imbalances are corrected, welfare delivery risks becoming **uneven, and ineffective**, undermining both **social justice and cooperative federalism**.

III. Economic survey & Budget

1. DEFENCE BUDGET 2026–27 AND RISE IN CAPITAL SPENDING

Why in News?

- The Union Budget 2026-27 has allocated a record **₹7.84 lakh crore** for defence, with a sharp rise in **capital outlay** to strengthen military modernisation and domestic defence industry.

Background

- India's defence budget has long faced the **"guns vs butter" dilemma**, balancing salaries and pensions with modernisation needs.
- The FY27 allocation of **₹7,84,678 crore** marks the highest-ever defence spending, accounting for **14.7% of total government expenditure**.
- This stabilises defence share compared to lean years (FY21–22) when it fell to **13.2%**.

Capital Outlay Trends

- Capital outlay (funds for modernisation and big-ticket purchases) has risen to **27.9% of the defence budget**, up from **24.9% in FY23**.
- In absolute terms, capital spending is **₹2,19,306 crore**, a jump of nearly **₹40,000 crore** from FY26.
- This rise is significant as earlier trends showed lower revised estimates compared to budget estimates, but FY26–27 reflects higher demand at the RE stage.

CHART 1: Defence expenditure as a percentage of total government expenditure (in ₹ crore) across select years, and at various Budget stages

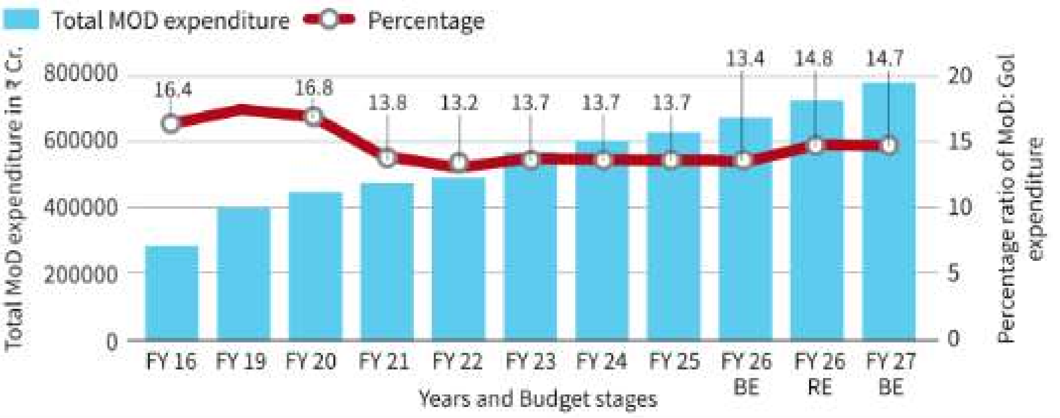


CHART 2: Comparative figures of capital outlay (in ₹ crore) across the past four years, and at various Budget stages

Years/ Stages	FY 23	FY 24	FY 25	FY 26	FY 27
BE (₹ crore)	1,52,369	1,62,600	1,72,000	1,80,000	2,19,306.47
RE (₹ crore)	1,50,000	1,57,228.2	1,59,500	1,86,454.2	-
Actuals (₹ crore)	1,42,940.01	1,54,256.28	1,59,768.4	-	-

Reasons for Increase

- **Post-Operation Sindoor Needs**: The 2025 conflict exposed shortages in precision-guided munitions and drones, requiring replenishment of war reserves.
- **Institutionalised Emergency Procurement**: Fast-track acquisitions, once ad hoc, are now becoming standard for critical technologies.
- **Committed Liabilities**: Payments for past contracts (e.g., Rafale jets, S-400 systems) consume large portions of capex. Higher allocation ensures funds for new projects like **Advanced Medium Light Aircraft** and **Project 75I submarines**.

Composition of Defence Spending

- **Pensions**: Share reduced to **21.8% in FY27**, down from **26% in FY20**.
- **Salaries**: Moderated to **22.4%**, compared to **30% in FY20**.
- Decline attributed to reforms like the **Agnipath scheme**, which caps revenue expenditure.
- Nearly **75% of capital acquisition budget** earmarked for domestic industry, boosting **Aatmanirbhar Bharat**.

Challenges Ahead

- **Absorption Capacity**: Defence PSUs and private firms must deliver on time to meet operational needs.
- **Buy Indian-IDDM Route**: Promotes indigenous design and manufacturing, but tight delivery timelines remain critical.
- **Industry Readiness**: Heavy allocation reflects confidence in India's defence industrial base, but execution will determine success.

Conclusion

By prioritising domestic industry and institutionalising emergency procurement, India aims to strengthen its military preparedness and reduce dependence on imports, though timely delivery and industry capacity remain key challenges.

2. BUDGET AND INDIA'S SPACE RESEARCH

Why in News?

- The Union Budget 2026–27 allocated **₹13,416.20 crore to the Department of Space**, with emphasis on **deep-space exploration and advanced telescope facilities**.

Key Allocations

- **New Telescope Projects**: **30-m National Large Optical-Infrared Telescope**. **National Large Solar Telescope** near Pangong Lake, Ladakh.
- **Upgrades**: Improvement of control systems at the **Himalayan Chandra Telescope (Hanle, Ladakh)**.
- **Science Outreach**: Completion of **COSMOS-2 planetarium** in Amaravati, Andhra Pradesh.

Challenges in Execution

- **Underutilisation of Funds**: Actual expenditure often falls short of budgetary estimates, slowing project implementation.
- **Cancelled Missions**: Several proposed space missions were not supported due to resource bottlenecks.
- **Need for Streamlining**: Experts stress better planning, checks, and balances for large-scale projects.

Global Context

- **Limited Access**: Only a few large observatories worldwide conduct frontier research; competition for telescope time is intense.

- **Restricted Opportunities**: National agencies often prioritise domestic researchers, limiting Indian scientists' access abroad.
- **Reliance on Overseas Facilities**: India depends heavily on foreign observatories for high-resolution data and specialised equipment.

Strengthening Domestic Capabilities

- **Existing Assets**: **Giant Metrewave Radio Telescope (GMRT)** near Pune. AI-driven data processing centres.
- **Future Plans**: Proposal for a **sub-millimetre telescope** under the **Astronomy & Astrophysics Mega Science Vision 2035**.
- **Public-Private Partnerships**: Growing collaboration between ISRO and startups, supported by the **Indian National Space Promotion and Authorisation Centre (IN-SPACe)**.

Strategic Importance

- **Reducing Dependence**: Building advanced domestic observatories will cut reliance on foreign facilities.
- **Boosting Research**: Encourages students to pursue advanced astronomy in India, reducing brain drain.
- **National Interest**: Proper regulation and governance needed to align private sector innovation with national priorities.

Conclusion

The Budget signals a **strong push for India's space and astronomy ecosystem**, especially through new telescope projects and partnerships. However, **execution efficiency, resource allocation, and international collaboration** will determine whether India can emerge as a global leader in frontier space research.

IV. Agriculture and allied

1. COTTON FARMERS OPPOSE U.S. IMPORT REMARKS

Why in News?

- Cotton farmers across India have raised concerns over the proposal to allow **zero-duty imports of raw cotton from the U.S.**

Cotton Import Policy and Farmers' Concerns

- Farmer groups argue the proposed zero-duty cotton import policy overlooks the interests of domestic cultivators.
- Farmers highlight past declines in cotton production due to poor price support, fearing further neglect under the new policy.
- Leaders caution that the move appears to benefit large textile companies more than farmers.
- Farmer unions warn of severe impact on cotton fields and demand stronger protection for cultivators' livelihoods.

Price and MSP Issues

- Cotton imports from the U.S. rose **95.5%** (from $199.3 million in Jan–Nov 2024 to $377.9 million in Jan–Nov 2025).
- MSP fixed at **₹7,710 per quintal**, but farmers argue it should be **₹10,075 per quintal** as per M.S. Swaminathan formula.
- Importing cheap cotton will further **depress domestic prices**, worsening indebtedness.

Production Data

- India's cotton output (2025–26): **29.22 million bales**.

- U.S. production (2024–25): **14.41 million bales**.
- Farmers fear unrestricted imports will expose them to **global competition**, leading to distress and possible abandonment of cotton farming.

Challenges

- **Risk of Price Crash**: Zero-duty cotton imports could depress domestic demand and reduce farmer incomes.
- **Rising Indebtedness**: Lower returns intensify debt burdens, leaving farmers more vulnerable.
- **Policy Credibility & Self-Reliance**: Dependence on imports undermines food and fibre security and contradicts earlier assurances of protecting farmer interests.

Way Forward

- **Safeguards in Trade Deals**: Protect tariff-sensitive crops like cotton through clear clauses in trade agreements.
- **Strengthen MSP Framework**: Link Minimum Support Price to cost-plus formulas to ensure fair returns for farmers.
- **Boost Domestic Value Chains**: Promote textile production using Indian cotton to generate demand and rural employment.
- **Technology & Productivity Gains**: Encourage modern farming practices and innovations to keep Indian cotton globally competitive.

Conclusion

The debate over U.S. cotton imports highlights the **tension between trade liberalisation and farmer protection**. For India, safeguarding cotton farmers through **MSP, tariff protections, and domestic value chain support** is essential to prevent further distress while pursuing global trade opportunities.

2. WHY ARE APPLE TRADERS IN J&K WORRIED?

Why in News?

- Apple growers in **Jammu & Kashmir** are worried about India's recent trade deals with the **U.S. and EU**, which reduce import duties on foreign apples.

Apple Economy of Jammu and Kashmir

- **Dominant Horticulture Crop:** Apples account for nearly **50% of the region's total horticulture output**, making them the backbone of J&K's fruit economy.
- **Major Economic Contributor:** The apple sector generates around **₹10,000 crore annually** and supports the livelihoods of nearly **35 lakh people**.
- **National Production Leader:** J&K contributes about **70% of India's total apple production**, producing nearly **21 lakh metric tonnes in 2024**.
- **Large-Scale Livelihood Support:** Apple cultivation directly sustains approximately **7 lakh families** across the region.

Why Orchardists are Worried

- **Lower import duties**: Customs duty on U.S. apples reduced from 50% to 25%; EU apples allowed at 20% duty under a quota system.
- **Productivity gap**: Western countries produce **40–70 tonnes per hectare**, while J&K produces only **7–8 tonnes per hectare** due to small farm sizes, limited mechanisation, and less advanced technology.
- **Technology edge**: U.S., EU, and New Zealand use AI-based systems for pruning, pollination, harvesting, and sorting, giving them higher efficiency.

- **Variety advantage**: Western nations dominate popular varieties like **gala apples**, while India is still developing quality output in these types.

Impact on Cold Storage and Off-Season Prices

- J&K has invested heavily in **controlled-atmosphere (CA) cold storages**, with capacity of nearly **397 lakh metric tonnes** across 92 facilities.
- Cheaper imported apples will undercut local apples stored for off-season sales, making these investments **economically unviable**.
- This threatens **price stability** and may force farmers into **distress sales**.

Farmers' Demands

- Calls for **interest-free loans** under the Holistic Agriculture Development Programme (HADP) to improve productivity.
- Demand for expansion of **cold storage infrastructure** and activation of **dry port projects** to ease transport.
- Leaders warn of an **uneven playing field**, where cheaper imports will dominate and devalue local produce.

Way Forward

- **Safeguard Domestic Producer:** Introduce protective measures such as **minimum import price enforcement** and stricter quotas to shield local orchardists.
- **Boost Productivity and Technology Adoption**: Promote **high-density cultivation**, mechanisation, and AI-based farming practices to match global yields.
- **Strengthen Post-Harvest Infrastructure**: Expand cold storage, logistics, and dry port facilities to stabilise prices and reduce farmer losses.

Conclusion

Apple farming is the backbone of J&K's economy, but reduced import duties risk undermining local growers. Making urgent policy intervention essential to protect farmers and sustain rural livelihoods.

V. Industry and Industrial Policies

1. CAPITAL SUPPORT IN BATTERY CELL PRODUCTION

Why in News?

- Recently, concerns have emerged that India's Production Linked Incentive (PLI) schemes are not delivering expected results in battery cell production.

Non-Fossil PLI Schemes

- Aim to achieve **500 GW of non-fossil energy capacity by 2030** as part of India's energy transition.
- Encourage **domestic manufacturing** of solar panels and advanced battery technologies.
- Reduce India's **dependence on imports** of clean energy equipment and materials.
- Position India as a **competitive player in global green energy supply chains**.

Performance So Far

- **Solar module assembly** has achieved around **56% of its target** by mid-2025, showing moderate progress.
- **Polysilicon manufacturing** has reached only **14% of planned capacity**, highlighting a major gap in upstream production.
- **Wafer manufacturing** stands at just **10% of the target capacity**, reflecting slow development in critical inputs.

- **Battery cell production** is far behind: out of a **50 GWh target**, only **1.4 GWh (2.8%)** has been commissioned by late 2025.
- **Job creation** has fallen short: against an expectation of **1.03 million jobs**, only **1,118 jobs** have been generated so far.

Issues in Battery Cell Manufacturing

- **Gigafactory Requirements** – Large-scale battery plants demand **advanced engineering, reliable infrastructure, and sustained R&D ecosystems**, which India is still developing.
- **Domestic Value Addition Rules** – Mandates of **25% value addition within two years and 60% within five years** are difficult to achieve quickly.
- **Delays in Imports and Expertise** – Slow clearance of **equipment imports** and restrictions on foreign technical staff visas have delayed factory commissioning.
- **Limits of Financial Support** – Capital incentives alone cannot substitute for **deep technological know-how and skilled manpower**.

Policy Design Limitations

- **Capital-Centric Approach** – Current PLI design focuses mainly on **output-linked subsidies**, ignoring structural needs.
- **Assumption of Finance as Solution** – Policy assumes that **money alone can bridge skill and technology gaps**, which is unrealistic.
- **Penalty Burden** – Firms face **steep penalties for delays**, even when caused by structural or external challenges.
- **Neglect of Ecosystem Needs** – Insufficient emphasis on **workforce training, R&D investment, and technology transfer mechanisms**.

External Dependencies

- **Raw Material Imports** – Continued reliance on **foreign sources for lithium, cobalt, and other critical inputs**.
- **Technical Expertise Dependence** – Heavy dependence on **foreign engineers and specialists** for plant setup and operations.
- **Supply Chain Vulnerability** – Global disruptions in logistics and raw material supply frequently **delay project timelines** and raise costs.

Way Forward

- **Extend Project Timelines** – High-tech sectors such as solar and batteries need longer gestation periods; timelines must align with realistic technology development cycles.
- **Strengthen R&D and Skill Development** – Greater investment in research, workforce training, and collaboration between industry and academia is essential to build domestic expertise.
- **Support Upstream Manufacturing** – Policy focus should expand beyond final assembly to include critical upstream segments like polysilicon, wafers, and battery cells.
- **Select Firms Based on Technical Capability** – Eligibility should prioritize companies with proven technological expertise and innovation capacity, not just financial strength or net worth.

Conclusion

Building battery and solar manufacturing strength requires more than subsidies, it needs patient policy, skilled manpower, and strong research ecosystems to achieve true technological self-reliance.

2. UNION BUDGET ON DOMESTIC MANUFACTURING

Why in News?

- The **Union Budget 2026-27** has been presented in Parliament, focusing on **domestic manufacturing, tariff reforms, and self-reliance**.

Global Backdrop – Budget 2026

- **Trade Pressures**: India's labour-intensive exports (textiles, leather, gems & jewellery) face **high U.S. tariffs**, reducing competitiveness which account for nearly **20% of India's merchandise exports**.
- **India–EU Partnership**: Negotiations for a **major India–EU Free Trade Agreement (FTA)** are underway, aiming to cover **99% of India's exports** worth **USD 136 billion (2024–25)**.
- **China Dependence**: China has restricted exports of **rare earths and EV-related technologies**, adding pressure on India's clean energy and automobile sectors

Manufacturing Sector Push

- India faces **premature deindustrialisation**: Manufacturing share in GDP has stagnated at **15–16%** over the past decade.
- Employment in manufacturing declined from **12.1% of total workforce (2015–16)** to **10.8% (2024–25)**.
- Official GDP data shows higher growth, but **Annual Survey of Industries (ASI)** indicates slower expansion.
- Fixed investment growth in manufacturing averaged only **3.5% annually (FY21–FY25)**, eroding industrial capacity.

Tariff & Trade Reforms

- Correction of **inverted duty structures** by reducing customs duties on capital and intermediate goods.
- Rationalisation of import procedures to cut delays and improve ease of doing business.
- Aim: Boost competitiveness and reduce reliance on costly imports.

Electronics & Rare Earths Strategy

- Electronics parts and sub-assemblies remain India's **largest import dependence on China (USD 65 billion in FY25)**.
- Proposal for a **rare earths corridor** across Odisha, Kerala, Andhra Pradesh, and Tamil Nadu.
- Tax exemptions extended for **lithium-ion cell production** and related capital goods to support EV ecosystem.

MSME Support

- Emphasis on labour-intensive goods to offset U.S. tariff pressures.
- Promotion of new MSME clusters and modernisation of **120 legacy clusters**. Financial assistance for MSMEs to access capital markets.
- **MSME credit growth** outpaced large industry lending, rising **18% YoY in H1 FY26**, making MSMEs the primary driver of industrial credit expansion.

Challenges

- Manufacturing share stagnant at **15–16% of GDP**, with declining employment.
- **FDI inflows** into manufacturing fell by **12% in FY25**, especially in high-tech industries. Persistent import dependence on China for electronics and critical minerals.
- Policy gaps: Allowing SEZ sales domestically instead of boosting exports. Centre–State fiscal coordination issues remain unresolved.

Way Forward

- Strengthen **domestic value chains** through targeted incentives in high-tech and strategic sectors.
- Promote **FDI in technology-intensive industries** with stable policies and ease of doing business.
- Enhance **MSME competitiveness** via credit access, skill development, and cluster modernisation.
- Invest in **inclusive infrastructure** beyond metros, focusing on logistics, energy, and local manufacturing hubs.

Conclusion

The Budget rightly prioritises self-reliance and manufacturing revival, but success hinges on attracting investment and reducing dependence on imports. A balanced strategy combining high-tech growth with MSME support is essential for sustainable industrialisation.

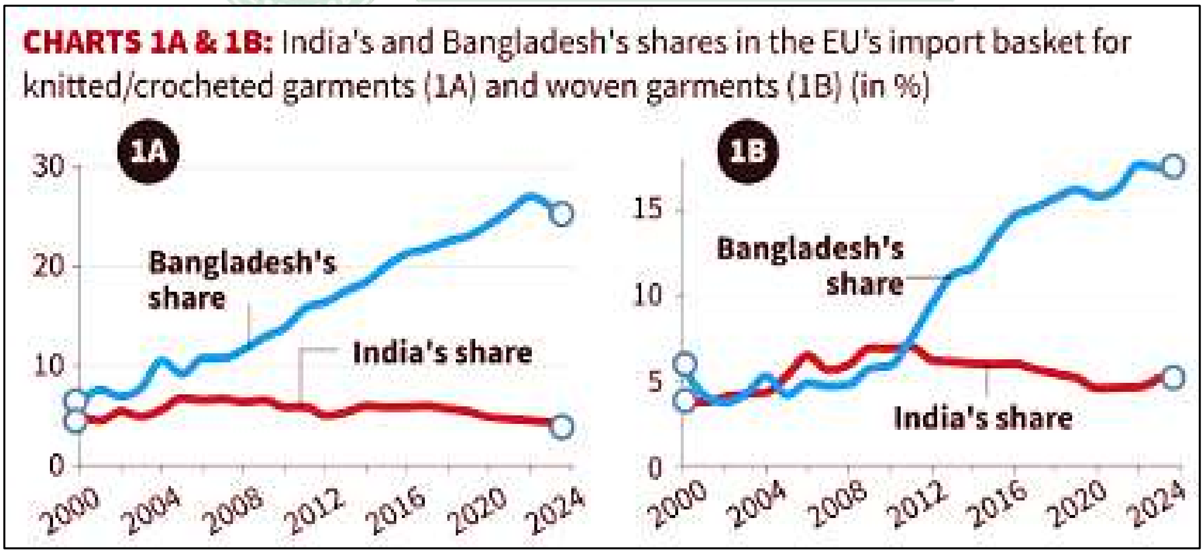
3. INDIA VS BANGLADESH IN EU TEXTILE EXPORTS

Why in News?

- Recently, with the EU-India FTA granting India duty-free access for textiles and Bangladesh set to lose its LDC trade benefits by 2029, the issue is whether India can regain EU textile market share.

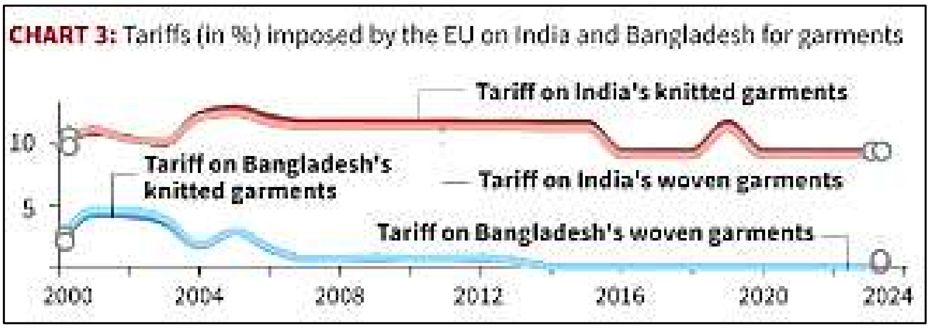
Current Scenario

- **India's Position** – Exports to EU are concentrated in **yarns and fabrics**, not finished garments.
- **Bangladesh's Advantage** – Dominates **knitted/crocheted garments** (T-shirts, sweaters) and **woven garments** (shirts, trousers, jackets).
- India's share in EU knitted garment imports fell from **6.5% (2009) to 4.4% (2023)**, while Bangladesh rose to **26% (2023)**.
- India's woven garment exports declined from **$3.5 billion to $2.9 billion**.



Reasons for India's Weakness

- **Higher Unit Prices** – Indian garments cost more due to higher production costs, less integrated supply chains, and logistical inefficiencies.
- **Tariff Disadvantage** – India faced **12% MFN tariffs**, while Bangladesh enjoyed **duty-free access** under the EU's *Everything But Arms (EBA)* scheme.
- **Fragmented Policy Support** – Bangladesh consistently promoted garments, while India's approach was less coordinated.



Upcoming Changes

- **Bangladesh's LDC Graduation (2029)**: Will lose EBA benefits; may enter EU's **GSP+ scheme**, but stricter rules of origin could hurt its competitiveness.
- **India–EU FTA**: Grants India **duty-free access**, subject to double-stage processing. India's vertically integrated textile industry can meet these rules easily.
- **Opportunity Window**: India's tariff disadvantage narrows, while Bangladesh faces stricter compliance.

Challenges for India

- **Cost Competitiveness**: Must reduce production costs to compete in mass-market apparel.
- **Supply Chain Efficiency**: Need better integration and logistics.
- **Industrial Policy Gaps**: Lack of consistent long-term support compared to Bangladesh.
- **Employment Crisis**: Textile sector is a major employer but has failed to generate new jobs.

Way Forward

- **Leverage FTA**: Use duty-free access to expand garment exports, not just yarn/fabric.
- **Boost Competitiveness**: Improve infrastructure, reduce logistics costs, and streamline compliance.
- **Industrial Strategy**: Adopt coherent policies like Bangladesh's garment focus.
- **Learn from Vietnam**: EU-Vietnam FTA (2020) boosted apparel exports; India can replicate this success.
- **Employment Generation**: Reviving textiles can address India's job creation challenge.

Conclusion

With **cost-competitive production, vertical integration, and strong policy support**, India can regain ground in EU textile exports and strengthen both its economy and employment base.

4. DISCOMS AND THE ROAD AHEAD

Why in News?

- Recently India's electricity distribution companies **(Discoms)** have reported a financial turnaround after years of heavy losses.

Recent Recovery of Discoms

- **Positive Profit After Tax**: DISCOMs collectively reported a profit of ₹2,701 crore in FY 2024-25, reversing years of losses.
- **Decline in AT&C Losses**: Losses reduced from 22.62% to 15.04%, showing better efficiency in transmission and billing.
- **Implementation of RDSS**: The Revamped Distribution Sector Scheme introduced reforms to improve operational efficiency and financial sustainability.

- **Debt Clearance**: Legacy dues fell to ₹4,927 crore, and current dues are being paid on time, improving credibility.

Historical Problems Faced by DISCOMs

- **High Technical and Commercial Losses**: DISCOMs struggled with large transmission and billing inefficiencies, which drained revenue and weakened operations.
- **Gap Between Supply Cost and Revenue**: The Average Cost of Supply (ACS) was consistently higher than the Average Revenue Realised (ARR), creating a financial imbalance.
- **Rising Debt Burden**: Outstanding liabilities grew steadily, crossing ₹7.2 lakh crore, which made the sector financially unstable.
- **Violation of Legal Norms**: Section 59 of the Electricity Act required utilities to maintain zero loss or a minimum profit margin, but this was rarely achieved.
- **Accumulated Legacy Dues**: By March 2023, unpaid dues had reached nearly ₹1.4 lakh crore, adding to the financial stress.

Uneven Progress Across States

- **Tamil Nadu**: Despite receiving large subsidies and financial support, its utility TANGEDCO still reported heavy losses, showing uneven improvement.
- **Gujarat**: Achieved a modest profit with subsidy support and better operational practices, reflecting stronger governance.
- **Risk of Reversal**: Gains may be temporary, as future expenses like employee pay revisions could again strain finances.

Structural Challenges That Persist

- **Dependence on Subsidies**: Much of the turnaround is subsidy-driven rather than based on genuine efficiency gains.
- **Cross-Subsidisation**: Agricultural and domestic consumers are heavily subsidised, distorting tariff structures.
- **Unmetered Supply**: Lack of proper metering, especially in agricultural power, prevents accurate consumption data.
- **Incomplete Feeder Segregation**: While some States have progressed, many still lag in separating agricultural feeders from others.

Way Forward

- **Feeder Segregation**: Completing this reform will help measure agricultural consumption more accurately.
- **Expansion of Metering**: Universal metering is essential for cost-reflective tariffs and accountability.
- **Promotion of Solar Pumps**: Encouraging solar-powered irrigation can reduce procurement costs and subsidy burdens.
- **Financial Discipline**: Strict adherence to RDSS reforms is necessary to sustain the current gains.

Conclusion

India's DISCOMs have shown measurable improvement in financial performance, but the recovery is fragile. Long-term sustainability depends on structural reforms, subsidy management, universal metering, and political commitment to financial discipline.

VI. Services sector

1. INDIA'S TOURISM SECTOR DEFICIT

Why in News?

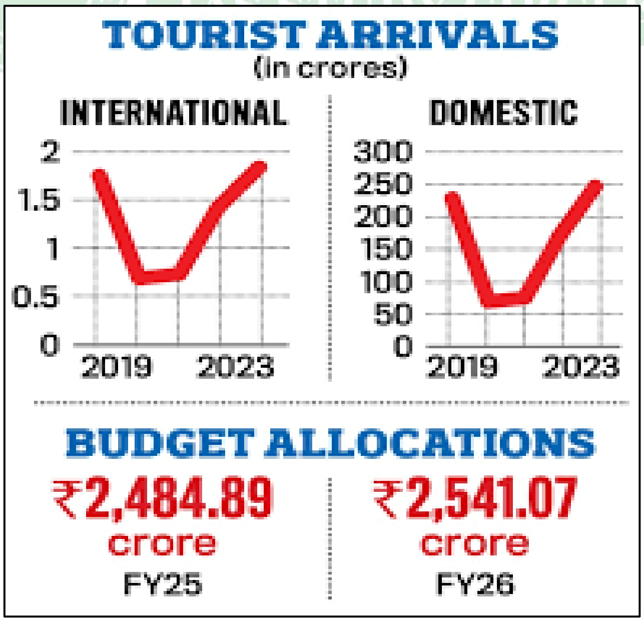
- Recently, the **Reserve Bank of India (RBI)** highlighted foreign tourist arrivals remain comparatively low, exposing gaps in the country's tourism strategy and infrastructure.

India's Tourism Industry (2025)

- **GDP Contribution:** Tourism contributed **over ₹19 trillion** to India's GDP in 2023, about **10% higher than pre-pandemic levels**.
- **Employment:** The sector supported **43 million jobs**, marking an **8% increase compared to 2019**.
- **Domestic Tourism:** Spending by Indian travelers reached **₹14.6 trillion**, showing strong growth and driving recovery.
- **Foreign Tourist Arrivals:** India received **14.2 million international tourists in 2024–25**, an **18% rise** compared to the previous year.

Image Problem

- India's global image is often shaped by **negative headlines** on safety, scams, sanitation, and bureaucracy.
- The **'Incredible India' campaign** is attractive but insufficient to counter these perceptions.
- Tourists want **safety, efficiency, and trust**, which competitors like Singapore and Thailand consistently project.
- Need for **segmented branding**: Spiritual India, Adventure India, Luxury India, Buddhist circuit, Ramayana circuit, cricket tourism, etc.



Infrastructure Gaps

- First impressions at **airports, immigration, taxis, and Wi-Fi** remain weak.
- Poor **last-mile connectivity** to remote destinations.
- Lack of **clean public toilets, reliable internet, and well-maintained heritage sites**.
- Mid-range and luxury travel often costlier than Southeast Asian competitors.

Challenges

- **Tourist Experience Challenges**: Crowds, noise, scams, touts, and harassment undermine visitor trust and comfort.
- **Hospitality Sector Strain**: Facing a 40% staff shortage. Limited vocational training programs and shortage of multilingual guides.
- **Immigration Barriers**: Processes remain complex despite the introduction of e-visas. India still lags behind peer countries in ease of entry.
- **Need for Institutional Improvements**: Friendlier immigration officers can enhance visitor experience. Greater openness to feedback and criticism is essential for reform.

Way Forward

- **Rebranding Tourism**: Promote **targeted circuits** (Golden Triangle, Himalayas, coastal belt). Use **digital storytelling, influencer campaigns, and virtual tours**.
- **Infrastructure Development**: Expand **public-private partnerships** for heritage site upkeep. Improve **roads, rail, signage, and sustainable transport**.
- **Safety & Training**: Strengthen **tourist police**, especially women officers. Crack down on **scams and harassment**. Skill development for **homestays, eco-lodges, artisans**.
- **Visa Reforms**: Simplify **e-visas** and offer **multi-entry long-term visas**. Explore **Visa on Arrival** for low-risk countries.
- **Sustainability & Authenticity**: Promote **eco-tourism and community-based tourism**. Regulate **footfalls at fragile sites** to prevent degradation.

Conclusion

India has unmatched **history, natural beauty, and cultural depth,** but weak fundamentals in **image, infrastructure, and tourist experience** limit its potential. Tourism must become **a national priority** to transform India into a **top-tier global destination.**

VII. Trade and External sector

1. DE-DOLLARISATION, AND THE GLOBAL GOLD RUSH

Why in News?

- Recently, the **Reserve Bank of India (RBI)** highlighted that global gold prices have surged to record highs while the U.S. dollar has weakened.

Global Reserve Realignment

- **Definition of De-dollarisation:** Refers to countries reducing dependence on the U.S. dollar in trade, reserves, and investments.
- **Key Triggers**: Driven by U.S. sanctions, trade wars, and the geopolitical use of the dollar as leverage.
- **Shift Toward Alternatives**: Gold has re-emerged as a preferred reserve asset. Valued for being politically neutral and free from sanctions.

Drivers Behind the Shift

- **Policy-Driven Shifts**: Heavy reliance on tariffs, sanctions, and dollar dominance under Trump's policies. Use of the dollar as a geopolitical tool created friction globally.
- **Erosion of Trust**: Confidence in the dollar weakened after the U.S. froze Russia's reserves in 2022.

- **Rise of Multipolarity**: Nations are diversifying reserves to reduce vulnerability. Reflects a broader move toward a multipolar world order in finance and geopolitics.
- **Currency Weakness**: The U.S. dollar fell by about 9% in 2025. Marked its steepest decline in a decade, intensifying concerns about stability.

India's Position

- **RBI Reserves:** Nearly one-third of forex reserve growth in 2025 came from gold value appreciation.
- **Gold Share:** Rose from **12% to 17% of total reserves** in one year.
- **US Treasuries:** RBI reduced holdings from $234 bn (2024) to $186 bn (2025).
- Reflects India's cautious diversification strategy.

Global Trends

- **Central Banks Buying Gold:** Poland, Kazakhstan, Brazil among top buyers in 2025.
- **IMF Data:** Dollar's share in global reserves fell to **58.5% in 2024**, lowest in 30 years (from 71% in 1999).
- **Institutional Investors:** Danish pension funds and European banks reducing US debt exposure.
- **EU Holdings:** Europe holds ~$10.4 trillion in US assets but faces pressure to diversify.

Implications

- **For US:** Weakens Washington's ability to influence global trade and finance.
- **For Global System:** Gold regains importance as a hedge against currency debasement and geopolitical risk.
- **For India:** Strengthens reserve stability but raises challenges in managing CAD and external shocks.
- **Weaponisation of Capital:** Financial flows increasingly used as geopolitical leverage.

Way Forward

- **Balance Diversification with Stability**: Countries must diversify their reserve assets while maintaining financial stability, since the U.S. dollar continues to dominate global forex transactions.
- **Strengthen India's Strategy**: India should keep expanding its gold reserves while simultaneously deepening mechanisms for **rupee-based trade settlements** to reduce external dependence.
- **Reform Global Financial Governance**: International institutions need structural reforms to lessen overdependence on any single currency.

Conclusion

De-dollarisation reflects a **structural shift in global finance**, accelerated by US policies under Trump. While the dollar remains dominant, the rising role of gold and alternative currencies signals a gradual move towards a **multipolar monetary order**, reshaping global economic power balances.

2. INDIA-EU FREE TRADE AGREEMENT

Why in News?

- India and the European Union (EU) have recently concluded a **landmark Free Trade Agreement (FTA)**.

Importance of the Deal

- The EU accounts for nearly **12% of India's trade**, making this agreement far more impactful than the eight FTAs signed in the past four years with smaller economies.
- Under the pact, the EU will **remove tariffs on 99.5% of Indian exports**, most of them immediately.
- India has offered tariff concessions on **97.5% of EU exports**, while safeguarding sensitive sectors.

Key Features

- **Agriculture Protection**: India excluded **strategic agricultural and dairy sectors** from tariff cuts. The EU also kept its sensitive farm products outside the agreement.
- **Automobile Sector Resolution**: Past talks collapsed in 2013 over auto tariffs. A **quota-based system** now protects India's low-cost manufacturers while opening space for **European luxury carmakers**.
- **Wine Tariffs**: Quota-based tariffs allow **French winemakers entry** while protecting India's growing domestic wine industry.
- **Broader Cooperation**: Separate agreements were signed on **mobility, defence, and technology**, showing a comprehensive partnership.

Significance for India

- **Expanded Market Access**: EU will remove tariffs on **99.5% of Indian exports**, most to zero immediately.
- **Boost for High-Value Industries**: Quota-based concessions open opportunities for **European luxury cars and wines**, while protecting India's domestic producers.
- **Strengthened Trade Balance & Investment**: Greater access to Europe's large consumer base encourages **foreign investment in India's manufacturing**.
- **Comprehensive Cooperation Beyond Trade**: Separate agreements on **mobility, defence, and technology** enhance strategic ties.

Concerns

- **Carbon Border Adjustment Mechanism (CBAM)**: India could not secure concessions under CBAM, which currently applies to six products but may expand to all industrial goods.
- **Need for Manufacturing Reforms**: To attract foreign investors using India as a base for exports to Europe, India must **scale up large-scale manufacturing** quickly.
- **Implementation Delay**: The FTA must be translated into **27 EU languages** and ratified by each member state and the European Parliament.
- **India must push for speedy clearance** to ensure benefits are not delayed, especially in light of U.S. tariff challenges.

Free Trade Agreement (FTA)

An FTA is an arrangement under international law where countries agree to form a *free-trade area* by reducing or removing tariffs, quotas, and restrictions on imports and exports.

1. **Purpose:**
   - Promote smoother trade flows.
   - Encourage investment and cooperation.
   - Enhance competitiveness of domestic industries.
2. **Types:**
   - **Bilateral FTAs:** Between two countries.
   - **Multilateral FTAs:** Between multiple countries or regional blocs.

India's major Free Trade Agreements (FTAs):

- **India–Sri Lanka FTA (2000):** Gave duty-free access to many goods, boosting textile and agriculture trade.
- **SAFTA (2006):** Regional trade pact among SAARC nations to reduce tariffs and promote South Asian trade.
- **India–ASEAN FTA (2010):** Lowered tariffs on goods, expanding trade in electronics, textiles, and agriculture.
- **India–Japan CEPA (2011):** Comprehensive pact covering goods, services, investment, and intellectual property.

Conclusion

The India-EU FTA reflects a **pragmatic and balanced approach** to trade diplomacy. While challenges remain in CBAM and implementation timelines, the agreement positions India strongly in global trade and offers long-term economic opportunities.

3. WILL REMOVING CURBS ON CHINESE FDI HELP INDIA?

Why in News?

- The **Ministry of Finance** is considering lifting restrictions on **Chinese firms bidding for government contracts**, imposed after the **2020 Galwan Valley clash**.

India-China Economic relations (2025–26)

- **Trade Deficit Remains High**: India's exports to China grew **37% in the first nine months of 2025–26**, led by electronics and marine products.
- **However, imports from China** continue to dominate, leaving India with a **trade deficit of over $85 billion in 2025**, making China India's largest source of imports.
- **FDI Trends Diverge**: According to **UNCTAD (2026)**, FDI inflows to India surged by **73% to $47 billion in 2025**, driven by services and manufacturing.
- **In contrast, FDI inflows to China** fell for the **third consecutive year**, declining by **8% to $107.5 billion**. This shows India is becoming more attractive for global investors, while China faces slowing inflows.
- **Chinese companies like Xiaomi and Oppo** remain successful in India's consumer market, showing that selective Chinese FDI can integrate well into India's economy.

Potential Economic Benefits

- **Boost to Manufacturing:** Chinese investments can help expand India's manufacturing base and attract global supply chains.
- **Export Growth:** Increased FDI may push India's exports by integrating into global production networks.
- **Trade Deficit Reduction:** Allowing investment in non-sensitive sectors could reduce India's heavy trade deficit with China.
- **Examples of Success:** Companies like **Xiaomi and Oppo** have shown that Chinese FDI can thrive in India's consumer market.
- **Emerging Sectors:** Electric vehicle (EV) manufacturers from China may find India an attractive destination.

TOP TRADING PARTNERS OF INDIA (2024–2025)

Rank	Country	Total Trade Value (USD Billion)	Key Features of Trade Relationship
1	United States	131.84	Largest partner; strong export market; positive trade balance; major in IT, pharma, textiles.
2	China	127.7	High import dependence (electronics, machinery); large trade deficit.
3	United Arab Emirates (UAE)	83.65	Energy, gems, jewelry, textiles; strategic Gulf ties.
4	Russia	65.69	Energy (oil, coal), defense, fertilizers; growing ties
5	Saudi Arabia	43.37	Crude oil, chemicals; major energy supplier

Security Concerns

- **Sensitive Sectors:** Defence, coastal infrastructure near naval bases, and the **digital economy** are considered high-risk.
- **Data Security Risks:** Chinese dominance in digital platforms could lead to **data leaks or kill switches** during crises.
- **Policy Approach:** Experts suggest restrictions should be **sector-specific**, not country-specific, to ensure consistency.

Supply Chain Integration

- **Economic Survey 2023–24:** Suggested Chinese FDI could help India join global supply chains.
- **Challenges:**
    - Supply chains need low tariffs and easy imports of components.
    - India must identify areas where it has competitive advantage.
    - Infrastructure and logistics constraints remain barriers.
- **Apple Example:** India had to make special concessions for Chinese suppliers to support Apple's manufacturing, showing the complexity of integration.

China's Gains from Investing in India

- **Excess Capacity:** China has surplus production and seeks to diversify supply chains abroad.
- **Tariff Avoidance:** Establishing bases in India helps Chinese firms bypass **China-focused tariffs** in the U.S. and Europe.
- **Access to Market:** India offers the **fastest-growing consumer market**, especially in smartphones.
- **India Premium:** Geopolitical and economic factors make India an attractive destination compared to saturated markets.

Way Forward

- **Clear Red Lines:** National security must remain central in deciding sectors open to Chinese FDI.
- **Balanced Approach:** Encourage investment in **non-sensitive sectors** while protecting strategic areas.
- **Policy Consistency:** Move towards **sector-based restrictions** rather than country-specific bans.
- **Infrastructure & Ease of Business:** Improve logistics and regulatory environment to attract diversified FDI.

Conclusion

Removing curbs on Chinese FDI could **strengthen India's manufacturing and exports**, but only if accompanied by **strict safeguards in sensitive sectors**. A balanced, sector-specific policy will help India gain economic benefits while protecting national security.

4. INDIA–U.S. TRADE DEAL

Why in News?

- India and the United States have announced a new **trade deal** that reduces U.S. tariffs on Indian goods from 50% to 18%, bringing relief to several industries.

Background

- The deal was announced jointly by **Prime Minister Narendra Modi and U.S. President Donald Trump** via social media, marking a departure from India's usual formal channels.
- Commerce Minister **Piyush Goyal** later confirmed that sensitive sectors such as **agriculture and dairy** would be excluded from concessions.

- The U.S. agreed to reduce its **reciprocal tariffs from 25% to 18%** and remove the **additional 25% penalty tariffs** linked to India's purchase of Russian oil.

Key Features of the Deal

- **Tariff Reduction**: Major relief for Indian exports, especially in **labour-intensive sectors** like textiles, footwear, leather, apparel, and engineering goods.
- **Exclusion of Sensitive Sectors**: Agriculture and dairy remain protected, ensuring domestic interests are not compromised.
- **Ambiguity in Commitments**: No clarity yet on India's concessions in terms of investments, purchase orders, or oil imports.

Concerns and Challenges

- **Implementation Timeline**: While the U.S. President claimed tariffs would be cut "immediately," India's Commerce Minister said details would be shared "soon."
- **Russian Oil Issue**: Reports suggest India may reduce or stop Russian oil imports, which currently account for nearly **one-third of India's crude supply**. This could affect India's energy security and relations with Russia.
- **Alternative Sources**: Buying Venezuelan crude poses refining challenges, while increasing U.S. oil imports may raise costs.
- **Competitiveness Gap**: Even after tariff cuts, Indian exports may face slightly higher duties compared to **South-East Asian competitors** with Most-Favoured Nation (MFN) status.

Economic Impact

- **Positive Market Reaction**: Stock markets and the rupee strengthened after the announcement.
- **Boost to Exports**: Labour-intensive industries, already benefiting from the upcoming **India–EU trade deal**, stand to gain further competitiveness in the U.S. market.
- **Budgetary Support**: Targeted measures in the **Union Budget 2026** are expected to help bridge the competitiveness gap.

INDIA–U.S. TRADE (FY 2024–25)

- **Total trade**: $131.8 billion (U.S. is India's largest trading partner).
- **India's exports to U.S.**: $86.51 billion (↑ 11.6% from previous year).
- **India's imports from U.S.**: $45.33 billion (↑ 7.4% from previous year).
- **Trade surplus for India**: $41 billion.
- **Key export sectors**: Textiles, engineering goods, pharma, IT services.
- **Key imports from U.S.**: Oil, aircraft parts, electronics, defence equipment.

Why Services Are Not Included in Trade Deficit

- **Goods vs Services**: Trade deficit is usually calculated only on **merchandise (goods)**, since they are tangible and tracked at ports/customs.
- **Measurement Difficulty**: Services (like IT, finance, tourism) are harder to quantify consistently across countries.
- **Political Narrative**: Governments often highlight goods deficit because it is more visible and easier to link with jobs/manufacturing.
- **Reality Check**: India exports more goods to the U.S. than it imports, creating a surplus. But if services were included, the U.S. would offset part of this gap, which is why services are often excluded from the deficit calculation.

Conclusion

The **India-U.S. trade deal strengthens economic ties while balancing domestic sensitivities** in agriculture and energy. Its long-term success will depend on clear implementation and strategic management of energy and geopolitical considerations.

B. ENVIRONMENT

I. Biodiversity and conservation

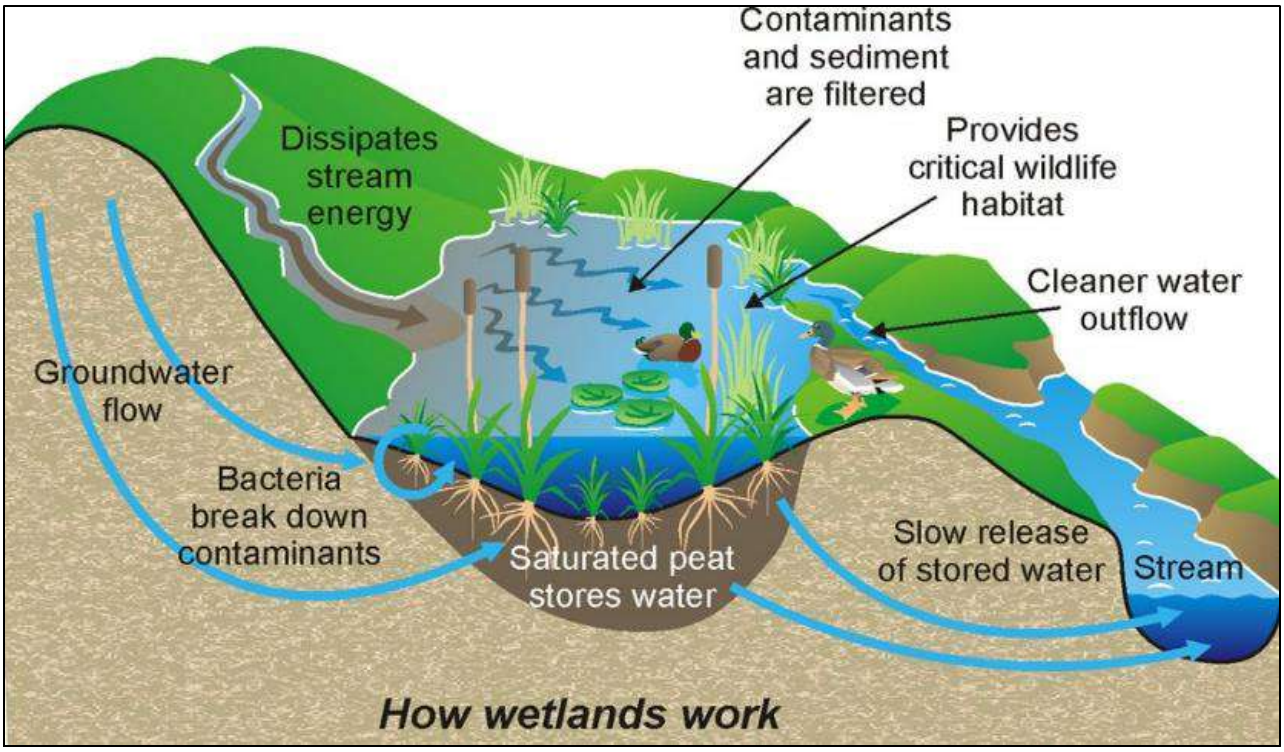
1. WETLANDS AS A NATIONAL PUBLIC GOOD

Why in News?

- **Recently World Wetlands Day 2026** was observed on February 2 under the theme *"Wetlands and Traditional Knowledge: Celebrating Cultural Heritage"*.

What Are Wetlands?

- **Wetlands are areas** where water covers the soil or is present near the surface for long periods, creating conditions for special plants, animals, and microorganisms.
- **Types**:
  - **Freshwater wetlands** – lakes, rivers, marshes, ponds.
  - **Coastal wetlands** – mangroves, lagoons, estuaries.
  - **Man-made wetlands** – reservoirs, tanks, rice paddies.
- **Functions:**
  - Natural water filters (purify water).
  - Flood buffers (absorb excess rainwater).
  - Carbon sinks (store carbon, mitigating climate change).
  - Biodiversity hotspots (home to migratory birds, fish, amphibians).



India's Position in Wetlands

- **Global Commitment**: India joined the **Ramsar Convention in 1982**, pledging to conserve and use wetlands wisely.
- **Ramsar Sites**: As of 2026, India has **98 Ramsar wetlands of international importance**, covering diverse ecosystems from Himalayan high-altitude lakes to coastal mangroves.
- **Global Standing**: India is among the **top countries in Ramsar site numbers**, reflecting its ecological diversity and conservation efforts.
- **Threats**: Despite recognition, nearly **40% of wetlands have disappeared in the last three decades** due to urbanisation, pollution, and land conversion.
- **Recent Additions (2026)**:
  - **Patna Bird Sanctuary (Uttar Pradesh)** – important for migratory birds.
  - **Chhari-Dhand (Gujarat)** – supports flamingos and other waterfowl.

Traditional Importance

- **Tamil Nadu**: Ancient irrigation tanks (*kulams*) supported paddy cultivation.
- **Kerala (Wayanad)**: *Kenis* (shallow wells) provided drinking water and cultural value.
- **Andhra Pradesh (Srikakulam)**: Wetlands sustained traditional fishing livelihoods.
- Wetlands have historically been **ecology + economy + heritage**, vital for community wellbeing.

Challenges in India

- **Loss of Wetlands**: Nearly **40% vanished in 30 years**, and half of the remainder show degradation.
- **Encroachment & Land Conversion**: Wetlands replaced by real estate, roads, and infrastructure.
- **Pollution**: Sewage, industrial effluents, and agricultural runoff cause eutrophication.
- **Coastal Pressures**: Sea-level rise, cyclones, and tourism threaten mangroves and lagoons.
- **Weak Institutions**: State wetland authorities face staff shortages, poor training, and limited funds.

Policy Framework

- **Wetlands Rules, 2017**: Provide legal basis for identification and management.
- **NPCA Guidelines**: Push for structured planning and monitoring.
- **CRZ Regulations**: Protect coastal wetlands.
- **Ramsar Sites**: India has **98 Ramsar wetlands**, offering global recognition and responsibility.

Pragmatic Approaches

- **Boundary Notification**: Demarcate wetlands with maps, grievance redress, and community participation.
- **Wastewater Treatment**: Ensure treated inflows; wetlands cannot replace sewage plants.
- **Catchment Protection**: Restore feeder channels, regulate extraction, and prevent dumping.
- **Disaster Risk Reduction**: Treat mangroves, floodplains, and mudflats as natural buffers.
- **Capacity Building**: Launch national training missions for wetland managers in hydrology, ecology, GIS, and law.

Conclusion

Wetlands are vital for India's ecology, economy, and resilience, yet face severe degradation. Aligning **science, policy, and community wisdom** is essential to restore them as thriving ecosystems.

2. THE FADING OF INDIA'S ENVIRONMENTAL JURISPRUDENCE

Why in News?

- Recent Supreme Court's acceptance of restrictive definitions and post-facto clearances is seen as a **dilution of environmental justice**.

Judicial Shifts in Environmental Regulation

- **EIA Policy Change (Dec 2025)**: Allowed Environmental Impact Assessments (EIA) to proceed without detailed land acquisition data. Reduced transparency and weakened safeguards in project approvals.
- **Vanashakti Case (2025)**: Earlier ban on retrospective clearances was recalled. This weakened deterrence against environmental violations and encouraged post-facto approvals.
- **Judicial Role in Environmental Rights**: Historically, courts expanded environmental rights under **Article 21 (Right to Life)**. Recent rulings show a shift toward leniency in enforcement.

Key Cases and Issues

1. **Aravalli Ranges:**
    - **Ecological backbone of north-west India**, crucial for groundwater recharge, biodiversity, and desertification control.
    - **Earlier rulings (2004, 2010) protected the ranges** beyond height-based definitions.
    - **Latest ruling (2025)** restricted protection to landforms above 100m, excluding large ecologically vital areas.
2. **Mangroves in Maharashtra:**
    - Judicial approval for destruction of 158 mangroves for projects like Adani Cementation.
    - Large-scale felling of mangroves in Mumbai permitted on promises of compensatory afforestation, ignoring ecological science.
3. **Char Dham Highway Project:**
    - Despite recognition of fragile Himalayan ecology, wider roads were allowed citing defence needs.
    - Studies show over 800 landslide zones, raising risks of floods and ecological imbalance.

Concerns

- **Judicial Leniency:** Courts increasingly allow post-facto clearances and mitigation assurances instead of strict enforcement.
- **Corporate Influence:** Large projects backed by capital often bypass regulatory hurdles.
- **Procedural Fairness:** Hearings are shortened, objections dismissed, reducing transparency.
- **Public Trust Doctrine:** Earlier rulings held natural resources as public trust, but recent decisions undermine this principle.

Way Forward

- **Strengthen Judicial Mechanisms**: Revive and empower **Green Benches** in High Courts and the Supreme Court for specialized environmental cases.
- **Strict Enforcement of EIAs**: Ensure **transparent, science-based Environmental Impact Assessments** with public participation and independent review.
- **Curtail Corporate Influence**: Enforce stricter checks on large projects, preventing dilution of ecological safeguards through post-facto clearances.
- **Promote Federal Coordination**: Enhance **Centre–State cooperation** in environmental regulation and monitoring for consistent enforcement.

Constitutional Principles

- **Article 21:** Right to a clean and healthy environment.
- **Article 48A:** Duty of the State to protect and improve the environment.
- **Article 51A(g):** Duty of citizens to safeguard natural resources.
- **Article 14:** Principle of non-arbitrariness violated when selective protection is given to certain landforms.

Conclusion

This trend risks undermining constitutional guarantees and ecological sustainability. Strengthening **Green Benches in courts**, enforcing strict EIAs, and resisting corporate influence are essential to restore environmental justice.

3. CLIMATE GOVERNANCE 'HOP-ON, HOP-OFF' BUS ANALOGY

Why in News?

- Recently Former Environment Secretary compared global climate governance to "hop-on, hop-off" buses, highlighting lack of direction in climate negotiations.

Current State of Climate Governance

- **CMP & CMA Meetings**: Function like buses circling endlessly without obligation to reach climate goals.
- **Politics Dominates**: National interests override global urgency; consensus often means veto power for all.
- **Economics Influence**: Short-term profits outweigh long-term ecological concerns.
- **Common People**: Focused on immediate needs, they become victims of climate disasters rather than active stakeholders.

Role of Different Actors

- **Scientists**: Have already established risks and scenarios; delays now stem from politics, not science.
- **Politicians**: Manage expectations, postpone decisions, and avoid costs.
- **Markets**: Driven by opportunism, not precaution; future generations ignored in profit calculations.
- **Individuals**: Concerned with livelihood, not distant climate threats.

COP30 Outcomes

- **Global Mutirão Package**: Promoted cooperation but remained voluntary.
- **1.5°C Target**: Politically unrealistic; emissions projected to cross threshold in early 2030s.
- **Finance**: Needs exceed $2.4–3 trillion annually; current flows under $400 billion. No binding timetable for funds.
- **Adaptation**: Pledge to triple finance lacked baseline or binding sources. Indicators adopted but unclear.
- **Loss & Damage Fund**: Opened for applications but underfunded.
- **Technology Transfer**: Announced programmes but lacked financial backing.
- **Capacity Building & Just Transition**: Strong statements, but no binding commitments or resources.

Structural Issues

- **Drift, Not Collapse**: Governance continues but remains inadequate.
- **Voluntary Language**: Encouragement without obligations.
- **Gap Between Needs & Delivery**: Climate urgency unmet by political will.

Way Forward

- **Strengthen Binding Commitments**: Move beyond voluntary pledges to enforceable obligations.
- **Prioritise Finance & Adaptation**: Ensure predictable funding for developing nations.

- **Balance Justice & Pragmatism**: Uphold common but differentiated responsibilities while ensuring global cooperation.

Conclusion

COP remains the only universal forum for coordinated climate response, despite flaws. The challenge is clear: while nations can "hop on and hop off" negotiations, humanity cannot hop off the planet.

4. NGT CLEARANCE OF GREAT NICOBAR ISLAND PROJECT

Why in News?

- The **National Green Tribunal (NGT)** has cleared **Great Nicobar Island mega-infrastructure project**, stating that adequate environmental safeguards are in place

Great Nicobar Island Mega Infrastructure Project

- **Strategic Importance:** Located near the **Malacca Strait**, the project strengthens India's maritime presence in the Indo-Pacific and enhances strategic reach in the Bay of Bengal.
- **Major Components:** The plan includes an **International Container Transshipment Terminal (ICTT)**, a greenfield international airport, township development, and a power plant — with an estimated investment of around **₹72,000 crore**.
- **Environmental & Tribal Concerns:** The project involves diversion of over **130 sq km of forest land** and has raised concerns regarding biodiversity loss and impact on indigenous tribes like the Shompen.

NGT's Observations on the Great Nicobar Island Project

- **Validity of HPC Mandate:** The **National Green Tribunal** found no procedural flaws in the Terms of Reference issued to the High-Powered Committee (HPC).
- **Strict Compliance with EC Conditions:** It directed that all **Environmental Clearance (EC) conditions** must be adhered to rigorously during project implementation.
- **Balanced Development Approach:** The Tribunal emphasised that strategic and infrastructure development should align with the **ICRZ Notification, 2019**, ensuring environmental safeguards are not compromised.
- **Specific Directions to Environment Ministry:** The Ministry was instructed to ensure **coral reef protection, shoreline stability**, and to prepare a **comprehensive coral regeneration implementation plan**.

Concerns over the Project

- **Inadequate Ecological Assessment:** Applicants allege insufficient examination of sensitive ecosystems, including **coral reefs, turtle nesting sites, and coastal biodiversity**.
- **Flawed Environmental Impact Assessment (EIA):** It is claimed that the EIA study was conducted for **only one season instead of the mandatory three seasons**, raising concerns about incomplete environmental evaluation.
- **Location in Ecologically Sensitive Zone:** Objections were raised regarding the project's siting in a **fragile and protected ecological region**, increasing risks of long-term environmental damage.
- **Violation of Tribal & Forest Rights:** Local communities, including the **Nicobarese and Shompen tribes**, argued that their **free, prior, and informed consent was not properly obtained**, and that **forest rights were not fully settled** before project clearance.

Challenges

- **Ecological risks**: coral reef damage, turtle nesting disruption, shoreline erosion.
- **Community rights**: concerns of indigenous groups over displacement and forest land use.
- **Transparency**: limited public disclosure of HPC findings.

- **Legal hurdles**: forest clearance aspects under challenge in Calcutta High Court.

Way Forward

- **Scientific Environmental Monitoring:** Establish continuous, data-based monitoring of **coral reefs, coastal ecosystems, and shoreline dynamics** to detect and mitigate ecological impacts early.
- **Strengthen Community Participation:** Ensure meaningful consultation with local communities and complete **settlement of forest and tribal rights** prior to full-scale implementation.
- **Sustainable Construction Practices:** Adopt eco-friendly design, low-impact construction techniques, and strict waste management systems to minimise environmental degradation.
- **Transparency & Accountability:** Maintain public disclosure of environmental compliance reports and enforce independent oversight mechanisms.

National Green Tribunal (NGT)

Constituted in **2010** under the **National Green Tribunal Act, 2010**. Provides a **specialised forum** for effective and speedy disposal of cases relating to **environmental protection, conservation of forests, and natural resources**.

Jurisdiction:

- Deals with cases under laws like the **Environment Protection Act (1986)**, **Forest Conservation Act (1980)**, **Air Act (1981)**, **Water Act (1974)**, and **Biological Diversity Act (2002)**.

Composition:

- Headed by a **Chairperson (retired Supreme Court Judge or Chief Justice of High Court)**.
- Includes **Judicial Members** and **Expert Members** with knowledge in environmental science, forestry, ecology, etc.

Powers:

- Has powers of a **civil court**.
- Can provide **relief, compensation, and restitution of damaged environment**.
- Decisions are binding and appealable only in the **Supreme Court**.

Principles Applied:

- **Polluter Pays Principle:** those who pollute must bear the cost of managing pollution.
- **Precautionary Principle:** preventive measures must be taken even if scientific certainty is lacking.
- **Sustainable Development:** balance between development and environmental protection.

Conclusion

Effective safeguards, transparent monitoring, and respect for indigenous rights will be crucial to ensure that development does not compromise **environmental sustainability and social justice**.

5. CHALLENGES FACED BY INDIA'S FOREST AND VEGETATION COVER

Why in News?

- Recent assessments and reports, including media analysis (February 2026), have highlighted growing stress on India's forest ecosystems due to fires, invasive species, and developmental projects.

Major Ecological and Developmental Challenges

1. Increasing Forest Fires

- Over **50% of India's forests** are classified as fire-prone.
- Climate change-induced **heat waves, erratic rainfall, and prolonged dry spells** have increased fire frequency.
- Pine-dominated forests in Himalayan states accumulate highly combustible **pine needles**, raising vulnerability.
- Impacts include:
  - Loss of biodiversity
  - Soil degradation and erosion
  - Release of stored carbon, affecting climate mitigation goals

2. Spread of Invasive Alien Species

- Species like **Lantana camara** and **Prosopis juliflora** have expanded across forest landscapes.
- These plants:
  - Displace native species
  - Reduce grazing areas
  - Degrade wildlife habitats
- Invasive growth lowers **ecosystem resilience** and disrupts natural regeneration.

3. Expansion of Monoculture Plantations

- Replacement of natural forests with single-species plantations (e.g., eucalyptus, teak, pine) has increased in some regions.
- Monocultures:
  - Support lower biodiversity
  - Store comparatively less carbon
  - Are more vulnerable to pests and fires
- Such plantations cannot replicate the ecological complexity of natural forests.

4. Diversion of Forest Land for Development

- Forest land continues to be diverted for:
  - Highways and railways
  - Mining and dams
  - Industrial and urban expansion
- Large-scale projects such as the one proposed in **Great Nicobar Island** involve clearing tropical rainforests.
- Consequences include:
  - Habitat fragmentation
  - Human-wildlife conflict
  - Displacement of indigenous communities

5. Climate Change Impacts

- Rising temperatures and changing rainfall patterns affect forest productivity.
- Increased pest outbreaks and species migration alter forest composition.
- Mountain and coastal ecosystems are particularly vulnerable.

6. Governance and Policy Gaps

- Delays in updating forest management strategies.
- Weak monitoring and enforcement in certain regions.

- **Compensatory afforestation** often carried out in ecologically unsuitable areas, failing to restore original biodiversity.

Existing Forest Governance Mechanisms

1. Legal Framework

- Forest conservation laws regulate diversion of forest land.
- Wildlife laws support the creation of protected areas.
- The **National Green Tribunal** addresses environmental disputes and clearance-related issues.
- Recognition of tribal rights strengthens participatory conservation.

2. Institutional Monitoring

- The **Forest Survey of India** conducts biennial satellite-based forest cover assessments.
- Environmental clearances are reviewed through statutory mechanisms.

3. Community-Based Approaches

- **Joint Forest Management (JFM)** encourages shared responsibility between forest departments and local communities.
- Recognition of community forest rights promotes sustainable use and protection.

4. Climate and Afforestation Initiatives

- The **Green India Mission** aims to enhance forest and tree cover.
- India has pledged to create an additional **2.5–3 billion tonnes of CO_2 equivalent carbon sink** through forests and tree cover as part of its climate commitments.

Limitations of Current Approach

- Compensatory plantations cannot substitute **old-growth forests**.
- Ecological considerations often take a back seat to economic priorities.
- Fragmented coordination between agencies reduces policy effectiveness.

Way Forward

- Promote **mixed native species plantations** instead of monoculture forestry.
- Strengthen **early fire warning systems** using satellite and AI-based tools.
- Enhance removal and control of **invasive species** through scientific methods.
- Ensure **free, prior, and informed consent** of tribal communities in development projects.
- Integrate forest conservation into broader **climate adaptation and land-use planning strategies**.

Conclusion

India's forests are central to its **climate resilience, biodiversity security, and sustainable development goals**. A balanced approach combining **strong governance, scientific management, and community participation** is essential to safeguard forest ecosystems for future generations.

II. Environmental pollution

1. NEW SOLID WASTE MANAGEMENT FRAMEWORK

Why in News?

- The Union government has notified the **Solid Waste Management Rules, 2026** sfor bulk waste generators and urban local bodies.

Solid Waste Situation in India

- **Urbanisation and lifestyle changes** have led to a sharp rise in waste generation.
- India generates about **1.8–2 lakh tonnes of solid waste every day**, with housing societies, offices, and institutions contributing a major share.
- **Door-to-door collection** has improved in many cities, but **waste processing capacity remains insufficient**.
- A large portion of waste still ends up in **open dumps and landfills**, causing pollution and health risks.
- **Poor segregation** at household and institutional levels increases costs and reduces recycling efficiency.

Earlier Regulatory Framework

- Waste management was governed under the **Environment Protection Act, 1986**.
- The **Solid Waste Management (SWM) Rules, 2016** encouraged segregation, composting, recycling, and decentralised treatment.
- **Urban Local Bodies (ULBs)** were made primarily responsible for collection and disposal of waste.
- **Bulk waste generators** (like large housing complexes, institutions) were included in the framework, but enforcement was weak.
- **Monitoring and accountability mechanisms** were inadequate, limiting the effectiveness of the rules.

Features of SWM Rules, 2026

- **Stricter Compliance Framework**: New rules will be **enforced from April 2026** with stronger monitoring and penalties.
- **Urban Local Bodies (ULBs)** and bulk waste generators must strictly follow segregation and disposal norms.
- **Mandatory Processing at Source**: **Bulk waste generators** (housing societies, institutions, offices, hotels) must **treat and process waste at source**.
- **Promotion of Circular Economy**: Emphasis on **resource recovery, recycling, and reuse** to encourage industries and communities to adopt **sustainable waste management practices**.
- **Higher User Fees for Non-Compliance**: Dumping **mixed or untreated waste** will attract **higher user charges**.

Who Are Bulk Waste Generators?

- **Entities that** fall under this category include: Buildings with **large floor areas**
- **Establishments** using **high volumes of water**, Institutions producing **over 100 kg of waste daily** This covers apartments, hotels, colleges, offices, and government complexes.
- **Mandatory Segregation Categories:** Waste must now be separated into four streams:
  - **Wet waste** (biodegradable)
  - **Dry waste** (recyclables)
  - **Sanitary waste**
  - **Domestic hazardous waste** (batteries, e-waste, etc.)

- **Extended Responsibility of Bulk Generators:** Must **treat wet waste on-site** wherever possible. If not feasible, they must obtain a **certified waste processing arrangement**.
- **Special Powers to Local Bodies:** Hill and island regions can **charge tourists** for waste services. Authorities may **limit visitor numbers** based on waste-handling capacity.

Importance of Extended Producer Responsibility (EPR)

- **Shared Responsibility**: Under **EPR rules (2022)**, major producers of plastics, electronics, and packaging must take responsibility for collection and recycling.
- **Example:** India generates **3.5 million tonnes of plastic waste annually (CPCB, 2023)**, and producers are now mandated to recycle a fixed percentage of it.
- **Decentralised Treatment**: Encourages **local recycling and treatment facilities**, reducing the need to transport waste long distances. Decentralisation lowers costs and improves efficiency in waste handling.
- **Promotes Sustainability**: Focus on **resource recovery** — turning waste into usable materials like recycled plastic, compost, or energy. Supports India's target of **reducing single-use plastics by 100% by 2030**.

Conclusion

The SWM Rules, 2026 mark a decisive move towards **accountable, source-based waste management**, supporting India's transition to a circular and environmentally responsible urban system.

III. Indian Initiatives, efforts and Commitments

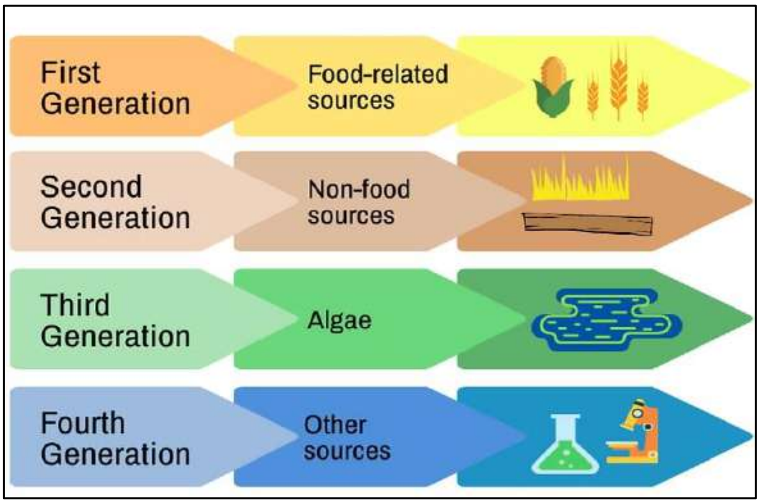
1. ETHANOL BLENDING AND ITS IMPACT ON FOOD SECURITY

Why in News?

- The **Economic Survey 2025-26** has cautioned that India's ethanol-blending programme may pose risks to **food security** as maize cultivation expands at the cost of pulses and oilseeds.

India's ethanol-blending

- India's ethanol-blending programme aims to reduce dependence on imported crude oil and promote cleaner energy.
- As of **August 2025**, ethanol blending saved India **₹1.44 lakh crore in foreign exchange** and substituted about **245 lakh metric tonnes of crude oil**.
- Farmers benefited through higher demand for crops like maize, which is increasingly used for ethanol production.



Emerging Concerns on Food Security

- **Expansion of maize** acreage is visible in **Maharashtra and Karnataka**, competing with pulses, oilseeds, soyabean, millets, and cotton.
- **Pulses and oilseeds** are vital for **nutrition and consumption baskets**, but are losing priority among cultivators.
- **Reduction in paddy acreage**, expected earlier, has not materialised. Highlights tension between **self-reliance in energy (Aatmanirbharta in fuel)** and **self-reliance in food**.
- Survey warns of imbalance: greater dependence on **edible oil imports** and higher **domestic food price volatility** during supply shocks.

Challenges

- **Shift in Crop Patterns** – Rising maize cultivation for ethanol risks reducing acreage of pulses and oilseeds, weakening India's nutritional security.
- **Dependence on Imports** – Greater reliance on edible oil imports exposes India to global price fluctuations and supply chain shocks.
- **Food vs Fuel Dilemma** – Balancing energy security with food security creates policy tensions, as land, water, and labour are diverted from food crops to fuel crops.

Future Growth of Ethanol Production

- **India has set a target of 20% ethanol blending in petrol by 2025-26**, advancing from the earlier 2030 deadline.
- **Recent expansion of ethanol distilleries** and use of **multiple feedstocks (sugarcane, maize, damaged grains)** is boosting production capacity.
- **Government is encouraging second-generation ethanol** from agricultural waste to reduce pressure on food crops.
- **With crude oil prices volatile** and climate concerns rising, ethanol blending remains a critical part of India's **energy transition strategy**.
- However, policies must ensure **balanced crop diversification** and adequate support for pulses and oilseeds to safeguard food security.

Conclusion

A balanced approach promoting **non-food feedstocks, supporting pulses and oilseeds, and investing in advanced ethanol technologies** is essential to achieve both **energy self-reliance and food security**.

2. GREEN STEEL AND INDIA'S CLIMATE GOALS

Why in News?

- Recently India is exploring **green steel production** as part of its revised **Nationally Determined Contributions (NDCs)** under COP30 commitments.

Background

- India's steel demand is expected to **rise from 125 million tonnes per year to over 400 million tonnes by 2050**.
- Steel is a **key driver of infrastructure and industrial growth**, making it vital for India's development.
- Current production is **heavily dependent on coal**, contributing significantly to carbon emissions.
- Without a transition to cleaner technologies, India risks **locking in carbon-intensive infrastructure**, weakening both climate goals and global competitiveness.

Global Context

- **China**: Expanding **scrap-based steel production** and investing in **green hydrogen** to reduce coal dependence.

- **European Union (EU)**: Implemented the **Carbon Border Adjustment Mechanism (CBAM)**, which imposes penalties on high-carbon steel imports.
- **Global Trend**: Countries adopting **low-carbon steel technologies** gain access to **premium export markets** and avoid border taxes.
- Early movers in **green steel** secure a **competitive advantage** in international trade and sustainability leadership.

India's Current Efforts
- **Tata Steel**: Hydrogen injection in blast furnaces, renewable power agreements, carbon capture pilots.
- **JSW Steel & JSPL**: Exploring green hydrogen integration.
- **SAIL**: Modernising furnaces and testing low-carbon routes.
- **Policy Initiatives**:
  - ***Greening Steel Roadmap* (2025).**
  - ***Green Steel Taxonomy* (2024) –** India became the first country to define green steel formally.
  - ***National Green Hydrogen Mission* and *Carbon Credit Trading Scheme (CCTS)*** for 253 steel units.

Challenges in India's Green Steel Transition
- **High Cost & Limited Supply of Green Hydrogen**: Green hydrogen is essential for low-carbon steelmaking but remains expensive and scarce.
- **Insufficient Renewable Energy for Industry**: Dedicated renewable energy for industrial use is inadequate, slowing decarbonisation.
- **Weak Scrap Market & Informal Recycling**: India's scrap steel market is fragmented and informal. Limited availability of quality scrap reduces potential for secondary steel production.
- **Natural Gas as Transition Fuel**: Natural gas can serve as a bridge fuel before hydrogen-based steelmaking. However, consistent and affordable supply remains uncertain.

Way Forward
- **Clear Carbon Targets**: Government must set short-, medium-, and long-term emission reduction goals for steel.
- **Carbon Pricing**: Introduce a carbon price regime to make low-carbon technologies viable.
- **Public Procurement Policy**: Create demand for green steel through certification, labelling, and government purchases.
- **Infrastructure Hubs**: Shared facilities for hydrogen, renewable power, and CO_2 capture pipelines.

Conclusion
By combining **corporate innovation with strong policy frameworks**, India can decarbonise steel and set global standards in clean manufacturing.

C. DISASTER MANAGEMENT

I. Disasters and their management

1. NDMA'S FIRST GUIDELINES ON DISASTER VICTIM IDENTIFICATION

Why in News?
- The National Disaster Management Authority (NDMA) has released India's first Standard Operating Procedures (SOPs) for identifying victims in mass disasters.

Need for Guidelines

- **No Standard System**: Earlier, States followed different methods, leading to inconsistency.
- **Operational Weaknesses**: Lack of forensic experts, poor coordination, and limited facilities slowed identification.
- **Humanitarian Concerns**: Families suffered due to uncertainty and delays in receiving remains.
- **Rising Fatal Events**: Industrial accidents, aviation disasters, floods, and earthquakes highlighted the urgency for a national protocol.

Scope of the Guidelines

- **Applicability**: For all mass fatality events, whether natural or man-made.
- **Uniform Reach**: To be adopted across States, districts, and local bodies.
- **Complete Process**: Covers everything from recovery at disaster sites to handing over remains to families.

Scientific & Forensic Methods

- **Forensic Archaeology**: Careful recovery and documentation of remains.
- **Forensic Odontology**: Identification through dental records.
- **DNA Profiling**: Useful when bodies are fragmented or decomposed.
- **Anthropology & Pathology**: Helps determine age, sex, and cause of death.
- **Medical Records**: Cross-checking with antemortem data for accuracy.

Tackling Operational Challenges

- **Defined Roles**: Clear responsibilities for police, health officials, forensic teams, and administration.
- **Logistics**: Planning for storage, transport, and preservation of remains.
- **Administrative Clarity**: Avoids overlap between local, State, and Central agencies.
- **Capacity Building**: Recognises shortage of forensic labs and experts, calls for strengthening infrastructure.

Sensitivity Towards Families

- **Cultural Respect**: Ensures customs and traditions are honoured.
- **Counselling**: Emotional support for grieving families.
- **Transparent Updates**: Timely communication about identification status.
- **Dignified Handling**: Treats victim identification as both technical and humanitarian.

Drafting Process

- **NDMA Leadership**: Prepared under guidance of NDMA's Joint Advisor.
- **Expert Committee**: Included specialists in forensics, archaeology, odontology, and pathology.
- **Learning from Past Disasters**: Incorporated lessons from earthquakes, floods, and aviation accidents.
- **Consultative Approach**: Inputs taken from States and central agencies over several years.

Conclusion

The NDMA's DVI guidelines bring **scientific rigour, administrative clarity, and humanitarian ethics** into disaster management. By standardising identification procedures nationwide, they strengthen governance, build public trust, and provide dignity and closure to affected families.

D. SCIENCE AND TECHNOLOGY

I. Developments and their Applications and Effects in Everyday Life.

1. VEHICLE-TO-VEHICLE (V2V) COMMUNICATION

Why in News?

- Recently the Ministry of Road Transport and Highways (MoRTH) is preparing to introduce **Vehicle-to-Vehicle (V2V) communication technology** to strengthen road safety and traffic management.

What is V2V Technology?

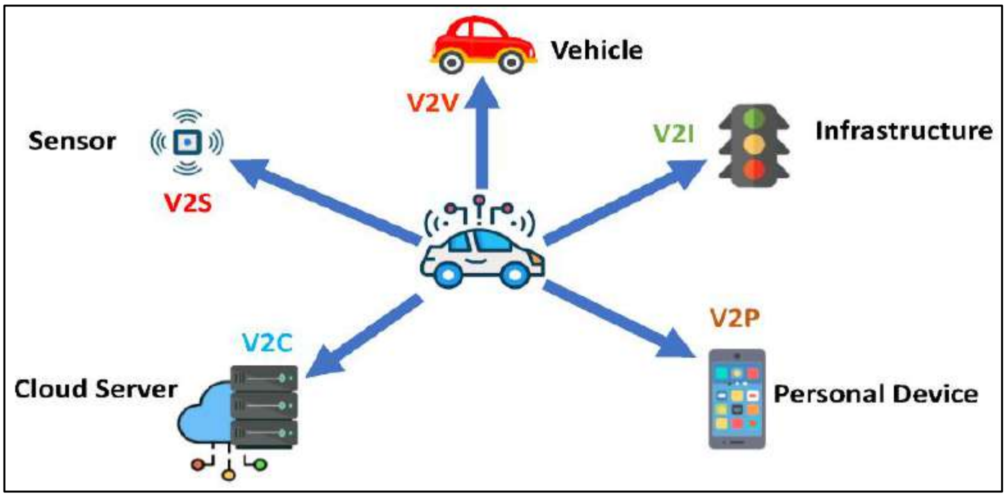
- **Wireless Communication System**: Enables vehicles to share real-time data such as speed, braking, and location. Improves situational awareness and reduces chances of collisions.
- **Integration with V2X Technology**: Forms part of the broader **Vehicle-to-Everything (V2X)** framework within Intelligent Transportation Systems (ITS).
- **Supports communication between vehicles (V2V),** vehicles and infrastructure (V2I), vehicles and pedestrians (V2P), and vehicles and networks (V2N).

Aviation Safety Inspiration

- **Aviation Safety Inspiration**: Concept drawn from aviation practices where aircraft continuously broadcast position and speed.
- **Collision Avoidance in Air Travel**: Ensures all nearby aircraft are aware of each other's movements. Helps prevent mid-air collisions by maintaining constant situational awareness.
- **Application to Road Traffic**: The same principle is applied to vehicles for enhanced safety and efficiency.

Policy Developments in India

- **Spectrum Allocation:** 30 GHz band reserved by DoT.
- **Joint Task Force:** Collaboration between MoRTH and DoT with OEMs.
- **Standardisation:** National standards being drafted for rollout.
- **Road Safety Mission:** V2V identified as a priority initiative.



Working of V2V

- **On-Board Unit (OBU):** Cost ₹5,000–₹7,000, range ~300 metres.

- **Rollout Strategy:**
  - **Phase 1** – Mandatory in new vehicles.
  - **Phase 2** – Retrofitting in older vehicles.
  - Spectrum cost free to reduce compliance burden.

Global Experiences
- **USA:** Pioneer in V2V regulation and pilot projects.
- **Europe:** Germany, France, UK integrating into smart mobility.
- **Japan:** ITS Connect programme for real-time alerts

Challenges
- **Technology Limitations**: Frequency bands used in digital systems may not be compatible with all types of vehicles.
- **Privacy Concerns**: Collection of driver and vehicle data raises risks of surveillance. Misuse of sensitive information could lead to violations of personal privacy.
- **Cybersecurity Risks**: Digital systems are vulnerable to hacking, malware, and system hijacking. A successful cyberattack could disrupt transport networks and compromise safety.
- **Regulatory Gaps**: Lack of clear rules on liability, accountability, and ownership of data.

Way Forward
- **Formulate Comprehensive Standards**: Develop clear V2V communication standards aligned with **global best practices** across different vehicle types and manufacturers.
- **Integrate with Digital Public Infrastructure**: Link V2V systems with India's **Digital Public Infrastructure (DPI)** and align with upcoming **data protection laws** to safeguard user privacy.
- **Conduct Regular Cybersecurity Audits**: Carry out periodic checks to identify vulnerabilities. Strengthen resilience against hacking and system hijacking.
- **Ensure Phased Adoption**: Introduce V2V technology gradually across **commercial and private vehicles**. Allows smooth transition and testing before mass deployment.
- **Build Institutional Capacity**: Run **public awareness campaigns** to educate drivers and stakeholders about benefits and safe usage.

Conclusion

The V2V technology represents a **transformative step in India's road safety governance**. If implemented effectively, it can significantly reduce accidents, align India with global road safety targets, and pave the way for **smart, safe, and sustainable mobility**.

2. INDIA AI APPLICATIONS STACK

Why in News?
- The **Economic Survey 2026** highlighted the proposal for an **India AI Applications Stack**.

Concept of India AI Applications Stack
- It emphasized that AI's success should be measured by its **social impact in health, agriculture, and education**, rather than just computing power.
- AI adoption must align with **human welfare and inclusion**. Focus is on **grassroots applications** that improve everyday life.
- Government can act as an **ecosystem orchestrator**, creating demand and setting standards for responsible AI use.

AI in Healthcare

- **Niramai** – AI-based thermal imaging for early breast cancer detection; portable and affordable for rural areas.
- **Qure.ai** – Rapid analysis of X-rays and CT scans, detecting 35+ conditions; crucial where radiologists are scarce.
- **AISteth** – AI-powered stethoscope converting sounds into visual waveforms; 93% accuracy in detecting cardiac/respiratory issues.

AI in Agriculture

- **Neoperk** – Instant soil health analysis using spectroscopy; optimises fertiliser use and reduces costs.
- **CottonAce (Wadhwani AI)** – Mobile app for pest identification and pesticide advice; helps cotton farmers fight pink bollworm.
- **Niqo Robotics** – Precision spraying robots; cut pesticide use by 60–90%.
- **Cropin** – AI platform for farm monitoring, credit analytics, and climate-smart farming.

AI in Education

- **PadhaiWithAI**: Personalised learning platform; improved math pass rates in government schools within six weeks.
- **Rocket Learning's Appu**: AI companion via WhatsApp; supports early childhood literacy and numeracy.
- **Belagavi Smart City eBooks**: Adaptive AI-enabled eBooks; boosted reading speed by 12% in two weeks.

Government's Role

- Enable **procurement of domestic AI solutions** across departments.
- Establish **benchmarks and standards** for AI use in health, agriculture, and education.
- Build a **national governance framework** harmonised with global standards (e.g., GDPR).

Challenges

- **Data & Infrastructure Gaps**: Limited availability of high-quality datasets and inadequate digital infrastructure in rural areas restrict effective AI deployment.
- **Skilling & Inclusion**: Shortage of trained professionals and lack of awareness among farmers, teachers, and healthcare workers hinder adoption at the grassroots level.
- **Governance & Trust**: Absence of a robust national framework raises concerns about privacy, accountability, and responsible AI use.

Way Forward

- **Strengthen Ecosystem**: Build reliable datasets, expand rural digital infrastructure, and encourage domestic AI innovation.
- **Capacity Building**: Invest in vocational training, multilingual AI tools, and awareness programs to ensure inclusive adoption.
- **Robust Governance**: Establish a national AI regulatory framework aligned with global standards, ensuring transparency, ethics, and public trust.

Conclusion

By scaling innovations in healthcare, farming, and education, and integrating them into an **India AI Applications Stack**, the country can achieve **inclusive growth domestically** and position itself as a **global leader in socially impactful AI solutions**.

II. Medical science/vaccines/diseases

1. INDIA'S POSITION IN BIO-BASED CHEMICALS AND ENZYMES

Why in News?

- India has identified **bio-based chemicals and enzymes** as a priority sector under the **BioE3 policy**, aiming to reduce dependence on petrochemicals and strengthen sustainable manufacturing.

What are Bio-based Chemicals?

- Industrial chemicals made from **biological feedstocks** like sugarcane, corn, starch, or biomass residues.
- Produced through **fermentation or enzymatic processes**.
- Examples: **lactic acid, ethanol, solvents, surfactants, intermediates for plastics, cosmetics, and pharmaceuticals**.

What are Enzymes?

- **Biological catalysts** that speed up chemical reactions.
- Widely used in **detergents, food processing, pharmaceuticals, textiles, pulp & paper, and biomanufacturing**.
- Work at **lower temperatures and pressures**, reducing energy use and emissions.

Why India Needs Them

- Large **agricultural base** provides feedstock.
- Strong expertise in **fermentation** from pharma and vaccine industries.
- Can reduce **import dependence on petrochemicals** (e.g., India imported $479.8 million worth of acetic acid in 2023).
- Creates new markets for farmers and supports **sustainable industrial inputs**.

India's Current Position

- Prioritised under **Department of Biotechnology's BioE3 policy**.
- Leading companies: **Praj Industries, Godrej Industries, Godavari Biorefineries, Jubilant Ingrevia**.
- Emerging innovators: **StringBio** (microbial strategies).
- Enzyme market: consolidated, with **Novozymes India, DuPont, DSM, Advance Enzyme Technologies, BASF SE, Ultreze Enzymes** dominating (75% share).

Global Approaches

- **EU**: Bioeconomy Strategy links bio-based chemicals to climate goals and circular economy.
- **U.S.**: USDA BioPreferred Program mandates federal procurement of bio-based products.
- **China**: Prioritises high-value bio-based chemicals and enzymes in bioeconomy plans.
- **Japan**: Funds integrated research and manufacturing readiness through METI/NARO.

Risks and Challenges

- **Cost disadvantage** compared to petrochemicals in early stages.
- Need for **reliable feedstocks and infrastructure**.
- Market adoption depends on whether bio-based inputs can **seamlessly replace existing ones**.

Way Forward

- Develop **shared biomanufacturing infrastructure** (biofoundries, pilot plants, demo facilities).

- Establish **standards, certification, and procurement policies** to build investor confidence.
- Encourage **public–private partnerships** for scaling production and adoption.

Conclusion

India has strong fundamentals to become a **global hub for bio-based chemicals and enzymes**, combining agricultural strength with industrial innovation. With supportive policies, infrastructure, and market adoption, India can reduce petrochemical dependence and lead in **sustainable biomanufacturing**.

III. Awareness in the fields of IT, Space,

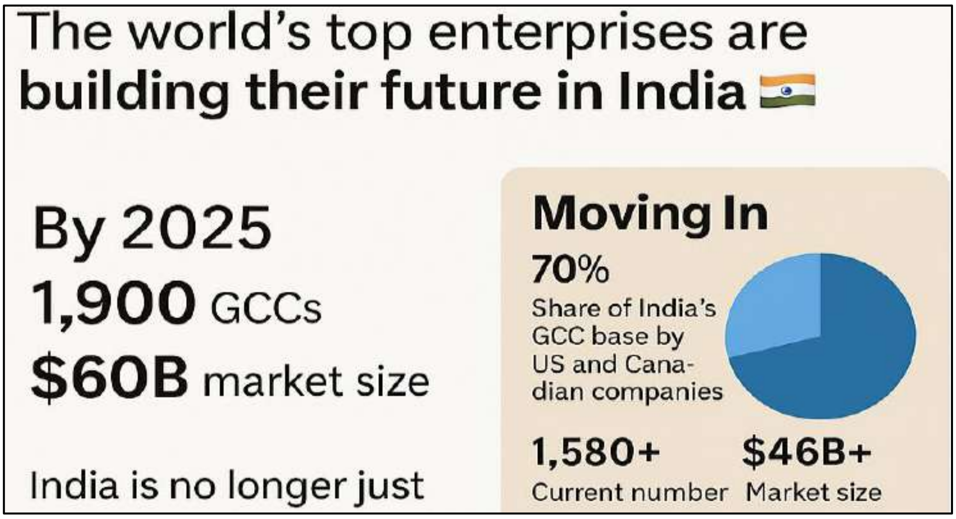
1. GCCs DRIVING INDIA'S TRANSITION TO A GLOBAL INNOVATION HUB

Why in News?

- India is in focus as **Global Capability Centres (GCCs)** are transforming from back-office units into strategic innovation and leadership hubs for multinational corporations by 2026.

Evolution of Global Capability Centres (GCCs)

- **Cost-Efficiency Origins:** GCCs initially operated as cost-saving centres, managing routine IT services and back-end business processes for global firms.
- **Shift to Product Ownership:** Over time, they transitioned into **end-to-end product development and ownership hubs**, handling core business functions.
- **Emergence of GCC 4.0:** The current phase, *GCC 4.0*, emphasises **advanced R&D, global strategy formulation, and intellectual property creation**, positioning India as a knowledge hub.
- **Adoption of Emerging Technologies:** Around **58% of GCCs in India** are investing in **Agentic AI**, signalling a move from pilot experimentation to large-scale enterprise deployment.



Benefits for Companies

- India hosts over **1,800 GCCs**, employing nearly **two million professionals**.
- Provides access to a **large, multi-skilled talent pool** unmatched globally.
- Enables faster innovation cycles through a **follow-the-sun model**.
- GCCs act as **Centres of Excellence (CoEs)** for finance, HR, legal, and technology.
- They manage entire product lifecycles, from design to deployment, often surpassing headquarters in technical depth.

Benefits for India

- Generates **high-value employment** with better pay and intellectual stimulation compared to traditional service jobs.
- Promotes **regional development** in Tier-II and Tier-III cities such as Coimbatore, Indore, and Kochi.
- Reduces pressure on metros like Bengaluru and Hyderabad.
- Boosts local economies through growth in real estate, infrastructure, and retail.

Challenges Ahead

- **Talent gap**: Demand for niche skills in AI security, cloud architecture, and quantum technologies exceeds supply.
- **Cybersecurity risks**: GCCs face rising state-sponsored cyber-attacks, with India handling **13.7% of global incidents**.
- **Fiscal uncertainty**: OECD's Global Minimum Tax (15%) and India's 24% markup for R&D under Safe Harbour rules create unpredictability.
- **Geopolitical risks**: US tariff volatility and reshoring policies may slow GCC expansion.
- **Digital sovereignty concerns** in western nations could restrict data operations in India.

Way Forward

- **Policy Support and Simplification**: Implement a **Single-Window Clearance system** for GCCs.
- **Skill Development and Industry-Academia Collaboration**: Strengthen partnerships between universities and industry to upskill workforce in **deep tech areas**.
- **Balanced Regional Growth and Security Framework**: Offer **capital subsidies** to encourage GCC expansion in Tier-II and Tier-III cities. Enhance **cybersecurity infrastructure** to protect intellectual property and sensitive data.

Conclusion

With proactive policymaking, skill development, and strong cybersecurity, India can sustain its position as a global innovation hub and ensure that GCCs remain engines of growth for both corporations and the nation.