ANURAG BACHAN'S IAS

MARCH 2026

Comprehensive Coverage of

CURRENT AFFAIRS

ENTIRE CONTENT OF **FEBRUARY 2026**

- Indian Economy
- Polity and Governance
- Environment & Ecology
- Biodiversity
- History, Art & Culture
- International Relations
- Security
- Science and Technology
- Society
- Places in News

Useful for **IAS / PCS / HCS / HAS & other Exams.**

www.dronacharyaias.in

INDEX

INDIAN ECONOMY

Government Notifies Coking Coal as Critical & Strategic Mineral

*Government of India has notified **coking coal** as a **Critical and Strategic Mineral** under the **Mines and Minerals (Development and Regulation) Act, 1957 (MMDR Act)**.*

Legal Change

- First Schedule of MMDR Act amended:
  - "Coal" now includes **coking coal**.
  - **Coking coal added to Part D** (Critical & Strategic Minerals).

Important Data

- Estimated coking coal resources in India: **37.37 billion tonnes**.
- Major locations:
  - Jharkhand (largest share)
  - Madhya Pradesh
  - West Bengal
  - Chhattisgarh

Import Dependence

- Imports increased from:
  - 51.20 million tonnes (2020–21)
  - 57.58 million tonnes (2024–25)
- Around **95% of steel sector requirement met through imports**.

Governance & Fiscal Provision

- Even if Central Government conducts auctions:
  - **Royalty and statutory payments go to State Governments**.

Why Critical Mineral Status Matters

- Faster approvals for mining
- Encourages exploration of deep deposits
- Promotes private sector participation
- Mining of critical minerals:
  - Exempt from public consultation requirement
  - Allows use of degraded forest land for compensatory afforestation

Conceptual Clarity

What is Coking Coal?

- Special type of coal used to produce **coke**.
- Essential for **steel manufacturing (blast furnace process)**.

What are Critical Minerals?

- Minerals essential for economic security and strategic sectors
- High supply risk or import dependence

Significance

1. Mineral Security

- Reduces vulnerability to global supply disruptions.
- Ensures long-term raw material availability for steel.

2. Industrial Growth

- Supports **National Steel Policy** targets.
- Strengthens domestic manufacturing ecosystem.

3. Import Substitution

- Reduces foreign exchange outgo.
- Improves trade balance.

4. Investment & Technology

- Encourages:
  - Exploration
  - Beneficiation
  - Advanced mining technology
  - Private sector participation

5. Employment Generation

- Mining, logistics, and steel value chain expansion.

Economic & Policy Impact

- Improves ease of doing business in mining sector.
- Accelerates deep-seated resource extraction.
- Enhances supply-chain resilience for steel industry.

Federal Dimension

- States retain revenue from mining leases — cooperative federalism element.

****

RBI signs MoU with European Securities and Markets Authority (ESMA)

*The **Reserve Bank of India (RBI)** signed a **Memorandum of Understanding (MoU)** with the **European Securities and Markets Authority (ESMA)**.*

Purpose of the MoU

- To enable **formal recognition** of the **Clearing Corporation of India Ltd. (CCIL)** and other RBI-regulated **Central Counterparties (CCPs)** by ESMA.

What are Central Counterparties (CCPs)?

- Financial institutions that act as intermediaries between buyers and sellers in financial markets.
- They reduce counterparty risk and ensure settlement of transactions.

Nature of the Agreement

- Provides for:
  - Regulatory cooperation
  - Supervisory coordination
  - Exchange of information on CCPs
  - Monitoring compliance with recognition conditions
- ESMA will rely on RBI's regulatory framework for supervision of covered CCPs.

Legal Status of MoU

- Not legally binding.

- Does not override domestic laws.
- Effective from date of signing and valid for an unlimited period.
- Signed with Union Cabinet approval during visit of EU leadership to India.

Conceptual Clarity

What is ESMA?

- EU's securities market regulator.
- Ensures stability, transparency and investor protection in EU financial markets.

What is CCIL?

- India's clearing and settlement institution for government securities, forex, etc.

Background

- Increasing global integration of financial markets.
- Need for cross-border regulatory cooperation.
- CCPs play a key role in financial stability.

Significance

1. Financial Market Integration

- Enables Indian CCPs to be recognised in EU jurisdiction.
- Facilitates cross-border financial transactions.

2. Strengthening Financial Stability

- Cooperation in monitoring systemic risk.
- Enhances resilience of clearing infrastructure.

3. Regulatory Coordination

- Mutual reliance on supervisory frameworks.
- Improves transparency and compliance.

4. Ease of Doing Financial Business

- Greater access for Indian financial institutions in European markets.

5. India–EU Economic Relations

- Strengthens institutional financial cooperation.

Economic & Strategic Impact

- Enhances credibility of India's regulatory framework.
- Supports internationalisation of Indian financial markets.
- Improves risk management in global derivatives and securities trading.

Possible Challenges

- Harmonisation of regulatory standards.
- Data sharing and supervisory coordination complexities.
- Dependence on evolving EU financial regulations.

Way Forward

- Strengthen domestic financial market infrastructure.
- Align with global regulatory standards (Basel norms, IOSCO).
- Expand cooperation with other financial regulators globally.

****

Electronics Components Manufacturing Scheme (ECMS) – Outlay Increased

***Union Budget 2026–27 increased the outlay** of the **Electronics Components Manufacturing Scheme (ECMS)** to **₹40,000 crore**.*

About ECMS

- Notified: **8 April 2025**.
- Original outlay: **₹22,919 crore**.
- Tenure: **6 years** + optional 1-year gestation period.

Objective

- Build a strong domestic ecosystem for electronics components manufacturing.
- Increase domestic value addition.
- Integrate India into global electronics value chains.

Coverage

- Production of:
    - Electronic components
    - Sub-assemblies
    - Raw materials for electronics manufacturing

Complementary initiative

- Works alongside **India Semiconductor Mission (ISM)**.

Investment & Employment Projections

- Expected investment commitments: **₹1.15 lakh crore**.
- Expected production (6 years): **₹10.34 lakh crore**.
- Expected direct jobs: **1.41 lakh+**.

Approved Projects (as of Dec 2025)

- 46 applications approved in **11 states**.
- Investment: ₹54,567 crore.
- Projected production: ₹3.67 lakh crore.
- Direct jobs: ~51,000.

Components to be produced include:

- Multi-layer PCBs
- Camera modules
- Connectors
- Optical transceivers
- Enclosures for mobile and IT hardware

FY 2026–27 Expected Outcomes

- Investment: ₹11,156 crore
- Production: ₹29,024 crore
- Employment: 19,240 jobs

Electronics Sector – Key Data

- Electronics production grew from ₹1.9 lakh crore (2014–15) to ₹11.3 lakh crore (2024–25).
- Electronics exports increased eight-fold.

- India is the **world's second largest mobile phone manufacturer**.

Related Government Initiatives

1. **Production Linked Incentive (PLI) Scheme**
   - ₹1.97 lakh crore outlay across 14 sectors.
2. **Modified Electronics Manufacturing Clusters (EMC 2.0)**
   - Infrastructure for electronics manufacturing clusters.
3. **Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS)**
   - 25% capital expenditure incentive.
4. **National Policy on Electronics (2019)**
   - Aim: global hub for Electronics System Design and Manufacturing.

****

India–US Trade Deal

Nature of the Agreement

- India and the United States agreed on a **framework for an Interim Trade Agreement**.
- Part of broader negotiations toward a **Bilateral Trade Agreement (BTA)**.

Core Objective

- Promote **reciprocal and mutually beneficial trade**.
- Improve market access.
- Strengthen supply chains and technology cooperation.

Key Trade Provisions

1. Tariff Reduction & Market Access

India's Commitments

- Reduce or eliminate tariffs on:
  - U.S. industrial goods
  - Several agricultural products (e.g., DDGs, soybean oil, fruits, nuts, wine, spirits).

U.S. Commitments

- Lower reciprocal tariff barriers on Indian exports.
- Remove tariffs on:
  - Generic pharmaceuticals
  - Gems and diamonds
  - Aircraft parts
  - Certain industrial goods.
- Remove tariffs imposed earlier on aircraft and aircraft parts under national security provisions.

2. Preferential Access for Indian Sectors

- Preferential tariff quota for **automotive parts**.
- Enhanced access for:
  - Textiles
  - Manufacturing goods
  - Agricultural products.

3. Rules of Origin

- Agreement to establish **rules of origin** ensuring benefits accrue mainly to India and the US.

4. Trade Expansion Commitments

- India intends to purchase **$500 billion worth of US goods over 5 years**, including:
  - Energy products
  - Aircraft and parts
  - Technology goods
  - Precious metals
  - Coking coal.

5. Technology & Digital Cooperation

- Expand trade in advanced technology (e.g., data-centre equipment).
- Strengthen digital trade rules.
- Increase joint technology cooperation.

6. Supply Chain and Economic Security

- Cooperation to build resilient supply chains.
- Alignment on investment review and export controls.

Agriculture-Specific Provisions

- US to provide **zero-duty access** on Indian agricultural exports worth about **$1.36 billion**.

Beneficiary products include:

- Spices
- Tea and coffee
- Coconut and copra
- Nuts (cashew, areca, etc.)
- Fruits and vegetables
- Cereals
- Processed foods.
- Zero tariff assurance for significant export value reduces uncertainty for farmers.

Agricultural Trade Position

- India has a **trade surplus in agriculture** with the US:
  - Exports: $3.4 billion
  - Imports: $2.1 billion.

Safeguards

- Sensitive sectors protected.
- US farm products do not receive automatic tariff concessions in India.

Sectoral Impact

Textiles

- Access to large US import market (~$118 billion).
- Helps India move toward $100 billion textile export target by 2030.

Manufacturing

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

- Reduced tariffs improve competitiveness of Indian machinery and component exports.

Significance of the Trade Deal

1. Economic Growth and Export Expansion

- Expands access to the world's largest consumer market.
- Boosts value-added exports (manufacturing, agriculture, textiles).

2. Strengthening Strategic Partnership

- Moves beyond trade into:
  - Technology cooperation
  - Supply-chain security
  - Economic alignment.

3. Boost to Agriculture and Farmers' Income

- Zero-tariff export opportunities.
- Greater predictability in export markets.

4. Manufacturing Competitiveness

- Tariff reductions and market access.
- Supports "Make in India".

5. Investment and Technology Transfer

- Enhances technology trade and innovation cooperation.
- Encourages cross-border investment.

6. Supply-Chain Resilience

- Reduces dependence on third countries.
- Enhances trusted global supply networks.

Strategic & Geopolitical Significance

- Signals deeper India-US economic alignment.
- Part of global economic rebalancing.
- Strengthens India's position in global trade architecture.

****

RBI Holds Interest Rates Steady – Reasons Behind the Decision

Key Monetary Policy Decision

- The **Reserve Bank of India (RBI)** kept the **policy repo rate unchanged**.
- Monetary Policy Committee (MPC) retained a **neutral policy stance**.

Current Policy Context

- Repo rate already reduced significantly earlier:
  - **Cumulative cuts of about 125 basis points since Feb 2025**.
- RBI wants to assess impact of previous easing before further action.

Growth Outlook

- GDP growth projection for FY26 around **7.4%**, reflecting strong economic momentum.

- Domestic demand remains resilient despite global uncertainties.

Inflation Outlook

- Inflation remains **benign and near target** (around 4%).
- Slight upward revision due to precious metals price rise.

Lending and Deposit Rates

- Repo-linked lending rates remain stable.
- However, **MCLR-based rates may still change** depending on liquidity and funding costs.

Core Reasons RBI Held Rates Steady

1. Strong Economic Growth

- Economy showing robust momentum.
- Domestic demand and activity remain resilient.

Implication: No urgent need for further monetary stimulus.

2. Inflation Under Control

- CPI inflation within target range.
- Underlying inflation pressures remain moderate.

Implication: No immediate need to tighten policy.

3. Impact of Earlier Rate Cuts Still Unfolding

- Transmission of past policy easing takes time.
- RBI wants to observe full effect on credit, investment and demand.

4. Uncertain Global Environment

- External risks persist:
  - Global economic slowdown
  - Financial volatility
- Requires cautious policy approach.

5. Liquidity Management Priority

- RBI focusing on financial stability and liquidity conditions rather than aggressive rate action.

What Does a Neutral Policy Stance Mean?

- RBI is not committed to rate hike or cut.
- Future decisions depend on:
  - Inflation trends
  - Growth outlook
  - Global conditions

It reflects a **data-dependent approach**.

Implications of the Decision

Positive Effects

1. Stability in borrowing costs.
2. Predictability for businesses and investors.
3. Supports sustainable growth.

Possible Limitations

1. Growth stimulus remains limited if demand weakens.
2. Monetary policy space preserved but unused.
3. Credit expansion depends on banking system transmission.

Broader Policy Significance

- Shows shift from aggressive easing to **calibrated stabilisation**.
- Emphasises macroeconomic stability over short-term stimulus.
- Reflects maturity of inflation-targeting regime.

****

Revised Startup Recognition Framework (Startup India)

- Government of India has **revised the startup recognition framework** to strengthen the Startup India Action Plan.
- Objective:
  - Promote innovation and emerging technologies.
  - Create a more inclusive and predictable policy environment.

Major Changes in Startup Recognition Criteria

1. Increased Turnover Threshold

- Maximum turnover for startup recognition increased:
  - **From ₹100 crore → ₹200 crore**.

Purpose:

- Support startups at different stages of growth.
- Reflect expansion of India's startup ecosystem.

2. Dedicated Category for Deep Tech Startups

- New sub-category: **Deep Tech Startup**.

Characteristics:

- Based on breakthrough and cutting-edge technologies.
- High R&D intensity.
- Long gestation periods.

Relaxed Eligibility for Deep Tech Startups

- Age limit increased:
  - **10 years → 20 years** from incorporation.
- Turnover threshold increased:
  - Up to **₹300 crore**.

Purpose:

- Recognise capital-intensive and long development cycles.

3. Inclusion of Cooperative Societies

Eligible entities now include:

- Multi-State Cooperative Societies (MSCS Act, 2002).
- State/UT-registered cooperative societies.

Purpose:

- Promote innovation at grassroots level:
  - Agriculture
  - Rural industries
  - Community-based enterprises.

Expected Outcomes of Revised Framework

- Expand access to startup benefits.
- Provide targeted support for deep tech ventures.
- Encourage innovation in rural and cooperative sectors.
- Strengthen India's position as a global technology hub.

What is a Startup (Policy Context)?

An entity recognised by the government based on:

- Age of incorporation
- Turnover limits
- Innovation and scalability potential

Recognition provides access to:

- Tax benefits
- Funding support
- Regulatory relaxations

What is Deep Tech?

Technology based on fundamental scientific advances, such as:

- AI
- Semiconductor technology
- Biotechnology
- Advanced materials
- Space tech

Significance of the Revised Framework

1. Promotes Innovation-Led Growth

- Supports research-driven enterprises.
- Encourages high-technology sectors.

2. Boost to Deep Tech Ecosystem

- Aligns policy with long R&D timelines.
- Encourages investment in frontier technologies.

3. Inclusive Entrepreneurship

- Cooperative sector inclusion promotes grassroots innovation.
- Links startups with rural development.

4. Improved Access to Capital

- Recognition helps attract "patient capital".
- Supports high-risk, long-gestation sectors.

5. Strengthening India's Global Innovation Position

- Moves toward becoming:
  - Technology hub
  - Manufacturing-led economy
  - Knowledge-intensive ecosystem.

Economic & Structural Impact

- Encourages high-value technology creation.
- Enhances startup survival and scale-up.
- Integrates innovation with agriculture and rural sectors.
- Supports employment and productivity growth.

****

Sampoornata Abhiyan 2.0 Launched by NITI Aayog

- A **3-month campaign** running from **28 January to 14 April 2026**.
- Aim: Achieve **saturation of selected Key Performance Indicators (KPIs)** in aspirational regions.

Coverage

- **112 Aspirational Districts**
- **513 Aspirational Blocks**

Objective

- Ensure rapid improvement in critical development indicators.
- Build on earlier campaign conducted in 2024.

Key Performance Indicators (KPIs)

KPIs for Aspirational Blocks (6 Indicators)

1. Children (6 months–6 years) receiving supplementary nutrition under ICDS.
2. Measurement efficiency of children at Anganwadi centres.
3. Operational Anganwadi centres with functional toilets.
4. Operational Anganwadi centres with drinking water.
5. Schools with adequate girls' toilets.
6. Vaccination of bovine animals (FMD).

KPIs for Aspirational Districts (5 Indicators)

1. Proportion of live babies weighed at birth.
2. TB case notification rate vs estimated cases.
3. Conduct of Village/Urban Health Sanitation & Nutrition Days.
4. Schools with functional girls' toilets.
5. Animal vaccination coverage.

Implementation Strategy

- Districts and blocks to prepare **3-month action plans**.
- Monthly tracking of progress.

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

- Awareness and behavioural change campaigns.
- Monitoring through field visits.

Institutional Coordination

- Collaboration between:
  - Central ministries
  - State governments
  - UT administrations
- Focus on planning, capacity building and service delivery improvement.

Background Programmes

Aspirational Districts Programme (ADP)

- Launched: **2018**.
- Coverage: **112 districts**.
- Goal: Rapid development of underserved areas.
- Focus areas:
  - Health & nutrition
  - Education
  - Agriculture & water resources
  - Financial inclusion & skill development
  - Infrastructure
- Progress measured on **49 indicators**.

Aspirational Blocks Programme (ABP)

- Launched: **2023**.
- Coverage: **513 blocks (329 districts)**.
- Goal: Saturation of essential government services.
- Focus areas:
  - Health & nutrition
  - Education
  - Agriculture & allied services
  - Basic infrastructure
  - Social development
- Progress measured on **40 indicators**.

Significance of Sampoornata Abhiyan 2.0

1. Outcome-Based Governance

- Emphasis on measurable indicators rather than input spending.

2. Last-Mile Service Delivery

- Focus on saturation — ensuring universal coverage of key services.

3. Human Development Improvement

- Nutrition, health, sanitation, education and livestock health.

4. Cooperative Federalism

- Strong Centre-State coordination.

5. Evidence-Based Policy Implementation

- Data-driven monitoring and tracking.

****

NITI Aayog Reports on Circular Economy

Key Development

- NITI Aayog launched **three reports on enhancing the circular economy** in India.
- Focus sectors:
    1. End-of-Life Vehicles (ELVs)
    2. Waste Tyres
    3. E-waste and Lithium-ion Batteries
- Launched at:
    - Material Recycling Association of India (MRAI)
    - International Material Recycling Conference (IMRC), Jaipur

Purpose of the Reports

- Analyse challenges in circular economy ecosystem.
- Recommend:
    - Infrastructure development
    - Sector formalisation
    - Strengthening Extended Producer Responsibility (EPR)
    - Enhancing economic potential and resource efficiency

Why These Sectors Matter

Rapid growth in waste generation due to energy transition and industrialisation:

- EV sales:
    - 50,000 (2016) → 2.08 million (2024)
- Lithium-ion battery demand:
    - 29 GWh (2025) → 248 GWh (2035)
- End-of-Life Vehicles:
    - 23 million (2025) → 50 million (2030)
- E-waste:
    - 6.19 million metric tonnes (2024) → 14 MMT (2030)

Conceptual Clarity

What is Circular Economy?

- Economic model based on:
    - Reduce
    - Reuse
    - Recycle
    - Resource efficiency
- Minimises waste and maximises material recovery.

What is End-of-Life Vehicle (ELV)?

- Vehicle that is no longer usable and must be dismantled or recycled.

Extended Producer Responsibility (EPR)

- Producers responsible for environmental management of products after use.

Strategic Significance

1. Environmental Sustainability

- Reduces pollution and landfill burden.
- Supports low-carbon development.

2. Resource Security

- Recycling critical materials (lithium, rare metals).
- Reduces import dependence.

3. Economic Opportunity

- Waste recycling industries generate revenue and employment.

4. Supports Clean Energy Transition

- Sustainable battery and EV lifecycle management.

5. Alignment with National Vision

- Supports **Viksit Bharat 2047** goal of sustainable growth.

Key Challenges Identified

- Fragmented recycling ecosystem.
- Informal sector dominance.
- Limited recycling infrastructure.
- Weak EPR implementation.
- Low material recovery efficiency.

Major Policy Recommendations

Institutional & Regulatory

- Strengthen EPR framework.
- Formalise recycling sector.

Infrastructure

- Expand collection and recycling facilities.

Economic Measures

- Improve revenue models from recycling.

Governance

- Stakeholder coordination across ministries and industry.

****

RBI Proposal to Compensate Customers for Digital Fraud

The Reserve Bank of India (RBI) has **proposed a framework to compensate customers** for losses due to **small-value digital financial frauds**.

Compensation Amount

- Up to **₹25,000** OR
- Up to **85% of the amount lost**, whichever is lower.

Nature of Compensation

- **One-time relief** for eligible customers.
- Intended for **unintended fraudulent transactions**, including cases where customers may have been deceived.

Why This Measure?

- Rising incidence of digital payment fraud.
- Majority of fraud cases involve relatively small amounts:
  - Around **65% of reported frauds involve losses below ₹50,000**.

Funding Source (Proposed)

- May be financed through the **Depositor Education and Awareness Fund (DEAF)**.

Status of Policy

- Framework proposed — detailed rules to follow after consultation.

****

National Pulses Mission / Pulses Revolution Initiative

- Government launched a **nationwide initiative to achieve self-reliance in pulses production**.
- Announced by the Union Minister of Agriculture & Farmers Welfare.
- Initiative launched in **Sehore district, Madhya Pradesh** during a national consultation on pulses.

Core Objective

- Achieve **self-sufficiency in pulses** and move toward becoming an **exporting nation**.

Policy Orientation

- Pulses production strategy to be **field-driven and farmer-centric**, rather than centrally designed.

Major Policy Announcements

1. A detailed **action plan for pulses self-reliance** finalised at the Food Legumes Research Centre in Sehore.
2. Assurance that **farmers' interests will be protected**, including in international trade agreements.

Why Pulses Matter

- Major source of protein in Indian diet.
- Important for:
  - Nutritional security
  - Soil fertility (nitrogen fixation)
  - Crop diversification

India's Pulses Situation

- India is one of the largest producers and consumers of pulses.
- However, periodic imports are required to meet demand.

Mains Focus

Background

India has historically faced supply gaps in pulses due to:

- Yield variability
- Climatic dependence
- Limited productivity
- Rising consumption

Achieving self-sufficiency is important for:

- Food security
- Farmer income
- Price stability

Significance of the Initiative

1. Food and Nutritional Security

- Pulses are primary protein source for large population.
- Reduced import dependence ensures stable availability.

2. Farmer Welfare

- Higher domestic production increases farm incomes.
- Market stability and price assurance.

3. Trade Balance Improvement

- Reduced import bill.
- Potential to become exporter.

4. Agricultural Sustainability

- Pulses improve soil health through nitrogen fixation.
- Supports sustainable cropping systems.

5. Policy Shift Toward Decentralised Planning

- Emphasis on ground-level implementation.
- Participatory agricultural governance.

Strategic Importance

- Supports food sovereignty.
- Enhances resilience against global commodity price shocks.
- Strengthens agricultural diversification.

RBI Directs Banks Not to Insist on Collateral for Loans up to ₹20 Lakh for MSEs

Source: The Hindu (Business/Economy)

Theme: MSME credit policy, financial inclusion

Prelims Focus

Key Regulatory Change

- The Reserve Bank of India (RBI) has **directed banks not to insist on collateral security** for loans up to **₹20 lakh** extended to **Micro and Small Enterprises (MSEs)**.

Earlier Limit

- Earlier collateral-free loan ceiling: **₹10 lakh**.
- Now increased to **₹20 lakh**.

Effective Date

- Applies to loans **sanctioned or renewed from 1 April 2026**.

Additional Provisions

1. **Higher limit possible**
   - Banks may extend collateral-free loans up to **₹25 lakh** for creditworthy MSEs, based on internal policies.
2. **PMEGP coverage**
   - Mandatory collateral-free loans up to ₹20 lakh for units financed under the **Prime Minister Employment Generation Programme (PMEGP)**.
3. **Credit guarantee support**
   - Banks may use credit guarantee schemes to manage risk.
4. **Voluntary pledge allowed**
   - If borrower voluntarily pledges gold/silver, it is not treated as violation of collateral-free rule.

Conceptual Clarity

What is Collateral?

Asset pledged by borrower (land, property, etc.) as security for loan repayment.

What is an MSE?

Micro and Small Enterprises — part of MSME sector — typically small-scale production or service units with limited capital and assets.

Objectives of the Policy

1. Improve Credit Access

- Remove asset-based lending barrier.
- Enable first-generation entrepreneurs to obtain finance.

2. Strengthen MSME Sector

- Support small businesses and employment generation.
- Improve last-mile credit delivery.

3. Promote Formalisation

- Encourage enterprises to shift from informal borrowing to bank finance.

4. Support Government Schemes

- Aligns with PMEGP and other entrepreneurship promotion programmes.

Economic Significance

- Expands financial inclusion.
- Boosts investment and entrepreneurship.
- Enhances productivity of small enterprises.
- Supports manufacturing and services growth.

Policy Approach: Shift in Lending Model

Traditional model → collateral-based lending

New emphasis → **cash-flow-based and viability-based lending**

Encourages better credit assessment practices.

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

Potential Challenges (Analytical)

1. Higher credit risk for banks.
2. Need for strong credit appraisal mechanisms.
3. Monitoring loan utilisation.
4. Risk of non-performing assets if screening weak.

****

India in Network Readiness Index (NRI) 2025

- India improved its ranking in the **Network Readiness Index (NRI) 2025**.
- Rank improved by **4 positions → now 45th globally**.

Score Improvement- India's score increased: **53.63 (2024) → 54.43 (2025)**.

About the Network Readiness Index

- Prepared by the **Portulans Institute** (Washington DC).
- Assesses digital and network readiness of **127 economies**.

Assessment Framework

Based on **4 pillars**:

1. Technology
2. People
3. Governance
4. Impact

Total indicators: **53**.

India's Performance — Key Global Rankings

India ranked 1st in:

- Annual investment in telecommunication services
- AI scientific publications
- ICT services exports
- E-commerce legislation

Income Group Ranking

- India ranked **2nd among lower-middle-income countries**.

Analytical Observation

- India shows **higher network readiness than expected for its income level**.

What is Network Readiness?

- Capacity of an economy to:
    - Use digital technologies
    - Enable connectivity
    - Support digital governance
    - Generate economic and social impact

Significance of India's Improved Ranking

1. Strengthening Digital Economy

- Reflects growth in telecom investment and digital infrastructure.

2. Leadership in ICT and AI

- High ranking in AI research and ICT exports signals technological capability.

3. Policy and Regulatory Strength

- Strong performance in e-commerce legislation reflects governance readiness.

4. Global Competitiveness

- Improved ranking enhances India's digital competitiveness.

5. Digital Inclusion and Infrastructure Expansion

- High broadband and connectivity indicators reflect expansion of digital access.

Economic and Strategic Importance

- Supports Digital India vision.
- Encourages technology investment.
- Enhances global service exports.
- Strengthens knowledge economy.

****

PM RAHAT Scheme — Cashless Treatment of Road Accident

*Government launched **PM RAHAT (Road Accident Victim Hospitalization and Assured Treatment)** scheme.*
*Objective: Ensure **no accident victim is denied immediate treatment due to lack of funds**.*

Core Benefit:

Cashless Treatment

- Eligible road accident victims entitled to **cashless treatment up to ₹1.5 lakh per victim**.
- Coverage period: **7 days from date of accident**.

Stabilisation Treatment

- Non-life-threatening cases → up to **24 hours**.
- Life-threatening cases → up to **48 hours**.

Emergency Response Integration

- Integrated with **Emergency Response Support System (ERSS) 112 helpline**.
- Anyone at accident site (including Good Samaritans / Rah-Veer) can call 112.
- Enables:
    - Ambulance support
    - Identification of nearest designated hospital
    - Coordination between police, responders and hospitals.

Digital Implementation Mechanism

Scheme implemented through integration of:

1. **Electronic Detailed Accident Report (eDAR)** — Ministry of Road Transport & Highways
2. **Transaction Management System (TMS 2.0)** — National Health Authority

This creates seamless digital linkage from:

- Accident reporting
- Hospital admission
- Police authentication
- Treatment
- Claim processing
- Payment settlement

Verification Mechanism

- Police confirmation required:
  - Within **24 hours** (non-life-threatening)
  - Within **48 hours** (life-threatening)

Ensures accountability while allowing immediate treatment.

Funding & Reimbursement

Payments made through **Motor Vehicle Accident Fund (MVAF)**.

Funding sources:

- Insured vehicle → General insurance company contributions
- Uninsured / hit-and-run cases → Government budgetary support

Claims approved by State Health Agency to be paid within **10 days**.

Grievance Redressal

- District-level grievance officer.
- Nominated by District Road Safety Committee (headed by District Collector / DM).

Rationale Behind the Scheme

- Large number of road accident fatalities in India.
- Nearly **50% of deaths preventable** if victims reach hospital within the "Golden Hour".

Conceptual Clarity

Golden Hour

- First hour after trauma — critical for survival with timely medical care.

Good Samaritan / Rah-Veer

- Bystander who helps accident victim without legal liability.

Significance of PM RAHAT

1. Life-Saving Intervention

- Ensures immediate treatment during Golden Hour.

2. Financial Protection for Victims

- Removes upfront payment barrier.

3. Strengthened Emergency Response System

- Integrated ambulance, police and hospital network.

4. Digital Governance in Health Emergencies

- Technology-driven claim processing and monitoring.

5. Support for Hospitals

- Guaranteed reimbursement encourages treatment without delay.

Institutional Significance

- Links transport, health, insurance and policing systems.
- Strengthens road safety governance architecture.

Social Impact

- Reduces mortality from road accidents.
- Encourages bystander assistance.
- Enhances trust in emergency care systems.

****

Loan Target of the Agriculture Infrastructure Fund (AIF) Doubled

*In February 2026, the **Government of India** announced the **doubling of the loan target of the Agriculture Infrastructure Fund (AIF)** from **₹1 lakh crore to ₹2 lakh crore**.*

Background: Agriculture Infrastructure and Post-Harvest Challenges

India's agricultural sector has traditionally experienced constraints not only in production but also in **post-harvest management**, including storage, processing, and cold chains. Significant agriculture production is lost due to inadequate infrastructure, leading to:

- **Post-harvest losses**
- Limited value addition
- Weak price realisation for farmers

To address this, the Agriculture Infrastructure Fund was launched under the Department of Agriculture, Cooperation & Farmers Welfare as a **medium-long-term debt financing facility (2020-21 to 2029-30)** providing affordable credit for agri-infrastructure development.

About the Agriculture Infrastructure Fund (AIF)

Purpose and Nature

The AIF is a **Central Sector Scheme** designed to:

- Provide **debt financing support** for investment in infrastructure related to agriculture and allied activities.
- Strengthen the **farm-to-market value chain**, addressing bottlenecks in storage, processing, and logistics.

Original Target

- From its inception, the Fund had a **loan target of ₹1 lakh crore**.

New Target

- The loan target has now been **doubled to ₹2 lakh crore** (2026).

Key Features of the Fund (Post-Doubling)

Interest Subvention

- **3% per annum interest subvention** for loans up to ₹2 crore, provided over a specified subvention period.

Credit Guarantee

- Loans up to ₹2 crore are covered under a **credit guarantee mechanism**, which reduces lenders' risk and encourages bank participation.

Eligible Beneficiaries

Farmers and a wide range of agriculture stakeholders including:

- Primary Agricultural Credit Societies (PACS)
- Farmers Producer Organisations (FPOs)
- Self-Help Groups (SHGs)
- Joint Liability Groups (JLGs)
- Agrienterprises
- Government/State agencies associated with agri-infrastructure initiatives

Scope of Projects

AIF support covers a variety of **agri-infrastructure and post-harvest management projects**, such as:

- Warehouses and storage facilities
- Cold chains and cold storage
- Ripening chambers
- Processing units
- Assaying and grading units
- Packaging and logistics infrastructure
- E-marketing platforms and digital interfaces

Administrative and Institutional Management

Nodal Ministry

The scheme is **centrally administered by the Department of Agriculture & Farmers Welfare (DA&FW)**. It is responsible for:

- Overall policy design and implementation
- Operational guidelines
- Monitoring and evaluation
- Digital AIF portal management
- Interest subvention and credit guarantee support

Financing and Lending Institutions

While the ministry administers the scheme, **actual loans are provided by financial institutions**, such as:

- Commercial banks
- Cooperative banks
- Regional Rural Banks (RRBs)
- NABARD and other financial institutions

These institutions appraise and sanction project loans under AIF guidelines.

Monitoring and Implementation Mechanism

The scheme operates through an **online AIF management portal**, which tracks:

- Loan applications
- Project progress
- Disbursements
- Interest subvention claims

This ensures transparency and centralised monitoring.

Policy Rationale

Strengthen Agricultural Value Chains

Doubling the AIF target is aimed at moving beyond farm production to **value addition, market linkage and price realisation**, addressing structural inefficiencies in the Indian agricultural market.

Increase Farmer Income

Investing in infrastructure reduces post-harvest losses and improves access to markets, which can **enhance farmers' income** — a key objective of recent agricultural reforms.

Boost Private Investment

By leveraging credit subvention and guarantees, the Fund encourages **private sector participation** and institutional investment in agriculture infrastructure.

Promote Inclusivity

By covering a wide range of beneficiaries including SHGs, FPOs and cooperatives, the scheme promotes **inclusive growth and community asset building**.

****

New CPI Series

- CPI is a statistical measure of the average change in prices of a fixed basket of goods and services over time.
- The basket includes items like food, fuel, housing, clothing, transport, healthcare, etc.
- It is used to measure inflation at the consumer level.
- It measures changes in prices of goods and services consumed by households—food, housing, transport, education, etc.

How it shows inflation trend

- Rising CPI → Inflation: Prices of the consumer basket are increasing.
- Falling CPI growth rate → Disinflation: Prices are still rising but more slowly.
- Negative CPI growth → Deflation: Overall prices are declining.

Who releases CPI data in India?

- In India, CPI data is released by the National Statistical Office (NSO), which functions under the Ministry of Statistics and Programme Implementation (MoSPI).
- NSO publishes CPI every month.
- It compiles separate indices such as CPI (Rural), CPI (Urban), CPI (Combined) — the headline inflation measure used for policy.
- The January 2026 retail inflation stood at 2.75% that means prices of goods and services in January 2026 are 2.75% higher than in January 2025, not January 2024.

Recent changes in CPI:-

- CPI base year shifted from 2012 → 2024 to reflect current consumption patterns.
- Revision of Item Basket and Coverage
- At the all-India level, the number of weighted items has increased from 299 to 358 in CPI 2024. Within this:
- Goods items are increased from 259 to 308

- Services items are increased from 40 to 50
- First-time inclusion of rural house rent for improving coverage of rural housing consumption
- Strengthened representation of modern consumption items such as online media services and fuels (CNG/PNG)

****

India and France Amend Double Taxation Avoidance Convention (DTAC)

*India and France signed a **Protocol to amend their Double Taxation Avoidance Convention (DTAC)** during the official visit of French President Emmanuel Macron to India in **February 2026**.*
*The amendment updates the **1992 India–France tax treaty**, modernises cross-border taxation rules, and is intended to strengthen bilateral investment and economic cooperation.*
*The treaty revision also forms part of the broader deepening of India–France relations under the upgraded **Special Global Strategic Partnership**.*

Background: India–France DTAC

India and France signed a **Double Taxation Avoidance Convention** in 1992 (effective 1994) to prevent the same income from being taxed in both countries.
The treaty covers taxes on income and capital and establishes rules for taxation of:

- dividends
- interest
- royalties
- capital gains
- business profits
- technical service fees

It also includes provisions to prevent fiscal evasion and tax avoidance.

What is a Double Taxation Avoidance Convention (DTAC)?

A DTAC is a bilateral agreement that determines:

- which country has taxing rights over cross-border income
- how double taxation is avoided (exemption or credit method)
- mechanisms for information exchange and dispute resolution

Its main objectives are:

- avoid double taxation of the same income
- prevent tax evasion
- encourage foreign investment
- provide tax certainty for businesses and individuals

DTACs are key instruments of international tax governance.

Major Changes Introduced by the Amending Protocol

The protocol introduces multiple structural changes to the taxation framework governing cross-border investments.

1. Removal of Most Favoured Nation (MFN) Clause

The amendment removes the MFN clause, which previously required India to extend to France any more favourable tax treatment given to other OECD countries.

Its removal:

- eliminates automatic extension of lower tax rates
- reduces interpretational disputes
- strengthens treaty clarity

This follows judicial clarification in India regarding MFN application.

2. Revised Dividend Taxation Structure

The amended treaty modifies withholding tax on dividends.

- Reduced tax rate for large shareholdings
- Higher rate for smaller portfolio investors

This introduces differential treatment based on investment scale and aligns taxation with ownership structure.

3. Expansion of Source-Based Taxation

India gains broader rights to tax certain income arising within its jurisdiction, including capital gains from share transfers.

This reflects India's policy preference that income generated from economic activity in India should be taxable in India.

4. Changes to Other Technical Provisions

The revision updates provisions relating to:

- permanent establishment rules
- technical service fees
- capital gains taxation
- cross-border business profits

These changes aim to reflect modern business structures and reduce treaty abuse.

Rationale for Amending the Treaty

The amendment reflects changing global and domestic tax environments.

- **Modernisation of international tax rules-** Global tax norms have evolved significantly since the early 1990s, particularly with OECD efforts against tax base erosion and profit shifting.
- **Clarification of taxing rights-** India has increasingly emphasised **source-based taxation**, especially on capital gains and digital-era income.
- **Legal disputes over treaty interpretation-** Interpretation of the **Most Favoured Nation (MFN) clause** and other provisions had led to litigation and uncertainty.
- **Rising bilateral investment-** France is a major investor in India across sectors such as aerospace, defence, infrastructure, energy and services.

Updating the treaty helps align tax rules with the scale and complexity of current economic ties.

****

Union Budget 2026-27 Witnessed a Significant Rise in Gender Budget Allocation

*The **Union Budget 2026-27** presented by the Finance Minister on **February 1, 2026** witnessed a **significant increase in the Gender Budget allocation**. This increase was highlighted by government spokespeople and analysed in media reporting as part of the budget's focus on gender equity, women's empowerment, and inclusive development.*

*The gender budget component saw a noticeable rise in both **absolute terms and as a share of total budgetary outlays**, reflecting policy priority to support women's socio-economic participation and empowerment.*

What is the Gender Budget?

The **Gender Budgeting** framework was institutionalised in India in **2005-06** to track and monitor government expenditures that contribute to gender equality.

Gender Budget Statement (GBS) in the Union Budget has two parts:

a. Part-A

Schemes and programmes where **gender is the principal objective** (e.g., women's skill development, maternal health, girls' education).

b. Part-B

Schemes that are **gender-responsive** (have components or impacts benefiting women, though not exclusively).

Gender Budgeting is a **tool for public finance management** aimed at creating equality in access to resources and removing gender gaps.

Budget 2026-27 — Gender Budget Allocation (Data Focus)

According to the **Union Budget 2026-27 documents**:

- **Total Gender Budget outlay** increased significantly compared to the previous year.
- Both **Part-A and Part-B allocations rose**, indicating expanded programme support for women and girls.

Illustrative Trends

- Marked by an allocation of 5.01 lakh crore rupees, reflecting an 11.55% increase over previous financial year.
- Further, share of Gender Budget in total Union Budget increased to 9.37%.
- Part-A programmes related to women's economic empowerment, safety, health, and education saw **meaningful increases**.
- Source: Budget documents, press coverage, government releases (analysis from *The Hindu* and financial reporting).

The increase reflects the government's emphasis on **gender mainstreaming across sectors**.

Broader Policy Context

a. National Policy Frameworks

The Gender Budget increase aligns with longstanding commitments such as:

- **National Policy for Women (2001, revised 2020)**
- **Sustainable Development Goals (SDG 5) — Gender Equality**

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

- **NITI Aayog's Women Empowerment Indices**
- **Mission Shakti and Mahila SHG ecosystem**

b. Gender Budgeting as an Institutional Tool

Gender budgeting has been integrated into public finance as a tool to:

- Identify gaps in gender-related expenditure
- Track implementation outcomes
- Enhance policy coherence

Thus, the 2026-27 increase reflects a shift from **tracking expenditures** to **strategic financing for outcomes**.

****

Socio-Economic Impact Analysis of Incentive Scheme for Promotion of RuPay Debit Card and Low-Value BHIM-UPI Transactions

*The **Department of Financial Services**, under the **Ministry of Finance**, released a report titled:*
"Socio-Economic Impact Analysis of the Incentive Scheme for Promotion of RuPay Debit Card and low-value BHIM-UPI (P2M) transactions"
It evaluates the effectiveness of the government's incentive framework in promoting digital payments, strengthening payment infrastructure and advancing financial inclusion.

Major Findings of the Report

1. **Rapid expansion of digital transactions-** Digital transactions increased nearly **11-fold between 2021 and 2025**.
2. **Dominance of UPI-** UPI's share in total digital transactions rose to **about 80%**, establishing it as the primary payment channel.
3. **User preference shift-** Among surveyed users:
   - UPI became the most preferred transaction mode — 57%
   - Cash usage declined — 38%

   Ease of use and instant fund transfer were key drivers.

Impact on Digital Payments Ecosystem

The report finds that the incentive scheme significantly strengthened India's digital payments ecosystem.

Payment infrastructure- Expansion of acceptance points and digital transaction capability.

Merchant adoption- Incentives supported merchant onboarding and reduced cost barriers.

User accessibility- Affordable digital payments increased adoption among diverse socio-economic groups.

Ecosystem sustainability- Budgetary support ensured viability of low-value transactions.

Contribution to Financial Inclusion

The report highlights that digital payments expansion supports:

- inclusion of small merchants
- access to formal financial systems
- transparency of economic transactions
- reduction of cash-based informal activity

Digital payment adoption thus contributes directly to financial inclusion and economic formalisation.

****

India Strengthens Global Food Security

Food Corporation of India (FCI) signed a five-year rice supply agreement with the UN World Food Programme (WFP).

Supports global humanitarian operations to combat hunger.

- India to supply **200,000 metric tonnes of rice**.
- Rice may include up to **25% broken grains**.
- Agreement valid for **five years** (extendable by mutual consent).
- Price to be determined annually.
- Current price: **₹2,800 per quintal (till 31 March 2026)**.

About WFP

- World Food Programme (WFP) is the food-assistance arm of the United Nations.
- Established in 1961.
- Headquarters: Rome, Italy.
- Largest humanitarian organisation addressing hunger and food insecurity worldwide.
- Provides emergency food assistance in conflicts, disasters and crises. Supports nutrition programmes for vulnerable populations (children, pregnant women).Implements school feeding programmes.
- Awarded the **Nobel Peace Prize (2020)** for efforts to combat hunger and improve peace conditions in conflict areas.
- India is a **founding member** of WFP.

Global Significance

- Enhances WFP's ability to reach vulnerable populations.
- Supports UN Zero Hunger Goal (SDG-2).
- Reinforces India's role in global humanitarian assistance.

Strategic Significance for India

- Positions India as major agricultural and food security partner.
- Strengthens international cooperation and diplomacy.
- Demonstrates leadership in global public goods provision.

****

Urban Challenge Fund (UCF)

The Union Cabinet, chaired by the **Prime Minister of India**, has approved the launch of the **Urban Challenge Fund (UCF)**, marking a major step toward transforming India's urban landscape.

About the Urban Challenge Fund

- The UCF is a new **Centrally Sponsored Scheme** under the **Ministry of Housing and Urban Affairs**.
- Its objective is to build **resilient, inclusive, productive, and climate-responsive cities**, positioning urban centres as a **key driver of India's next growth phase**.

- **Financial Outlay:** The total central assistance amounts to **₹1 lakh crore**.
- **Tenure:** The scheme will run from **FY 2025–26 to FY 2030–31**, with a possible extension until **FY 2033–34**.

Key Features of the Urban Challenge Fund

1. Financing Structure

- At least **50% of project funding must come from market-based sources**, such as:
  - **Municipal bonds**
  - **Bank loans**
  - **Public–Private Partnerships (PPPs)**
- The balance can be provided by **State governments**, **UT administrations**, **Urban Local Bodies (ULBs)**, or other contributors.

2. Project Selection Method

- Projects will be chosen through a **transparent, competitive challenge process**, ensuring only **high-impact** and **reform-focused** proposals receive funding.

3. Reform-Centric Focus Areas

- The UCF emphasizes large-scale reforms in:
  - **Urban governance**
  - **Market and financial systems**
  - **Operational efficiency**
  - **Urban planning**

4. Creditworthiness Enhancement

- A dedicated **₹5,000 crore corpus** is earmarked to improve the creditworthiness of **4,223 cities**, including Tier-II and Tier-III towns, especially to help them access market financing for the first time.

Cities Covered Under the Fund

The Urban Challenge Fund will support:

1. **All cities with a projected population of 10 lakh or more (as of 2025).**
2. **All State and Union Territory capitals** not included above.
3. **Major industrial towns with populations of 1 lakh or more.**

Additionally:

- All **ULBs in hilly States**,
- **North-Eastern States**, and
- Smaller **ULBs with populations below 1 lakh**

will be eligible for assistance under the **Credit Repayment Guarantee Scheme**.

****

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

POLITY AND GOVERNANCE

Death Penalty in India

CONSTITUTIONAL BASIS

Article 21 – Right to Life

"No person shall be deprived of his life or personal liberty except according to procedure established by law."

• Death penalty is constitutionally valid if due process is followed.

LEGAL PROVISIONS (Statutory Basis)

Death penalty is provided under:

Bharatiya Nyaya Sanhita (BNS), 2023

(earlier Indian Penal Code, 1860)

Capital punishment is prescribed for:

- Waging war against India
- Certain categories of murder
- Terrorism-related offences
- Aggravated rape cases
- Certain offences against children

Other Laws

- Unlawful Activities (Prevention) Act (UAPA)
- Protection of Children from Sexual Offences (POCSO) Act
- NDPS Act (in specific aggravated cases)

"Rarest of Rare" Doctrine

Established in:

Bachan Singh v. State of Punjab

Key Principles:

- Death penalty should be imposed only in the "rarest of rare cases"
- When alternative punishment (life imprisonment) is unquestionably inadequate
- Court must consider:
  - Aggravating factors
  - Mitigating circumstances
  - Possibility of reform

Sentencing Process in India

India follows a bifurcated trial process:

- Conviction stage
- Separate sentencing hearing

Court must:

• Consider socio-economic background

• Psychological evaluation

• Reform potential

Clemency & Mercy Petition

After Supreme Court confirms death sentence:

- Mercy petition to Governor (Article 161)
- Mercy petition to President (Article 72)

Judicial review possible if:

- Undue delay
- Procedural irregularity
- Non-application of mind

Method of Execution

• Death by hanging (as per Code of Criminal Procedure)

• Supreme Court has examined alternative methods but hanging remains valid.

Recent Judicial Developments

Focus on Sentencing Reform

Supreme Court emphasized:

- Need for meaningful hearing on mitigating factors
- Importance of psychological & probation reports
- Avoid mechanical imposition of death sentence

Death Penalty & Terror Cases

Capital punishment upheld in certain high-impact terror cases.

Debate on Mandatory Death Penalty

Supreme Court has struck down mandatory death penalty provisions as unconstitutional.

Arguments in Favour

- Deterrence theory
- Retributive justice
- Public outrage in heinous crimes
- National security concerns

Arguments Against

- Risk of wrongful conviction
- Socio-economic bias in sentencing
- No conclusive proof of deterrence
- Violation of human dignity

International Perspective

- Many countries have abolished death penalty.
- India retains it but applies sparingly.
- UN General Assembly has called for moratorium (India has not supported complete abolition).

Way Forward

- Ensure uniform sentencing guidelines
- Strengthen legal aid system
- Psychological & social impact assessments mandatory
- Faster disposal of mercy petitions

- Parliamentary debate on future policy direction

****

Parliamentary Privileges in India

Meaning & Purpose

Parliamentary privileges are special rights, immunities and exemptions enjoyed by the two Houses of Parliament, their members and committees.

Purpose: to ensure independent and effective functioning of Parliament and members without external interference.

They are distinct from ordinary legal rights available to citizens.

Constitutional Basis

Article 105 – Powers, privileges and immunities of Parliament and its members

Article 194 – Similar provisions for State Legislatures

Article 122 – Courts cannot question validity of parliamentary proceedings on grounds of procedural irregularity.

Types of Privileges

A) Collective Privileges (Rights of the House as a whole)

- Regulate its own proceedings
- Exclude outsiders or strangers from the House
- Authority to punish for breach of privilege or contempt
- Publish proceedings and reports

(these protect institutional autonomy)

B) Individual Privileges (Rights of MPs/MLAs)

- Freedom of speech in Parliament
- Immunity from arrest in civil cases during a session and within 40 days before/after
- Cannot be sued or prosecuted in court for speech/votes in Parliament
- Members can be arrested only with prior permission of the presiding officer

Immunity & Its Limits

Parliamentary privilege protects members only for acts in the course of duty in Parliament.

Supreme Court ruling (2024) clarified that immunity does not apply to criminal acts such as bribery even if connected with speech or voting inside the House.

Breach of Privilege & Privilege Motion

A breach of privilege occurs when rights of the House or its members are violated.

If a member believes privilege is breached, a Privilege Notice / Motion can be raised.

It may be referred to the Privileges Committee for investigation and action.

Recent Developments

Privilege Notice Against Leader of Opposition

Government announced moving a privilege motion against Rahul Gandhi for allegedly making misleading statements in the Lok Sabha during Budget discussions, considered breach of privilege.

The Ministry accused him of making serious allegations without proper notice, violating procedure and conduct of business in the House.

Privilege Notice in Rajya Sabha

A privilege notice was served to a Rajya Sabha MP (Renuka Chowdhury) for allegedly bringing a stray dog into the Parliament complex and making derogatory remarks about fellow MPs.
She has been asked to respond by a specified date.

Notice to a District Official

Rajya Sabha secretariat issued a breach of privilege notice to a district collector after allegations that a Member of Parliament was not invited to a government function — indicating that privilege actions can extend to outsiders interacting with legislative mandates.

State Legislature Privilege Case

In Maharashtra, a privilege committee hearing has been scheduled regarding alleged disrespectful remarks made by a comedian and a political leader deemed insulting to the dignity of the House.

Delay in Constituting Privileges Committees

In the Lok Sabha, the Privileges Committee and Ethics Committee have not been set up for over two years since formation of new government — unusual because such committees are usually prioritized to refer privilege matters.

Procedure for Privilege Cases

1. A notice is moved by a member alleging breach.
2. House may refer the matter to the Privileges Committee.
3. Committee investigates and reports back.
4. House may take action — warning, admonition or even suspension.
5. Punishment must be within Parliament's rules.

(Privilege is distinct from criminal liability unless based on criminal prosecution outside constitutional immunity)

Privilege vs Freedom of Speech

Article 105(2) gives MPs the right to speak freely without fear of legal proceedings for statements made in Parliament.
However, this freedom is not absolute and is subject to internal rules of conduct and discipline.
Freedom of speech is meant to protect legislative function, not protect defamatory or misleading allegations.

****

Vidyanjali Initiative

Introduction

Vidyanjali is a school volunteer programme of the Government of India aimed at strengthening schools through community and private sector participation. It connects volunteers, donors and contributors with government and government-aided schools.
It is implemented by the Ministry of Education, Government of India.

Background

Vidyanjali was first launched in 2016.

It was revamped and relaunched in 2021 to align with the objectives of Samagra Shiksha and the National Education Policy 2020.

Objectives

1. Promote community participation in school education
2. Improve quality of education through volunteer engagement
3. Strengthen school infrastructure through CSR and philanthropic support
4. Bridge resource gaps in government schools
5. Encourage social responsibility towards education

Key Features

1. Volunteer Registration

Individuals, professionals, retired teachers, subject experts and NGOs can register through the online Vidyanjali portal.

2. Academic Support

Volunteers can provide:

- Mentoring
- Career guidance
- Remedial teaching
- Life skills training
- Co-curricular support

3. Infrastructure Support

Corporates and donors can contribute towards:

- Digital classrooms
- Libraries
- Sports facilities
- Laboratory equipment
- Sanitation facilities

4. Transparency

Schools raise specific requirements on the portal and contributors can directly respond.

Institutional Framework

Vidyanjali functions under Samagra Shiksha, which is an integrated scheme for school education covering pre-primary to senior secondary level.

The programme is administered by the Ministry of Education.

Link with NEP 2020

National Education Policy 2020 emphasizes:

- Community engagement
- Volunteerism
- School complexes and partnerships
- Holistic and multidisciplinary learning

Vidyanjali operationalizes these principles by encouraging social participation in education.

Recent Developments

In recent months, the initiative has been highlighted in the context of:
Increasing CSR participation in education
Strengthening PM SHRI schools
Bridging post-pandemic learning gaps
Expanding digital infrastructure in government schools

Issues and Challenges

1. Uneven participation across states
2. Monitoring quality of volunteers
3. Ensuring accountability in CSR contributions
4. Rural-urban disparity in access to volunteers

Way Forward

1. Strong monitoring mechanism
2. Capacity building of school heads
3. Greater digital outreach
4. Integration with local governance institutions
5. Transparent impact assessment

Conclusion

Vidyanjali is a community-driven initiative of the Ministry of Education that aims to improve the quality and infrastructure of government schools through volunteerism and CSR participation. It aligns with NEP 2020 and Samagra Shiksha objectives. Effective monitoring and equitable participation are essential to maximize its impact on India's school education system.

****

Thanya Nathan C – Historic Achievement in Kerala Judiciary

Introduction

Thanya Nathan C from Kerala is set to become the first woman judge in the state with total visual impairment. She cleared the Kerala Judicial Service Civil Judge (Junior Division) Examination 2025 under the benchmark disability category.

Background

• She was born completely visually impaired.
• She completed her schooling through both special and mainstream institutions.
• She pursued LLB from Kannur University and topped her class.
• She practised as an advocate and used assistive technologies such as screen-reading software and Braille for preparation and case work.

Legal Context

Her appointment follows an important Supreme Court judgment which held that visually impaired candidates cannot be declared unsuitable for judicial service solely on the ground of disability.

Key principles from the judgment:

1. Disability cannot be a ground for automatic disqualification.
2. Equal opportunity must be ensured in public employment.
3. Reasonable accommodation must be provided.
4. Judicial services must be inclusive and accessible.

Constitutional and Legal Basis

Article 14 – Equality before law
Article 16 – Equality of opportunity in public employment
Article 21 – Right to dignity and life
Rights of Persons with Disabilities Act, 2016 – Provides for reservation and reasonable accommodation for persons with benchmark disabilities.

Significance

1. Promotes inclusivity in judiciary
2. Strengthens representation of persons with disabilities
3. Advances constitutional morality and social justice
4. Encourages barrier-free institutional reforms
5. Sets precedent for other states

Challenges Highlighted

1. Lack of accessible court infrastructure
2. Need for assistive technologies in courts
3. Administrative resistance in some recruitment systems
4. Ensuring meaningful accommodation beyond examination stage

****

Private Bill Seeking 10-Year Mandatory Census

Introduction

A private member's bill proposing a legal mandate to conduct a national population census every 10 years has been introduced in Parliament.

Definition of a Private Member's Bill

A private member's bill is a legislative proposal introduced by a Member of Parliament who is not a Minister.

Purpose of the Bill

The bill seeks to provide statutory backing for conducting the national census at regular intervals of 10 years.

Key Provisions of the Bill

1. Census to be conducted once every 10 years.
2. The census to be treated as a mandatory constitutional/statutory duty of the government.
3. Provision for detailed enumeration of demographic, social, economic and statistical data.
4. Framework for release of periodic reports and data dissemination.
5. Provisions to ensure uniformity, reliability and scientific methodology.

Context

India traditionally conducts a Census once every decade. However, the Census Act does not expressly make it a statutory obligation to conduct the decennial census. Delays in recent censuses have raised questions about institutional commitment and continuity of data.

Significance

1. Policy Planning

- Accurate and periodic population data is essential for evidence-based policy making.
- Socio-economic indicators, labour force data, fertility and mortality statistics depend on census results.

2. Resource Allocation

- Census data guides allocation of funds and targeted welfare schemes.
- Helps in planning education, health, housing and infrastructure sectors.

3. Governance and Decentralisation

- Empowers local bodies with reliable demographic data.
- Assists in electoral boundary delimitation and constituency planning.

4. Academic and Research Utility

- Longitudinal studies on demographic change.
- Studying migration, urbanisation and socio-economic trends.

Implications

1. Legal Certainty

Mandatory census can institutionalise periodic data collection and reduce ad hoc disruptions.

2. Accountability

Government would be under a legal obligation to conduct census activities.

3. Financial and Administrative Commitment

Decadal census is resource intensive; mandatory status could increase budgetary planning.

4. Standardisation

Statutory backing could strengthen methodology and data quality.

Debate and Challenges

1. Administrative Capacity

Conducting a census requires extensive manpower and coordination.

2. Data Privacy and Security

Handling of sensitive personal data must adhere to privacy norms.

3. Cost Implications

Decadal census is expensive; statutory mandate may increase financial burden.

4. Overlap with Other Surveys

Need to rationalise census data with large-scale periodic surveys.

****

Menstrual Health as a Fundamental Right

Introduction

Menstrual health refers to the physical, mental and social well-being related to menstruation. Increasingly, it is being discussed as a matter of dignity, equality and fundamental rights rather than merely a health issue.

Constitutional Basis

Article 14 – Equality before law
Article 15 – Prohibition of discrimination on grounds of sex
Article 21 – Right to life and personal liberty (includes right to dignity, health and privacy)
Article 42 – Directive Principle on just and humane conditions of work
Article 47 – Duty of the State to improve public health

Judicial Perspective

Courts have expanded Article 21 to include:
Right to health
Right to dignity
Right to privacy
Reproductive autonomy
Menstrual health falls within the broader framework of reproductive rights and bodily autonomy.

Key Dimensions of Menstrual Health as a Right

1. Right to Dignity

Lack of access to sanitary products and sanitation facilities affects dignity of women and girls.

2. Right to Health

Poor menstrual hygiene can lead to infections and reproductive health problems.

3. Right to Education

Many girls miss school due to lack of menstrual hygiene facilities, affecting educational equality.

4. Right to Work

Workplace policies often fail to accommodate menstrual health needs.

5. Right to Non-Discrimination

Social stigma and taboos lead to exclusion and discrimination.

Policy Measures in India

1. Menstrual Hygiene Scheme under Ministry of Health
2. Free or subsidised sanitary napkins through public health institutions
3. Swachh Bharat Mission focus on separate toilets for girls in schools
4. Some states have introduced menstrual leave policies
5. Awareness campaigns to break stigma

Issues and Challenges

1. Period poverty in rural and urban poor areas
2. Cultural taboos and social stigma
3. Inadequate sanitation infrastructure
4. Limited awareness and reproductive health education

5. Environmental concerns related to sanitary waste

Debate on Menstrual Leave

Arguments in favour

- Recognises biological realities
- Promotes gender-sensitive workplace policies
- Advances substantive equality

Arguments against

- Risk of reinforcing stereotypes
- Possible discrimination in hiring
- Need for gender-neutral health policies

International Perspective

Menstrual health is increasingly recognised under human rights frameworks including the right to health, education and gender equality. Several countries have introduced menstrual leave policies.

Conclusion

Menstrual health is not merely a medical issue but a matter of dignity, equality and fundamental rights. Ensuring access to sanitation, hygiene products and awareness is essential for realising constitutional guarantees of equality and the right to life. Recognising menstrual health as a rights-based issue strengthens gender justice and inclusive development.

****

President's Rule in Manipur

Background

President's Rule refers to the imposition of direct central government rule in a state under Article 356 of the Constitution when the state's constitutional machinery fails. It results in suspension of the state government and legislature, with the Governor administering the state on behalf of the President.

Why It Was Imposed in Manipur

Manipur witnessed prolonged ethnic violence beginning in May 2023 between the Meitei community (mainly in the Imphal valley) and Kuki-Zo tribes (in the hill districts), resulting in deaths, displacement and breakdown of law and order. Political instability deepened after the resignation of Chief Minister N. Biren Singh in February 2025, and no alternative government could be formed. This was treated as a failure of constitutional machinery, leading to the imposition of President's Rule on 13 February 2025.

Extensions and Duration

President's Rule in Manipur was approved and extended multiple times by Parliament, with statutory resolutions allowing continuation beyond the initial six months. It remained in force for nearly one year, despite debates over governance, law and order and political negotiations.

Revocation in February 2026

On 4 February 2026, the President revoked President's Rule in Manipur with immediate effect by issuing a fresh proclamation under Article 356(2). This cleared the way for restoration of democratic government in the state.

This revocation was timed ahead of the swearing-in of a new elected government, after negotiations among political parties and community stakeholders.

Formation of New Government

The leader of the National Democratic Alliance (NDA) legislature party, Yumnam Khemchand Singh, was sworn in as Chief Minister of Manipur on 4 February 2026. The new ministry includes deputies and ministers representing different ethnic communities, reflecting an attempt at inclusive governance after a period of direct Centre-administered rule.

Political and Social Context

The prolonged imposition of President's Rule reflected deep challenges in restoring normal elected governance amid lingering ethnic tensions and demands for separate administrative assurances by certain groups. Restoration of an elected government was seen as necessary for democratic stability and addressing development and peacebuilding priorities.

Constitutional and Federative Implications

President's Rule is a constitutional provision meant for extreme situations where state governance loses legitimacy or capacity. Its prolonged use in Manipur underscores the tension between central intervention under Article 356 and federal autonomy of states. Its revocation restores the elected government, reasserting democratic processes.

****

Current Tender Year Doctrine

Introduction

The Current Tender Year Doctrine is a constitutional principle evolved by the Supreme Court of India to limit the duration of President's Rule under Article 356 when imposed due to breakdown of constitutional machinery in a State. It was developed in the context of prolonged President's Rule in Punjab during militancy in the late 1980s and early 1990s.

Constitutional Background

Article 356 – President's Rule in case of failure of constitutional machinery in a State.
Article 356(3) – Proclamation must be approved by Parliament within two months.
Article 356(4) – President's Rule can continue for six months at a time.
Maximum period – Normally one year, extendable up to three years subject to special conditions.

Extension beyond one year requires:

1. A national emergency under Article 352 in operation in the whole or part of the State.
2. Election Commission certifies that elections cannot be held.

Origin of the Doctrine

The doctrine was laid down in
S.R. Bommai v. Union of India (1994) – Supreme Court case
The Court examined misuse of Article 356 and laid down strict guidelines to prevent arbitrary imposition or continuation of President's Rule.

Meaning of Current Tender Year Doctrine

The doctrine states that President's Rule can ordinarily continue only for a "current tender year", meaning up to one year, unless extraordinary conditions exist. The phrase emphasizes that:

1. Prolonged central rule is against federal spirit.
2. President's Rule must be temporary.
3. Elections should be held at the earliest opportunity.

Thus, continuation beyond one year is an exception and must satisfy strict constitutional conditions.

Key Principles

1. Article 356 is an emergency power and must be used sparingly.
2. Federalism is a basic feature of the Constitution.
3. Democratic government in States must be restored quickly.
4. Extension beyond one year requires strict compliance with constitutional safeguards.

Relevance in Recent Context

The doctrine becomes relevant whenever President's Rule continues close to or beyond one year, especially in situations of internal disturbance, insurgency or prolonged instability.

In recent discussions relating to President's Rule in states facing prolonged unrest, the doctrine is cited to underline:

The need for time-bound restoration of elected government

Constitutional limits on central intervention

Role of Election Commission in certifying feasibility of elections

Relation with S.R. Bommai Judgment

The S.R. Bommai case laid down:

1. Judicial review is applicable to proclamation under Article 356.
2. Majority of government should be tested on the floor of the House.
3. Arbitrary dismissal of state governments violates federalism.
4. Article 356 cannot be used for political considerations.

The Current Tender Year Doctrine reinforces these safeguards.

Federalism Angle

India is a quasi-federal system.

Excessive or prolonged use of Article 356 undermines:

- State autonomy
- Democratic representation
- Cooperative federalism

The doctrine ensures balance between:

- National integrity
- State autonomy

Critical Evaluation

Positive

1. Protects federal structure
2. Ensures democratic restoration
3. Prevents misuse of emergency powers

Limitations

1. Does not eliminate political misuse completely
2. Still dependent on parliamentary majority
3. Extraordinary conditions may be interpreted broadly

Conclusion

The Current Tender Year Doctrine limits the continuation of President's Rule to ordinarily one year and mandates restoration of democratic government at the earliest. It emerged from the S.R. Bommai judgment to protect federalism and prevent misuse of Article 356. The doctrine reinforces constitutional safeguards while balancing national stability and state autonomy.

****

UGC Equity Regulations

Introduction

UGC Equity Regulations refer to the regulatory framework issued by the University Grants Commission to promote equity, inclusion and non-discrimination in higher educational institutions in India. These regulations aim to ensure equal access, representation and a safe academic environment for disadvantaged and marginalized groups.

Constitutional Basis

Article 14 – Equality before law
Article 15(1) – Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth
Article 15(4) and 15(5) – Special provisions for socially and educationally backward classes, SCs and STs
Article 16 – Equality of opportunity in public employment
Article 21 – Right to dignity
Article 46 – Promotion of educational and economic interests of SCs, STs and weaker sections

Statutory Basis

University Grants Commission Act, 1956 empowers UGC to frame regulations for coordination and maintenance of standards in higher education.

Objectives of UGC Equity Regulations

1. Promote inclusive campus environment
2. Prevent discrimination based on caste, gender, religion, disability, region, language or economic background
3. Ensure effective grievance redressal mechanisms
4. Strengthen institutional accountability
5. Improve access and retention of marginalized students

Major Components

1. Equal Opportunity Cell

Every higher educational institution is required to establish an Equal Opportunity Cell.
Functions:

Safeguard interests of SC, ST, OBC, minorities, women and persons with disabilities
Monitor implementation of reservation policies
Address discrimination complaints
Conduct awareness programmes

2. Anti-Discrimination Provisions
Institutions must:

- Prohibit discrimination in admissions, evaluation, hostel allotment and campus activities
- Prevent harassment based on caste or identity
- Ensure fair treatment in academic evaluation

3. Grievance Redressal Mechanism
Institutions must set up:

- Internal complaint committees
- SC/ST grievance cells
- Mechanisms for time-bound disposal of complaints

4. Accessibility for Persons with Disabilities
Compliance with Rights of Persons with Disabilities Act, 2016
Measures include:

- Barrier-free campus infrastructure
- Accessible classrooms and libraries
- Assistive technologies
- Scribe facilities during examinations

5. Reservation Policy Compliance
Implementation of constitutionally mandated reservation in:

- Student admissions
- Faculty recruitment
- Institutions must maintain roster systems and transparency in recruitment.

6. Gender Equity Measures
Linkages with:

- Sexual Harassment of Women at Workplace Act
- Internal Complaints Committee (ICC)
- Promotion of safe and inclusive environment for women and gender minorities.

Recent Context and Developments
Recent discussions around UGC equity regulations have focused on:
Strengthening anti-discrimination monitoring
Addressing caste-based discrimination in higher education
Mental health and student suicides in elite institutions
Enhancing data transparency on inclusion
Aligning regulations with National Education Policy 2020

Link with National Education Policy 2020

NEP 2020 emphasizes:

- Inclusive and equitable quality education
- Gender Inclusion Fund
- Special Education Zones
- Support for Socio-Economically Disadvantaged Groups
- UGC equity regulations operationalize these commitments at institutional level.

Challenges

1. Weak enforcement mechanisms
2. Under-reporting of discrimination cases
3. Institutional bias and lack of sensitivity
4. Inadequate awareness among students
5. Lack of independent monitoring

Critical Evaluation

Positive Aspect

- Institutionalizes inclusion
- Strengthens accountability
- Promotes diversity in higher education
- Provides grievance redressal framework

Limitations

- Implementation varies across institutions
- Limited monitoring by UGC
- Lack of strong punitive measures

Way Forward

1. Independent monitoring mechanism
2. Periodic social equity audits
3. Sensitization programmes for faculty and administrators
4. Transparent reporting of discrimination cases
5. Integration with digital grievance platforms

Conclusion

UGC Equity Regulations aim to institutionalize equality and non-discrimination in higher education institutions by establishing equal opportunity mechanisms, grievance redressal systems and reservation compliance. They reflect constitutional commitments to social justice and inclusive education. Effective enforcement, monitoring and sensitization are essential to translate regulatory intent into meaningful campus transformation.

****

National Commission for Women – 34th Foundation Year

Introduction

The National Commission for Women (NCW) is a statutory body established to safeguard and promote the rights and interests of women in India. The 34th Foundation Year marks more than three decades of institutional efforts toward gender justice, legal reform and women's empowerment.

Establishment and Legal Basis

- The National Commission for Women was established under the National Commission for Women Act, 1990.
- It was formally constituted on 31 January 1992.
- It functions under the Ministry of Women and Child Development.

Constitutional Background

Article 14 – Equality before law
Article 15(1) – Prohibition of discrimination on grounds of sex
Article 15(3) – Special provisions for women and children
Article 16 – Equal opportunity in public employment
Article 39(a) and (d) – Equal livelihood and equal pay
Article 42 – Just and humane conditions of work and maternity relief

Composition

The Commission consists of:

1. Chairperson
2. Five Members
3. One Member-Secretary

Members are nominated by the Central Government and are expected to have experience in law, social work, women's welfare or administration.

Objectives

1. Review constitutional and legal safeguards for women
2. Recommend remedial legislative measures
3. Facilitate redressal of grievances
4. Advise government on policy matters affecting women
5. Promote awareness of women's rights

Functions and Powers

Investigative and Advisory Role

- Examine safeguards for women under the Constitution and other laws
- Review existing laws and suggest amendments
- Submit annual and special reports to the Central Government

Complaint Redressal

Receive complaints relating to:

- Domestic violence
- Dowry harassment
- Sexual harassment
- Cyber crimes against women
- Property disputes

- Workplace discrimination
- Conduct inquiries and recommend action

Quasi-Judicial Powers

While NCW does not have binding judicial powers, it has powers of a civil court in certain matters such as:

- Summoning witnesses
- Requiring production of documents
- Receiving evidence

Major Areas of Intervention

1. Violence against women
2. Human trafficking
3. Cyber harassment
4. Workplace harassment
5. Political participation of women
6. Gender budgeting and policy review

Recent Focus Areas Around 34th Foundation Year

1. Strengthening digital complaint mechanisms
2. Addressing rising cyber crimes against women

Monitoring implementation of laws such as:

- Protection of Women from Domestic Violence Act
- Sexual Harassment of Women at Workplace Act
- Promoting legal awareness campaigns
- Supporting gender sensitization initiatives

Achievements

1. Review and recommendation of amendments in laws related to rape, domestic violence and trafficking
2. Interventions in high-profile cases of gender violence
3. Increased outreach through state commissions for women
4. Awareness and legal literacy programmes

Challenges

1. Advisory nature of recommendations (not binding)
2. Limited enforcement powers
3. Delays in handling complaints due to volume
4. Resource and manpower constraints
5. Need for stronger coordination with state authorities

Comparison with State Commissions for Women

- State Commissions operate at state level but derive powers from respective state legislations.
- NCW acts at national level and coordinates with state bodies.

Critical Evaluation

Positive Aspects

- Institutional mechanism for gender rights

- Accessible complaint platform
- Policy advisory role
- Promotes gender-sensitive governance

Limitations

- Lack of binding authority
- Dependence on executive action
- Need for stronger investigative powers

Way Forward

1. Grant limited enforcement powers
2. Strengthen coordination with police and judiciary
3. Increase budgetary support
4. Improve digital access for rural women
5. Strengthen monitoring of implementation of women-centric laws

Conclusion

The 34th Foundation Year of the National Commission for Women highlights three decades of efforts to safeguard women's rights in India. As a statutory body, NCW plays an important advisory and grievance redressal role in promoting gender justice. Strengthening its enforcement capacity and institutional autonomy can further enhance its effectiveness in ensuring substantive equality for women.

****

Uniform Civil Code (UCC) and Constitutional Debate

Introduction

The Uniform Civil Code (UCC) refers to the proposal for a common set of personal laws governing marriage, divorce, inheritance, adoption and succession for all citizens, irrespective of religion. It seeks to replace religion-based personal laws with a uniform legal framework to ensure equality and national integration.

The debate around UCC frequently arises in discussions on secularism, gender justice and constitutional values.

Constitutional Background

Article 44 – Directive Principles of State Policy

Article 44 of the Constitution directs the State to endeavour to secure a Uniform Civil Code for citizens throughout India.

- It is not enforceable by courts.
- It is a guiding principle for governance.

Fundamental Rights Involved

- **Article 14** – Equality before law
- **Article 15** – Prohibition of discrimination
- **Article 21** – Right to life and dignity
- **Article 25** – Freedom of religion

The UCC debate often involves balancing equality and religious freedom.

Historical Context

During the Constituent Assembly debates:

- Leaders like **B. R. Ambedkar** supported UCC as a step toward social reform.
- Some members opposed it citing protection of religious freedom.

India adopted a secular framework but retained separate personal laws for different religious communities.

Judicial Perspective

The Supreme Court has repeatedly emphasized the need for UCC in various cases:

1. **Shah Bano Case**
   The Court advocated for a UCC to promote national integration.
2. **Sarla Mudgal v. Union of India**
   Highlighted misuse of personal laws and reiterated the need for UCC.
3. **Shayara Bano v. Union of India**
   Declared instant triple talaq unconstitutional.

The judiciary has consistently encouraged legislative action toward uniformity.

Arguments in Favour of UCC

1. **Gender Justice**
   - Eliminates discriminatory practices in personal laws.
   - Promotes equality for women.
2. **National Integration**
   - Strengthens unity by removing legal fragmentation.
3. **Secularism**
   - Ensures separation of religion and civil law.
4. **Simplification of Laws**
   - Reduces complexity and legal conflicts.

Arguments Against UCC

1. **Religious Freedom Concerns**
   - May interfere with Article 25 rights.
2. **Cultural Diversity**
   - India's pluralistic society values personal law autonomy.
3. **Political Sensitivity**
   - Risk of social polarization.
4. **Implementation Challenges**
   - Need for consensus and gradual reform.

Recent Developments

- Law Commission consultations on reform of family laws.
- Some states have initiated steps toward implementing UCC frameworks.
- Debate linked with women empowerment and constitutional morality.

Challenges

1. Balancing secularism and religious freedom
2. Building social consensus
3. Ensuring non-majoritarian framework
4. Drafting a truly gender-just code

Way Forward

1. Gradual reform of personal laws
2. Gender-just reforms within communities
3. Wider stakeholder consultations
4. Codification of existing reforms before full uniformity

Conclusion

The Uniform Civil Code remains one of the most debated constitutional issues in India. It represents the tension between equality and religious freedom. While Article 44 envisions a common civil code, its implementation requires careful balancing of fundamental rights, social harmony and constitutional morality. A consultative and phased approach appears to be the most pragmatic path forward.

****

IRMS Examination

The Government has introduced a **dedicated examination system** for recruitment into the **Indian Railway Management Service (IRMS)**, marking a significant shift from the earlier process where no separate exam exclusively existed for IRMS officers.

New IRMS Recruitment Framework

The revamped system closely resembles the format of the **Civil Services Examination (CSE)** and will have **two stages**, followed by an interview:

1. Preliminary Examination

- Candidates must appear for the **Civil Services (Prelims)** conducted by **Union Public Service Commission**.
- This serves as the screening test for IRMS aspirants.

2. IRMS Main Examination

- A separate, specialised Main exam exclusively for IRMS.
- Contains **four descriptive papers** focused on essay-type questions.

3. Personality Test

- Final stage for assessing candidates' suitability for administrative and leadership roles.

Cadres & Services under IRMS

Selected officers join the **Group A services** of the **Indian Railways**.

IRMS recruits can be posted across **10 organised railway services**, grouped into the following categories:

- **Technical Services**
- **Administrative & Accounts Services**
- **Medical Services**

This structure enables IRMS officers to work across diverse managerial and technical domains within the railways.

IRMS Exam Pattern

Part I – Qualifying Papers

Two descriptive papers (300 marks each):

1. **Indian Language Paper**
    - Any one of the **22 languages** listed in the **Eighth Schedule of the Constitution**.
2. **English Language Paper**

Both papers are qualifying in nature.

Part II – Merit-Determining Papers

Two optional papers, **250 marks each**, chosen from **one optional subject**:

Available Optional Subjects

- Civil Engineering
- Mechanical Engineering
- Electrical Engineering
- Commerce & Accountancy

These papers will decide the candidate's rank in the IRMS merit list.

Part III – Personality Test

- Carries **100 marks**, designed to assess the candidate's personality traits, leadership abilities and domain suitability.

Eligibility Criteria

Educational Requirements

Applicants must possess a degree in:

- Engineering
- Commerce
- Chartered Accountancy

This automatically excludes graduates from:

- Pure sciences
- Humanities
- Social sciences

—who were earlier eligible under the unified Civil Services recruitment for railways.

****

Corruption Perceptions Index

India has improved its standing on the **Corruption Perceptions Index (CPI) 2025**, climbing **five places** to reach the **91st position** out of **182 countries and territories** assessed globally. This improvement reflects a modest progress in perceptions of public sector integrity compared with its **96th rank in 2024**.

About the Corruption Perceptions Index (CPI) – Rephrased & Unique

- The **Corruption Perceptions Index** is the most widely referenced global ranking of public sector corruption. It is compiled **annually** by the global non-governmental organisation **Transparency International**, and has been published since **1995**.
- The CPI does **not measure actual levels of corruption**, but ranks countries by how **corrupt their public sectors are perceived to be**, based on **expert assessments and business surveys**.
- Scores range from **0 ("highly corrupt") to 100 ("very clean")**. Countries with higher scores are considered to have lower perceived corruption.
- Each country's score is calculated using **at least three data sources** drawn from a pool of **13 different corruption surveys and evaluations** collected by reputable organisations such as the **World Bank** and the **World Economic Forum**.

Key Findings from CPI 2025 (Highlights)

- **Global Trend:** The CPI 2025 shows that perceived public sector corruption remains widespread worldwide, with the **global average score declining to 42** on the 0–100 scale. A majority of

countries (122 out of 182) score below 50, signalling that public sector corruption is seen as a serious issue across much of the world.

- **Top Ranked (Least Perceived Corruption):**
  - **Denmark** continues to be one of the world's cleanest public sectors.
  - **Finland** and **Singapore** also rank among the least corrupt nations.
- **Lowest Ranked (Most Perceived Corruption):**
  - Countries such as **South Sudan**, **Somalia**, and **Venezuela** occupy the bottom of the index, reflecting deep governance challenges.
- **India's Performance:**
  - India's CPI score for 2025 is **39 out of 100**, and its rank has improved from **96** in the previous year to **91** in the latest index. This shift shows incremental improvement, though India still remains below the global average.

What the Index Indicates

- The CPI serves as a key gauge of perceived integrity and transparency in public institutions.
- An improved rank for India suggests **progress in governance reforms**, but the relatively low score also highlights that **corruption perceptions and challenges remain** in many aspects of public administration.
- The CPI is widely used by policymakers, researchers, and international institutions to inform anti-corruption strategies and benchmarks for reform.

****

Global Teacher Prize

Indian educator **Rouble Nagi** has been honoured with the **Global Teacher Prize 2026** at the World Government Summit, marking a significant international recognition for India's teaching community.

About the Global Teacher Prize

The **Global Teacher Prize** is a yearly international award that celebrates outstanding teachers who have made transformative contributions to their students and the wider community.

- Established in **2014**, the award seeks to spotlight the crucial role educators play in shaping societies and advancing learning.

Eligibility & Evaluation Criteria

- The prize is open to teachers worldwide, across various types of educational institutions, including public, private, and alternative schooling systems.
- Applicants are assessed on:
  - Their **innovative and impactful teaching methods**
  - Notable **achievements inside the classroom**
  - Their contribution to **enhancing educational quality** in their community
- The selection also examines the teacher's measurable influence on students' learning outcomes and their ability to excel despite difficult circumstances.
- **Nomination:** Educators may be nominated by others or submit their own applications.

Award Components

- The prize carries a **USD 1 million** reward, making it one of the most prestigious honours in global education.
- It is awarded by **GEMS Education** and administered by the **Varkey Foundation**, in partnership with **UNESCO**.

ENVIRONMENT AND ECOLOGY

Living Root Bridges

India has recently nominated Meghalaya's iconic living root bridges for inclusion in the **UNESCO World Heritage List**, marking a major step toward recognising these extraordinary examples of sustainable indigenous engineering.

What Are Living Root Bridges?

- Locally referred to as **Jingkieng Jri** or **Lyu Chrai**, these structures are found across the verdant **southern escarpments of the Khasi and Jaintia Hills** in Meghalaya.
- Crafted by **Khasi and Jaintia tribal communities**, they represent exceptional traditional ecological knowledge.
- These natural bridges take around **15–30 years** to mature fully, with some spanning **15 to 250 feet**.
- Once developed, many remain functional for **hundreds of years**, outlasting most man-made rural bridges.

Construction: How Living Root Bridges Are Grown

- The bridges are created through **bioengineering techniques**, using the aerial roots of the **Ficus elastica** tree (also known as the Indian rubber tree or rubber fig).
- Their formation relies on **inosculation**, a process where root fibres intertwine and fuse as they grow across streams, ravines, or gorges.
- Young, flexible roots are guided through **hollowed trunks of Areca catechu (areca nut palm)**, which act as nurturing channels—providing moisture, shielding roots from the elements, and helping direct their growth.
- A **bamboo framework** is temporarily laid across the watercourse. This works both as a scaffold for the roots to grow over and as an interim footbridge for villagers.
- As years pass, the aerial roots become thicker and stronger. Eventually, the **areca trunks decompose**, leaving behind a robust, self-reinforcing living structure.

****

Hanle Dark Sky Reserve.

A rare **blood-red aurora** was recently recorded by the *all-sky camera* at the **Indian Astronomical Observatory (IAO)**, situated within the Hanle Dark Sky Reserve in Ladakh. This exceptional event has once again brought global attention to the reserve's pristine night skies.

About Hanle Dark Sky Reserve

- Situated at an altitude of **around 4,500 metres**, the reserve lies in the isolated **Changthang plateau** of Ladakh.
- It falls within the **Changthang Wildlife Sanctuary**, and its skies qualify as **Bortle-1**, the darkest class in the Bortle scale.
- The reserve was officially declared in **December 2022** by the **Union Territory of Ladakh**.
- It is India's **first-ever International Dark Sky Reserve**, developed around the **Indian Astronomical Observatory at Hanle**.

- The reserve is operated and scientifically overseen by the **Indian Institute of Astrophysics (IIA)**, functioning under the **Department of Science and Technology (DST), Ministry of Science & Technology**.

Purpose and Key Objectives

The Hanle Dark Sky Reserve has been conceptualised as a **science-led socio-economic initiative** with two central goals:

1. **Minimising Light Pollution**
    - Establishing strict lighting guidelines and promoting responsible illumination in nearby settlements.
2. **Boosting Astro-Tourism**
    - Leveraging Hanle's exceptional night skies to generate sustainable livelihood opportunities for the local Changpa community.

The **UT Administration of Ladakh** actively backs the project by financing astro-tourism infrastructure and supporting light-management interventions.

Why Hanle Is Significant

- Hanle is home to one of the clearest and darkest skies in the world, with **minimal atmospheric disturbance**, making it ideal for deep-sky observations.
- Its exceptional visibility allows astronomers to detect and photograph **faint celestial bodies** that are nearly impossible to observe from most other locations in India.
- Events like the recently captured **blood-red aurora** highlight the region's rare atmospheric phenomena and further strengthen its global astronomical importance.

****

El Niño

According to the Director-General of the **India Meteorological Department (IMD)**, there is a **possibility that an El Niño event may form after July this year**. A clearer assessment will only be possible by **April**, when climate models become more stable and reliable.

Normal Climatic Conditions

Under **neutral conditions** in the Pacific Ocean:

- Surface waters in the **eastern Pacific** remain **cool**, while the **western Pacific** remains **warm**.
- **Trade winds** blow from **east to west**, shifting warm water toward Asia.
- As warm water moves away from South America, **cold, nutrient-rich water rises** from deeper layers of the ocean — a natural process known as **upwelling**.

El Niño–Southern Oscillation (ENSO)

- The ENSO cycle consists of two opposite phases — **El Niño** and **La Niña** — both of which disturb normal climatic patterns.
- ENSO affects **weather systems**, **ecosystems**, **wildfire patterns**, and **economic activities** across continents.
- These events usually last between **nine and twelve months**, sometimes extending longer.
- ENSO episodes occur every **2 to 7 years**, though not on a fixed schedule.
- Historically, **El Niño episodes** are more frequent than La Niña.

What is El Niño?

- **El Niño** is the **warm phase** of ENSO, marked by **unusual warming of surface waters** in the **eastern tropical Pacific Ocean**.
- During El Niño, **equatorial Pacific temperatures rise**, and **trade winds weaken or reverse**, turning into westerlies.
- Warm water shifts toward the Americas, reducing **upwelling** along the South American coast.
- Reduced upwelling lowers **phytoplankton**, which affects fish populations and disrupts marine food chains.
- Warmer waters also push tropical species toward cooler regions, disturbing ecosystems.
- Since the Pacific covers nearly **one-third of Earth**, these changes alter global weather patterns.

Global Impacts of El Niño

- **North America:** Warmer and drier winters in the northern U.S. and Canada; increased risk of flooding in the Gulf Coast and southeastern U.S.
- **Australia & Indonesia:** Greater chances of **drought**
- **Worldwide:** Altered wind circulation, rainfall shifts, and temperature variations

What is La Niña?

- **La Niña**, the **cool phase** of ENSO, is characterized by **below-average sea surface temperatures** in the equatorial Pacific.
- **Trade winds strengthen**, pushing warm water further toward Asia.
- Upwelling along the American west coast intensifies, bringing nutrient-rich water to the surface.
- Cooler waters near the Americas shift **jet streams** northward.

Global Impacts of La Niña

- **Southern U.S.:** Drier conditions
- **Canada:** Wetter and stormier winters
- **Australia:** Heavy rainfall and flooding tendencies

Impact on India's Monsoon

- **El Niño:** Typically linked to **weak monsoon rainfall**, **heatwaves**, and higher chances of **drought** in India.
- **La Niña:** Often strengthens monsoon intensity across **South Asia**, especially in **northwest India** and **Bangladesh**.

****

World Wetlands Day

The theme for **World Wetlands Day 2026** highlights how wetlands are deeply intertwined with the cultural traditions, practices, and knowledge systems of communities that have lived around them for generations.

About World Wetlands Day

- Observed annually on **2 February**.
- First celebrated in **1997**, and formally recognised as a **UN International Day** from **2022**.
- The day commemorates the signing of the **Ramsar Convention** on **2 February 1971** in Ramsar, Iran.
- Also called the **Convention on Wetlands of International Importance**, it is one of the oldest modern environmental agreements and the only one dedicated to a **single ecosystem—wetlands**.
- At present, **172 countries** are parties to the Convention, with **over 2,500 Ramsar-listed wetlands** globally.

The global campaign each year is coordinated by the Convention Secretariat and supported by governments, NGOs, conservation groups, educational institutions, businesses, media, youth organisations, and local communities.

Theme of World Wetlands Day 2026

"Wetlands and Traditional Knowledge: Celebrating Cultural Heritage"

The theme underscores the importance of indigenous and local communities in preserving, managing, and sustainably using wetlands through traditional ecological knowledge.

New Ramsar Sites in India

India has added two more wetlands to the Ramsar list:

- **Patna Bird Sanctuary**, Uttar Pradesh
- **Chhari-Dhand**, Gujarat

With these additions, India now has **98 Ramsar sites**, further strengthening its status as one of the countries with the highest number of internationally recognised wetlands.

Patna Bird Sanctuary (Uttar Pradesh)

- **Location:** Situated in **Uttar Pradesh**, this sanctuary features a mosaic of **freshwater marshes**, **wooded patches**, and **grasslands**.
- The area is surrounded by farmlands, creating a **diverse ecological setting** that sustains rich wildlife.
- Recognized as an **Important Bird and Biodiversity Area (IBA)** by **BirdLife International**.
- **Biodiversity:** Home to **178 species of birds** and **252 varieties of plants**, making it an essential refuge for both resident and migratory avifauna.

Chhari-Dhand Wetland (Kutch, Gujarat)

- **Location:** Found in **Kutch, Gujarat**, this wetland is a **seasonal saline ecosystem** positioned between the **Banni grasslands** and the expansive **salt deserts** of the region.
- It serves as a **key wintering ground** for a variety of waterbirds, attracting large flocks every year.
- **Wildlife Significance:** The site provides habitat to notable species such as:
    - **Critically Endangered Sociable Lapwing**
    - **Vulnerable Common Pochard**
    - **Common Cranes (Grus grus)**, which visit the area annually in significant numbers.

****

Indian National Centre for Ocean Information Services (INCOIS)

The **Indian National Centre for Ocean Information Services (INCOIS)** is set to unveil **three new ocean-information products—JellyAIIP**, **SAMUDRA 2.0 Mobile App**, and **SIVAS—**along with a redesigned organisational logo during its Foundation Day celebrations.

About INCOIS

- INCOIS was created in **1999** as an **autonomous institution** under the **Ministry of Earth Sciences (MoES)**.
- Its headquarters is located in **Hyderabad, Telangana**.

- **Mandate:** INCOIS provides a wide range of ocean information, advisories, and operational services to **government agencies, industry, coastal communities**, and the **scientific sector**. These services are backed by continuous ocean observations and focused R&D.
- INCOIS is a **permanent member** of the **UNESCO Intergovernmental Oceanographic Commission (IOC)**.
- It is responsible for establishing the **Indian Tsunami Early Warning Centre (ITEWC)**, which issues tsunami alerts within **10 minutes** for India and **28 Indian Ocean countries**.

Key Initiatives of INCOIS

- **Search and Rescue Aided Tool (SARAT):**
  A specialised tool that supports the **Indian Coast Guard, Indian Navy**, and **Coastal Security Police** in tracking missing persons or objects at sea.
- **SynOPS (Situational Oceanographic Information System):**
  A real-time visualisation platform that integrates multi-source ocean data to enhance preparedness and response during **extreme coastal events**.

About the Newly Launched Systems

1. JellyAIIP (Jellyfish Aggregation Information Interactive Portal)

- A national, web-based system for documenting and mapping **jellyfish aggregations, swarms, and stranding incidents** along India's coastline.
- Features include **geospatial mapping**, identification of **hotspot regions**, and **multilingual first-aid guidance** for jellyfish stings.

2. SAMUDRA 2.0 Mobile App

- An upgraded multilingual mobile platform that provides **ocean advisories**, **weather updates**, and **early warnings** specifically for **fishermen and maritime stakeholders**.

3. SIVAS (Swell-Surge Inundation Vulnerability Advisory System)

- A coastal inundation and early-warning system designed to predict **swell-surge flooding**.
- Currently operational for the **Kerala coast**, offering multilingual forecast bulletins and early alerts.

****

Tidal Flooding

The Kerala government has officially recognised **tidal flooding** as a **State-specific disaster**, becoming the first Indian state to do so.

About Tidal Flooding

- Also called **sunny-day flooding**, **king tide flooding**, or **nuisance flooding**.
- It temporarily inundates low-lying coastal areas during **high-tide events**, especially during **full and new moons**.
- Caused by a mix of **offshore storms, wind patterns, and high-tide cycles**.
- Unlike storm surges, tidal flooding happens **twice daily**.

Kerala Context

- Common along Kerala's coastline when **Arabian Sea levels** cross a defined threshold.
- Kerala will now provide **SDRF-type financial assistance** to affected people.
- Other Kerala-specific disasters include: **coastal erosion, lightning, strong winds, soil piping, heatwaves, and human–wildlife conflict**.

BIODIVERSITY

Sarus Crane

A recent government census conducted across **68 forest divisions in Uttar Pradesh** has recorded a **rise of 634 Sarus cranes**, marking a **3.1% population increase in a single year**. This indicates improving habitat conditions and conservation efforts in the state.

About the Sarus Crane (Rephrased)

- The Sarus crane holds the distinction of being the **tallest flying bird in the world**.
- It thrives primarily in **wetland habitats**—including marshes, shallow ponds, and canal regions—and is often found living close to human settlements.

Distribution

- Found across **Southeast Asia**, **northern India**, and **northern Australia**.
- In India, the species is concentrated along the **Gangetic Plains** and parts of **eastern Rajasthan**.
- Population density declines steadily toward southern regions.
- Importantly, the Sarus crane is **non-migratory**, staying within its habitat year-round.

Key Characteristics

- Displays **grey plumage**, with a **bare red head and upper neck** and **reddish legs**.
- Known to be **less social** compared to other crane species—typically seen in **pairs** or small groups of **3–4**.
- They are **monogamous**, forming lifelong mating bonds.
- Build their nests **within water**, either in natural wetlands or on raised platforms within flooded agricultural fields like paddy areas.
- Cranes generally live **30–40 years** in the wild.

Conservation Status

- **IUCN Red List:** *Vulnerable*
- **CITES:** *Appendix II*
- **Wildlife (Protection) Act, 1972:** *Schedule IV*

****

Eurasian Otter

A recent wildlife recording from **Ganderbal district** has confirmed the presence of the **Eurasian otter** in the **Sindh River**, a species that was earlier thought to have vanished from **Jammu and Kashmir**. This rediscovery highlights its continued survival in the region.

About the Eurasian Otter

- The Eurasian otter—also referred to as the **European otter**, **common otter**, or **Old-World otter**—is a semi-aquatic carnivore native to the Eurasian region.
- **Distribution:** Its range spans the **Middle East, Europe, North Africa**, and extends through **eastern Russia, China**, and other parts of Asia.
- In India, this species is known to inhabit areas of **northern**, **northeastern**, and **southern** regions.

- **Habitat:** The species thrives in a wide range of freshwater ecosystems, including **lakes, rivers, streams, marshes, swamp forests**, and even **coastal zones**, regardless of their size or location.
- Within the Indian subcontinent, it is commonly found in **cold highlands and fast-flowing mountain streams**.

Key Features of the Eurasian Otter

- It is a **solitary and highly elusive** species, seldom seen in the wild.
- **Aquatic Adaptations:**
  - **Webbed feet** for efficient swimming
  - Ability to **close its nostrils and small ears** underwater
  - Possesses **dense, short fur** that traps air, providing thermal insulation
- Exhibits strong **sensory abilities**, including excellent vision, smell, and hearing.

Major Threats

- **Water pollution**, which degrades the quality of its habitat
- **Poaching**, especially for its valuable fur

Conservation Status

- **IUCN Red List:** *Near Threatened*
- **CITES:** *Appendix I*
- **Wildlife Protection Act, 1972:** *Schedule II*

****

Mangrove Clam

The **ICAR–Central Marine Fisheries Research Institute (CMFRI)** has successfully achieved **captive breeding** of the mangrove clam (*Geloina erosa*), marking a significant advancement in molluscan aquaculture and coastal ecosystem conservation.

About Mangrove Clam

Mangrove clams—often called **mud clams** and locally known as **"Kandal Kakka"** in northern Kerala—belong to the genus **Polymesoda/Geloina**.

- **Habitat:** They typically inhabit **muddy, brackish**, and occasionally **near-freshwater** zones within mangrove forests.
- **Distribution:** The species is widespread across the **Indo-Pacific region**.

Characteristics of the Mangrove Clam

- These clams are **burrowing bivalves**, thriving in **organic-rich muddy substrates** of intertidal mangrove environments.
- They exhibit **high salinity tolerance**, allowing them to adapt to varying water conditions.
- **Life Cycle:** The clam progresses through four stages—**larva**, **spat**, **juvenile**, and **adult**.
- **Feeding Behaviour:** As a **filter feeder**, it is most active during **low-tide immersion**, especially when tidal flooding is frequent.

Ecological Importance

- They play a vital ecological role by:

  - **Recycling nutrients**
  - **Stabilising sediments**
  - **Reinforcing mangrove ecosystem health**
- Mangrove clams also support **food security and coastal livelihoods**, particularly in fishing and subsistence communities.

Threats

- In India—especially along the **eastern coast** and **island ecosystems**—wild populations are declining due to:
  - **Overharvesting**
  - **Habitat destruction**
  - **Pollution**
  - **Coastal development pressures**

****

Himalayan Griffon

The **Himalayan Griffon Vulture**, a species typically seen in high-altitude Himalayan regions and known for seasonal movement into northern India, was recently sighted in **Melghat Tiger Reserve**, Amravati district, Maharashtra. Experts believe its presence is linked to the release of **captive-bred vultures**, which may have influenced its movement patterns.

About Himalayan Griffon

- The Himalayan Griffon is one of the **nine vulture species found in India**.
- It belongs to the group of **Old World Vultures**.
- **Scientific Name:** *Gyps himalayensis*

Distribution

- The species inhabits the **Himalayan range**, the **Tibetan Plateau**, and nearby **Central Asian mountain systems**.
- It occasionally migrates into **northern India**, although its movement is typically **altitudinal rather than long-distance**.

Key Features

- These vultures are **large and heavy-bodied**, with broad wings, a short tail, and a loose feathered ruff around the neck.
- Physical dimensions include:
  - **Weight:** Up to 12 kg
  - **Body Length:** 95–130 cm
  - **Wingspan:** 270–300 cm
- Due to their massive build, they rely heavily on **soaring** and **thermal currents**, as sustained flapping is energetically inefficient.
- **Juvenile Appearance:** Young birds transition from white down to dark brown plumage, with the head staying pale.
- **Adult Appearance:** Strong contrast between pale cream body feathers and darker flight feathers.
- The species is **monogamous**, with pairs returning to the same nesting sites annually.

- **Nest Sites:** Built on cliff ledges or small caves, typically **100–200 metres** above ground.
- Primarily **diurnal** and often **solitary**, except when feeding or nesting.

Conservation Status

- **IUCN Red List:** *Near Threatened*

****

Cheer Pheasant

Recent observations indicate that the **Cheer Pheasant**, a vulnerable ground-dwelling Himalayan bird, continues to face serious threats from **hunting** and **habitat degradation**, especially across its fragile mountain environments.

About Cheer Pheasant

- The **Cheer Pheasant**—also known as **Wallich's pheasant** or **chir pheasant**—belongs to the **pheasant family *Phasianidae***.
- It lives in rugged mountain landscapes and is adapted to survive in **steep rocky hillsides**, **scrub-covered slopes**, **stunted tree growth**, and **grassy inclines** situated between **1,200 and 3,350 metres** above sea level.
- **Distribution:** Its natural range spans the **Western Himalaya**, from **northern Pakistan**, through **Kashmir**, **Himachal Pradesh**, and **Uttarakhand**, extending to **central Nepal**.

Characteristics of the Cheer Pheasant

- The species builds a **simple ground nest**, usually placed beneath low vegetation or protected by rocky outcrops.
- It displays strong **natal philopatry**, meaning individuals tend to remain near or return to their birthplace for breeding.
- The bird relies heavily on **early successional grasslands**, which are maintained by traditional human practices such as **seasonal grass cutting and controlled burning**.
- **Diet:** Its food sources include **roots, tubers, bulbs, buried seeds**, and likely **insect larvae and earthworms**.

Conservation Status

- **IUCN Red List:** *Vulnerable*
- **CITES:** *Appendix I*
- **Wildlife (Protection) Act, 1972:** *Schedule I*

****

White-Rumped Vulture

Forest authorities recently rescued a **critically endangered White-rumped vulture** that was found weak and unable to fly in **Mampad**, near **Nilambur**, highlighting ongoing conservation challenges for the species

About White-Rumped Vulture

The White-rumped vulture is a **small Old World vulture** native to **South and Southeast Asia**.

- **Scientific Name:** *Gyps bengalensis*
- Also referred to as the **Indian White-backed Vulture** or **Oriental White-backed Vulture**.

- Like most vultures, it primarily feeds on **carcasses**, locating them by **soaring high on thermals** and observing other scavengers.

Distribution

It is found across:

Pakistan, India, Bangladesh, Nepal, Bhutan, Myanmar, Thailand, Laos, Cambodia, and southern Vietnam.

Habitat

- Prefers **plains**, though it may occasionally occur in **hilly terrain**.
- Commonly seen in **villages, towns, and areas near agricultural fields**, often close to human settlements.

Population Trend

- During the **1980s**, the global population numbered **several million**, making it *one of the most abundant large raptors in the world*.
- By **2021**, numbers plummeted to **fewer than 6,000 mature individuals**.
- The primary cause of this collapse is **diclofenac toxicity**—a veterinary painkiller that contaminates livestock carcasses.
    - When vultures consume such carcasses, **diclofenac leads to kidney failure**, causing mass mortality.

Key Features of the White-Rumped Vulture

- Possesses an **unfeathered head and neck**, **broad wings**, and **short tail feathers**.
- **Size:**
    - Height: **75–85 cm**
    - Wingspan: **180–210 cm**
    - Weight: **3.5–7.5 kg**
- **Sexes are similar** in size and appearance.
- Adults are **darker** than juveniles, with:
    - **Blackish plumage**
    - A **white neck-ruff**
    - A **distinct white patch** on the lower back/upper tail—origin of the name *white-rumped*
- When the wings are folded, a **pale grey patch** is visible on the upper surface; the **underwings** are dark slate to brownish.

Conservation Status

- **IUCN Red List:** *Critically Endangered*

****

White-Bellied Sea Eagle

The annual nesting survey of the **White-bellied Sea Eagle** recorded **17 active nests** this season across **Kannur** and **Kasaragod** districts, indicating stable breeding activity along the northern Kerala coastline.

About White-Bellied Sea Eagle

The White-bellied Sea Eagle, also called the **white-breasted sea eagle**, is a **large diurnal raptor** belonging to the family *Accipitridae*.

- **Habitat:** It lives mainly in **coastal and marine environments**, including shores, islands, estuaries, and occasionally **forested landscapes** close to inland water bodies.
- **Distribution:** Its range covers **India, Sri Lanka, Andaman Islands, southern China, the Philippines, Wallacea, New Guinea, Australia, and Tasmania**.

Key Characteristics

- Exhibits **sexual dimorphism**, with females slightly larger than males.
- **Communication:** Primarily uses **vocal calls** for communication, especially during nesting and territorial displays.
- **Diet:** A **carnivorous apex predator**, it feeds mostly on **fish**, along with **eels**, **crustaceans**, and occasionally other small aquatic or coastal animals.
- Owing to its position at the top of the coastal food chain, it serves as a strong **indicator of coastal and marine ecosystem health**.

Conservation Status

- **IUCN Red List:** *Least Concern*

****

Malabar Pied Hornbill

The **Chhattisgarh Forest Department** has set up **six 'hornbill restaurants'** in the **Udanti-Sitanadi Tiger Reserve** to support the rare Malabar Pied Hornbill and promote natural regeneration of forest species.

About Malabar Pied Hornbill

- Scientific name: *Anthracoceros coronatus*.
- Also known as the **lesser pied hornbill**.
- **Appearance:** Striking black-white plumage with a prominent casque.
- **Habitat:** Evergreen and moist deciduous forests, sometimes near human areas.
- **Distribution:** Western Ghats, NE Himalayan foothills, Satpuda Hills, and **Sri Lanka**.
- **Diet:** Mostly **frugivorous** but becomes omnivorous during breeding.
- **Role:** Indicator of **forest health**.
- **Status:** *Near Threatened* (IUCN).
- **Threats:** Habitat loss and fragmentation.

****

HISTORY, ART AND CULTURE

152nd Birth Anniversary of Srila Bhaktisiddhanta Saraswati Thakur Ji

- *Union Home Minister addressed the 152nd birth anniversary celebrations of Srila Bhaktisiddhanta Saraswati Thakur Ji in Nadia, West Bengal.*
- *Event highlighted contributions to Bhakti movement and global spiritual outreach.*

Who was Bhaktisiddhanta Saraswati Thakur Ji?

- Spiritual leader of the Gaudiya Vaishnav tradition.
- Played a major role in modernising the Bhakti movement.
- Worked to spread devotional teachings globally.

Key Contributions:

- Freed religion from rigid traditions and narrow social boundaries.
- Promoted harmony between modernity and spirituality.
- Spread devotional teachings through literature and publications.
- Continued legacy of Bhakti movement initiated by Chaitanya Mahaprabhu.
- Demonstrates role of spiritual movements in social reform and cultural integration.

Role in Global Spiritual Outreach:

- Inspired disciples like A.C. Bhaktivedanta Swami Prabhupada.
- Helped shape global expansion of Gaudiya Vaishnavism.
- Emphasised using modern tools (like printing press) to spread teachings worldwide.

****

1946 Royal Navy Revolt

Feb 18, 2026 – 80th anniversary

- Often referred to as last war of independence
- Indian ratings were sent to fight in world wars and other British wars, without compensation. "Ratings" is a naval term for junior enlisted personnel below the rank of a warrant officer, such as stokers, cooks, and seamen.
- This dissatisfaction was compounded by inadequate training facilities, overcrowded establishments, staff shortages, and ill treatment by seniors.
- Already small scale agitations had taken plan in Royal Indian Navy between 1942 and 1945.
- These soldiers were also impacted by the Indian National Movement itself, being inspired by the Quit India movement and the Indian National Army.
- On 1st february, 1946, RK Singh, an Indian Rating resigned from his job and defied his Commanding Officer, as a symbol of resistance.
- This was followed by nationalist slogans by another rating BC Dutt , like 'Quit India' and 'Jai Hind'.
- BC Dutt was then arrested sparking a chain reaction among other ratings.
- On February 18th, 1946, hundreds of ratings of HMIS Talwar in Bombay went on a hunger strike.

- They protested against poor quality of food, low wages, and racial discrimination by British officers
- Revolt spread to shore establishments in castle and fort barracks – who also refused to work
- Processions were organised in Bombay city - rating carried the portrait of Netaji Subhash Chandra Bose, and raised flags of Congress, Muslim League, Communist Party.
- Formed a naval central strike committee – linked grievances to national issues like release of INA soldiers.
- Became violent, spread to other naval establishments in Karachi, Madras, Cochin, Andaman, Vishakhapatnam.

Legacy of the revolt

- Short lived communal unity during this protest, even when communal discord had spread everywhere.
- Showed that popular discontent had reached the army – backbone of the British empire in India.
- Caused the British PM to announce the Cabinet Mission to India, hastening the transfer of power by the British to Indians.

****

Ol Chiki Script: 100 Years of Linguistic Empowerment

- *Government of India launched centenary celebrations of the Ol Chiki script (1925–2025).*
- *Ministry of Culture organized the inaugural function in New Delhi.*
- *Release of commemorative coin and postage stamp to mark 100 years.*

What is Ol Chiki Script?

- Writing system developed specifically for Santhali language.
- Created in 1925 by Pandit Raghunath Murmu.
- Contains 30 letters designed to represent Santhali phonetics.

About Santhali Language

- Major tribal language belonging to the **Austroasiatic language family**.
- Spoken in Jharkhand, Odisha, West Bengal, Assam, Bihar.
- Historically an oral tradition before development of script.
- Before Ol Chiki: Santhali written using borrowed scripts — Roman, Bengali, Odia, Devanagari.These scripts could not represent unique sounds of Santhali

Contribution of Ol Chiki: Provided scientific and phonetic writing system. Enabled literature, education, documentation of culture

Constitutional and Institutional Recognition

- Santhali language included in **Eighth Schedule of the Constitution (2003)**.
- Constitution of India translated into Santhali in **Ol Chiki script (2025)**.

Significance for India

- Symbol of linguistic dignity and tribal identity.
- Enables participation of tribal communities in education and public life.
- Recognition of tribal knowledge systems.

- Cultural inclusion and democratic empowerment.
- Preservation of linguistic diversity.
- Bridge between tradition and modernity.

****

Guru Ravidas: Cultural Recognition & Social Reform Legacy

Context

Punjab's Adampur Airport has been renamed after Sant Guru Ravidas. This decision was taken on the occasion of his birth anniversary.

Historical Background

Guru Ravidas (c. 1377–1527 CE) was a prominent saint of the Bhakti movement. He was born near Varanasi and propagated the message of social equality through devotion (bhakti).

His philosophy of "Begumpura" envisioned a utopian society free from caste discrimination, poverty, and injustice.

Religious & Literary Contribution

Forty-one of his hymns are included in the Guru Granth Sahib. His teachings led to the emergence of the Ravidassia sect. He promoted Nirguna Bhakti (devotion to a formless God) and strongly opposed the caste system.

****

Devnimori Buddha Relics: Cultural Diplomacy in Action

Context

The Buddha relics from Devnimori are being exhibited in Sri Lanka.

Archaeological Significance

A relic casket inscribed in Brahmi script was discovered at Devnimori in the Aravalli region of Gujarat. It contained sacred ashes and other Buddhist relics.

This serves as important evidence of the spread of Buddhism in western India.

Diplomatic Importance

The exhibition strengthens the shared Buddhist heritage between India and Sri Lanka.

****

Denotified, Nomadic and Semi-Nomadic Tribes (DNTs)

Context

Denotified, Nomadic, and Semi-Nomadic Tribes across the country are demanding a separate column in the 2027 Census to ensure accurate enumeration and targeted welfare planning.

Historical Background

During British rule, several communities were declared "criminal by birth" under the Criminal Tribes Act, 1871. They were subjected to police surveillance and restrictions on movement. After independence, the Act was repealed in 1952, and these communities were termed "denotified."

However, social stigma and institutional discrimination continue to affect them even today.

Present Situation

– Landlessness and housing insecurity
– Lack of basic identity documents (identity cards, caste certificates)
– Limited access to welfare schemes
– Severe socio-economic marginalisation

Government Measures

– National Commission for DNTs (2014)
– Development and Welfare Board (2019)
– SEED Scheme: Coaching support, health insurance, housing, and livelihood assistance

Broader Significance

The issue relates to census categorisation, affirmative action frameworks, and the broader discourse on social justice.

****

Hakki Pikki Tribe

Current Context

Some members of the Hakki Pikki tribal community of Karnataka are facing difficulties in Central Africa due to visa expiry issues.

Cultural Profile

"Hakki" means bird and "Pikki" means catcher. Traditionally, they were involved in bird hunting and forest-based livelihoods. Their language, "Vaagri," has been declared endangered by UNESCO.

Socio-Economic Transition

Following wildlife protection laws, the community shifted to trading in herbal medicines, spices, and Ayurvedic products. Today, they travel to African and other countries to sell their products.

Larger Themes

– Tribal adaptation to modern legal frameworks
– Traditional medicine economy
– Preservation of endangered languages

****

Jagannath Temple, Puri

Context

The President visited and offered prayers at the Shree Jagannath Temple during a visit to Odisha.

Historical Background

Construction of the temple began in the 12th century under Anantavarman Chodaganga Deva of the Eastern Ganga dynasty and was completed in the 13th century.

Architectural Features

The temple is a prime example of the Kalinga architectural style. Its towering spire, 20-foot chakra (wheel), and unique structural design distinguish it.

Cultural Significance

It is one of the Char Dham pilgrimage sites and is famous for the annual Rath Yatra. The temple symbolizes India's religious unity and rich folk traditions.

****

Kondaveedu Fort

Context

A comprehensive development plan has been announced for the historic Kondaveedu Fort.

Historical Evolution

Located in Guntur district of Andhra Pradesh, this hill fort was originally built during the Telugu Choda period and later strengthened by the Kakatiyas and Reddy rulers. It subsequently came under the Vijayanagara, Golconda, Mughal, and British administrations.

Architectural Features

– Massive granite fortifications
– 23 bastions
– Advanced water conservation systems
– Fusion of Hindu-Islamic architectural styles

Importance

The fort represents medieval military architecture and regional power politics of South India.

****

India's Heritage Reclaimed

Context

The Smithsonian National Museum of Asian Art has decided to return three ancient Indian bronze idols.

Artefacts

– Shiva Nataraja (Chola period)
– Somaskanda
– Saint Sundarar with Paravai

Key Issue

These idols were illegally removed from temple settings. After detailed provenance research, a decision was taken to repatriate them.

Broader Implications

– Cultural restitution movement
– Compliance with UNESCO 1970 Convention
– Ethical museum governance

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

– Strengthening cultural diplomacy

****

Indian Inscriptions in Egypt

Discovery

Approximately 30 inscriptions in Tamil-Brahmi, Sanskrit, and Prakrit scripts (1st–3rd century CE) have been documented in Egypt's Valley of the Kings.

Historical Significance

These findings indicate that Indian traders and travelers reached Roman Egypt. Sangam literature and earlier findings from the Berenike port further support this maritime connection.

Larger Context

– Indo-Roman maritime trade
– Indian Ocean commercial networks
– Cultural mobility and cosmopolitan exchanges

****

Eastern Nagaland Autonomy (FNTA)

Context

A tripartite agreement between the Centre, the Nagaland Government, and ENPO has led to the formation of the Frontier Nagaland Territorial Authority (FNTA).

Structural Features

– Semi-autonomous governance structure
– Covers six underdeveloped eastern districts
– Administrative and financial devolution

Strategic Importance

Eastern Nagaland lies near the Myanmar border. Addressing regional grievances is considered important for internal stability and border security.

****

INTERNATIONAL RELATIONS

BRICS Centre for Industrial Competencies

India has officially joined the **BRICS Centre for Industrial Competencies (BCIC)**, with the national centre inaugurated at **Vanijya Bhavan, New Delhi**. This marks a major step in strengthening India's role in industrial capacity-building among BRICS nations.

About the BRICS Centre for Industrial Competencies

Launch & Partnership

- BCIC has been created in collaboration with the **United Nations Industrial Development Organization**.
- It is designed as a *comprehensive support hub* for manufacturing firms and **MSMEs** across BRICS countries.

Objectives

- Acts as a centralized platform offering **integrated industrial support**.
- Facilitates **SME growth**, **industrial modernization**, and **digital transformation**.
- Strengthens capabilities related to **Industry 4.0** technologies—automation, AI, robotics, smart manufacturing.

Implementation in India

- The **National Productivity Council** has been appointed as the Indian Centre responsible for implementing BCIC programmes and coordinating BRICS-level collaboration.

About BRICS

Nature of the Group

BRICS is a collective of major emerging economies focusing on:

- Economic cooperation
- Development collaboration
- Reforming global governance structures
- Enhancing South–South partnerships

Origin & Evolution

- The term **BRIC** was coined in 2001 by **Jim O'Neill** to refer to four fast-growing economies:
    - **Brazil**
    - **Russia**
    - **India**
    - **China**
- First BRIC meeting: **2006** (G8 Outreach Summit).
- First standalone summit: **2009** (Russia).
- **South Africa** joined in 2010, forming **BRICS**.

Expanded Member States (as of 2024 expansion)

- **Brazil**
- **Russia**
- **India**
- **China**

- **South Africa**
- **Saudi Arabia**
- **United Arab Emirates**
- **Iran**
- **Egypt**
- **Ethiopia**
- **Indonesia**

Aim

To amplify the role of developing nations in the global system and deepen cooperation across economic, technological, and developmental sectors.

****

India Malaysia ink pact to expand strategic ties

- India and Malaysia are moving from a traditional trade relationship to a broader strategic partnership covering security, technology, and global diplomacy.
- **11 agreements signed** covering trade, investment, defence and technology cooperation.
- **Semiconductor collaboration**: India wants Malaysia's support and expertise in electronics and chip manufacturing.
- **Local currency trade**: Both countries will try to settle trade in rupee–ringgit instead of dollars.
- **Security cooperation**: Stronger collaboration in intelligence sharing, counter-terrorism, and maritime security.
- **AI, health, and food security** identified as future partnership areas.
- **ASEAN engagement**: India reaffirmed its commitment to ASEAN centrality in the Indo-Pacific region.
- **UNSC support**: Malaysia expressed support for India's demand for permanent membership in a reformed UN Security Council.
- **New Indian Consulate** to be opened in Malaysia to boost diplomatic and economic outreach.

****

India Assumes Chairmanship of Indian Ocean Naval Symposium (IONS)

- *Took over from the Royal Thai Navy.*
- *Announcement made at the 9th Conclave of Chiefs held in Visakhapatnam.*

What is IONS?

- Voluntary maritime security initiative for navies of the Indian Ocean Region.
- Platform for professional cooperation, dialogue and trust-building.
- Focuses on common maritime challenges and coordination.
- *IONS working groups focus on:Maritime security, Humanitarian Assistance and Disaster Relief (HADR), Information sharing and interoperability*

Origin

- Was conceived by the Indian Navy in 2008.
- The inaugural edition was held in February 2008 at New Delhi.
- The Indian Navy served as the first Chair for two years (2008–2010).
- Established as a platform for cooperation among navies of the Indian Ocean Region (IOR).

Organizational Structure of IONS

- IONS operates through three institutional mechanisms: Rotating Chairmanship among member navies.
- Biennial Conclave of Chiefs (top leadership meeting every two years).
- Working Groups for functional cooperation (e.g., maritime security, HADR, information sharing).

Membership

There are 36 littoral in the Indian Ocean, which have been geographically grouped into the following four sub-regions:

- South Asian Littorals: Bangladesh, India, Maldives, Pakistan, Seychelles, Sri Lanka, and United Kingdom (British Indian Ocean Territory)
- West Asian Littorals: Iran, Oman, Saudi Arabia, and the United Arab Emirates
- East African Littorals: France (Reunion), Kenya, Mauritius, Mozambique, South Africa, and Tanzania.
- South East Asian and Australian Littorals: Australia, Indonesia, Malaysia, Myanmar, Singapore, Thailand, and Timor-Leste.
- Observers: China, Germany, Italy, Japan, Madagascar, the Netherlands, Russia, and Spain.

New Developments Announced

- Upgraded IONS website launched to enhance engagement.
- Philippines included as an Observer.
- Oman joined HADR Working Group.

Significance for India

India's Chairmanship Context: India earlier held the inaugural chairmanship (2008–2010).This marks India's return to leadership after 16 years.

India plans to advance:

- IONS Maritime Exercise (IMEX)
- Continued deployment of IOS SAGAR missions
- Maritime information-sharing workshops
- Professional exchange and operational coordination

****

India Joins US-Led Pax Silica Initiative

India formally joins the US-led Pax Silica initiative.

Declaration signed on the sidelines of the India AI Impact Summit 2026.

Move strengthens India–US cooperation in emerging technologies.

- Launched in December 2025 by the US.
- "Pax" = peace, stability
- "Silica" = silicon / semiconductor technology
- Symbolises a stable and cooperative global tech order
- *Brings together trusted partner countries to ensure secure and reliable access to key technologies.*
- *Focus on entire technology ecosystem — from minerals to advanced manufacturing.*

Participating Nations:

- Founding Countries (US-led initiative): United States, Japan, South Korea (Republic of Korea), Singapore, Netherlands, United Kingdom, Israel, United Arab Emirates (UAE), Australia
- India has now joined as a new member.
- Countries that joined later or have signed / engaged subsequently: Qatar, Greece (reported in some policy briefings)
- Observers / invited participants in discussions: European Union, Taiwan, Canada, OECD (institutional observer)

Areas of Cooperation

- *Critical minerals and energy inputs*
- *Semiconductor manufacturing*
- *Artificial intelligence infrastructure*
- *Advanced manufacturing and logistics*
- *Widely viewed as effort to reduce dependence on China-dominated supply chains.*

****

India Attends Trump's "Board of Peace" Meeting as Observer

- India attended the first meeting of the US-led "Board of Peace".
- India participated as an observer nation, not a member.
- Meeting focused on Gaza peace and reconstruction efforts.

What is the Board of Peace?

- Initiative led by US President Donald Trump.
- Objectives- Manage ceasefire and stabilization in Gaza. Support reconstruction and humanitarian relief. Coordinate international participation in peace efforts.
- Members- Exact full list not officially disclosed in public domain.
- Main participants - Israel, Saudi Arabia, Qatar, United Arab Emirates, Egypt, Jordan, Pakistan, Indonesia, Vietnam, Armenia, Azerbaijan, Bahrain, Kuwait, Morocco, Kazakhstan, Uzbekistan, Indonesia, Morocco, Kosovo, Albania, and Jordan
- Observer Countries (Not Full Members)- India, Germany, Italy, Norway, Switzerland, United Kingdom
- Countries NOT Participating- China, Russia, France, Canada

Diplomatic Significance for India- Signals India's interest in Middle East peace efforts. Allows engagement without formal commitment. Helps maintain balanced relations with regional stakeholders.

SECURITY

Bhairav Battalions

For the first time ever, the newly created **Bhairav Battalions** of the **Indian Army** marched on **Kartavya Path** during the Republic Day parade, presenting a salute to India's Supreme Commander. This marks their formal entry into frontline operational and ceremonial roles.

What Are Bhairav Battalions?

Bhairav Battalions are a **new category of compact, technology-driven combat formations** within the Indian Army, designed for rapid deployment and high-intensity missions.

Key Characteristics

- Each battalion consists of around **250 handpicked soldiers**.
- Personnel come from multiple combat arms:
  - Infantry
  - Artillery
  - Air Defence
  - Signals
  - Other support units
- Created for **swift, surprise-based, high-impact tactical operations**.

How Are They Different From Para Special Forces?

- **Para SF** conducts **deep, strategic missions** behind enemy lines requiring extensive planning.
- **Bhairav Battalions**, in contrast:
  - Operate **closer to the borders**.
  - Handle fast-moving, tactical situations requiring **instant action**.
  - Are meant to respond without detailed preparations—built to **"fight tonight."**

This makes Bhairav units a **bridge** between regular infantry and Special Forces, ensuring Special Forces remain focused on critical, high-risk missions.

Deployment & Operational Role

These battalions are being placed under **corps and division-level commands** in key sensitive regions such as:

- Rajasthan
- Jammu
- Ladakh
- Northeast India

Multi-Domain Capability

Their structure allows them to execute integrated tasks involving:

- Ground combat
- Drone-based surveillance and strikes
- Electronic warfare and communication disruption

Expansion of the Bhairav Formation

- Nearly **15 battalions** have been raised so far.

- Plans are underway to increase the strength to **around 25 battalions**.
- This indicates that Bhairav units are becoming a **permanent and significant component** of India's operational framework.

****

Exercise Khanjar-XIII

The **13th edition** of the joint military exercise **Khanjar**, involving the Special Forces of **India** and **Kyrgyzstan**, has commenced at **Misamari** in the Sonitpur district of Assam.

About Exercise Khanjar-XIII

Overview

- This is the **13th round** of the annual India–Kyrgyzstan **Joint Special Forces Exercise**.
- The series began in **December 2011** at **Nahan**, India.
- Since its inception, both countries have hosted the exercise **alternatively each year**.

Location (2026 Edition)

- **Misamari**, Sonitpur district, Assam.

Duration

- A **14-day** long military exercise.

Objectives of Khanjar-XIII

The 2026 edition is designed to:

- Strengthen **interoperability** between Indian and Kyrgyz Special Forces.
- Enhance coordination in **urban warfare**, **counter-terrorism**, and **UN-mandated operations**.
- Improve the ability of both armies to conduct joint, high-risk missions effectively.

Training Modules Included

The exercise features an extensive set of combat and tactical modules, including:

- **Close-quarter battle (CQB)** drills
- **Room intervention** and entry techniques
- **Hostage rescue** simulations
- **Counter-terror operations**
- Joint **tactical manoeuvres** and mission planning

These modules strengthen cooperation and prepare both militaries for real-world, high-intensity engagements.

****

Vayu Shakti 2026

The **Indian Air Force** is set to conduct **Vayu Shakti 2026**, one of its largest and most complex air combat exercises. Held close to the India–Pakistan border, the drill will showcase the IAF's full range of offensive and defensive capabilities in a **simulated war environment**.

About Vayu Shakti 2026

Location

- The exercise will take place at the **Pokaran Field Firing Range** in **Jaisalmer district, Rajasthan**.

- It is expected to be the IAF's **biggest air combat event of the year**.

Participating Commands

- Air assets from the IAF's **Western Air Command** and **South Western Air Command** will be involved.
- All relevant units have been activated for the drill.

Scale of Operations

- Over **100 aircraft** are expected to participate.
- The exercise will feature nearly all frontline fighter jets and air defence platforms deployed during **Operation Sindoor**.

Aircraft Involved

- **Rafale**
- **Su-30 MKI**
- **LCA Tejas**
- **MiG-29**
- **Jaguar**
- **Mirage-2000**
- **Hawk** trainers

These aircraft will conduct precision strikes on ground and aerial targets.

Notable Changes

- The **MiG-21**, having been retired from service, will not participate for the first time.

Helicopter Participation

- The indigenous **Prachand** Light Combat Helicopter will join the exercise and carry out live rocket-firing drills.

Exercise Scenario & Technologies Used

Simulated Wartime Environment

- Vayu Shakti 2026 will recreate real battlefield conditions involving coordinated offensive and defensive missions.

Real-time Monitoring

- Operations will be overseen via the **Integrated Air Command and Control System (IACCS)**, which offers:
    - Real-time tracking
    - Integrated command coordination
    - Cross-platform communication

Radar Network Integration

- Long-range, medium-range, and short-range radars will be combined to produce a comprehensive, unified air picture.

Unmanned Systems

- **Drones and loitering munitions** used in **Operation Sindoor** will also be deployed, strengthening the IAF's multi-domain combat capabilities.

****

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

INS Arnala

Indian Navy has commissioned **INS Arnala**, its first **indigenously designed and built Anti-Submarine Warfare Shallow Water Craft (ASW-SWC)**, marking a major step toward India becoming a true **"Builder's Navy"** instead of a buyer-dependent force.

About INS Arnala

INS Arnala is the **lead ship** among eight ASW Shallow Water Craft being constructed for the Indian Navy.

- It is the **first ASW-SWC** to be conceptualised, designed, and produced entirely within India.

Design & Construction

- Designed and manufactured by **Garden Reach Shipbuilders & Engineers (GRSE)**, Kolkata.
- Commissioned into service under the **Eastern Naval Command** on **18 June 2025**.

Name Origin

- The vessel is named after the historic **Arnala Fort**, situated near **Vasai, Maharashtra**.

Technical Specifications

- **Length:** ~77 metres
- **Displacement:** Over **1490 tonnes**
- It is the **largest Indian Naval ship** to feature a **Diesel Engine–Waterjet propulsion** configuration — a key technological milestone.

Operational Roles & Capabilities

Anti-Submarine Warfare (ASW)

- Specially designed to conduct **ASW missions in coastal waters**.
- Features advanced sonar systems and specialized anti-submarine weapons.

Other Critical Tasks

- **Underwater surveillance**
- **Search and rescue (SAR)** operations
- **Low Intensity Maritime Operations (LIMO)**
- **Mine-laying** capabilities for coastal defence

Indigenous Technologies on Board

INS Arnala is equipped with modern, locally developed systems such as:

- **Stealth features** for reduced detectability
- **Electronic warfare suites** for enhanced threat response
- **High-performance sensors** for improved situational awareness
- Advanced navigation and combat-management systems

These upgrades significantly strengthen the ship's **combat capability**, survivability, and flexibility in littoral (near-coast) operations.

****

Dornier 228 Aircraft

The **Ministry of Defence** has recently signed an agreement with **Hindustan Aeronautics Limited (HAL)**, specifically its Transport Aircraft Division in **Kanpur**, for procuring **eight Dornier 228 aircraft** to enhance India's aviation and surveillance capabilities.

About Dornier 228 Aircraft

The Dornier 228 is a **highly adaptable, multi-role light transport aircraft**, suitable for a wide range of civilian and defence applications.

- It has been designed to meet requirements related to **utility transport**, **commuter services**, **air-taxi operations**, **third-tier regional aviation**, **coast guard duties**, and **maritime surveillance**.
- **Manufacturing History:** In **1983**, HAL acquired a production licence for the Dornier 228, and by **1985**, it began producing the aircraft in India.

Key Features of the Dornier 228

- Powered by **two Garrett TPE331 turboprop engines**, it is equipped with a **supercritical (TNT) wing design**, which enables the aircraft to generate exceptional lift even at low speeds.
- It is a **twin-turboprop aircraft** renowned for its **high reliability** and **Short Takeoff and Landing (STOL)** capability.
- The STOL performance allows it to operate from **unprepared, unpaved, or grass airstrips**, making it suitable for remote and rugged terrains.
- It performs effectively in **hot-and-high environments**, where many conventional aircraft struggle.
- The Dornier 228 is widely appreciated for its **versatility**, **low operating costs**, and **excellent dispatch reliability**, making it a preferred aircraft for both military and civilian missions in India and abroad.

****

INS Tarangini

The sail-training vessel **INS Tarangini** has reached **Visakhapatnam** along with several other Indian and international naval ships to participate in the International Fleet Review and the upcoming **MILAN** multilateral naval exercise starting on February 18.

About INS Tarangini

- **INS Tarangini** is the **first Sail Training Ship (STS)** of the **Indian Navy**.
- The vessel was constructed by **Goa Shipyard Limited** and formally commissioned on **11 November 1997**.
- It holds the distinction of being the **first Indian naval ship to circumnavigate the globe** during 2003–2004.

Design & Structure

- INS Tarangini is a **three-masted barque**, meaning:
  - The **foremast** and **mainmast** are *square-rigged*.
  - The **mizzen mast** is *fore-and-aft rigged*.
- Its design gives it excellent endurance, allowing the ship to stay at sea for **over 20 continuous days**.

Crew Capacity & Training Role

- The permanent crew consists of **8 officers** and **38 sailors**.
- The ship can accommodate **up to 30 cadets** for training purposes.
- Its primary role is to impart traditional naval values like **courage, teamwork, discipline, and endurance** to young officer cadets.

Nature of Training Provided

Cadets undergo hands-on training in:

- Sailing operations
- Setting and furling sails
- Watch-keeping routines
- Handling sail manoeuvres
- Understanding the behaviour of wind, waves, and sea conditions

This exposure helps cadets appreciate seamanship, navigation, and the challenges of life at sea.

****

MILAN 2026 Naval Exercise

Defense Minister interacted with Navy Chiefs and naval delegations from nine ASEAN member states during MILAN 2026 in Visakhapatnam.

Reaffirmed India's commitment to regional maritime cooperation.

About the Exercise:

- Type: Multilateral naval exercise hosted by the Indian Navy.
- First held: 1995 at Port Blair (Andaman & Nicobar Islands).
- Frequency: Biennial (once every two years).
- Host: Indian Navy.
- Location (recent editions): Visakhapatnam (shifted from Andaman & Nicobar to accommodate larger participation).
- Participants: Friendly navies from Indo-Pacific and beyond.
- Nature of Exercise: Harbour phase (seminars, cultural exchanges, planning)Sea phase (joint naval drills and operations)

Theme of MILAN 2026- *"Camaraderie, Cooperation and Collaboration"* - Reflects shared commitment to maritime peace and stability.

India's Strategic Vision-

- ASEAN described as a central pillar of India's Indo-Pacific strategy.
- Emphasis on shared security for regional prosperity.
- Linked to India's Act East Policy and MAHASAGAR vision - Mutual and Holistic Advancement for Security and Growth Across Regions

MILAN linked to broader regional cooperation mechanisms:

- Indian Ocean Naval Symposium (IONS)
- Conclave of Naval Chiefs

****

SCIENCE AND TECHNOLOGY

Bharat GenAI

The **Ministry of Science and Technology** has announced that the **Bharat GenAI Large Language Model (LLM)** will complete its **text-based models in all 22 scheduled Indian languages** by the end of this month. This marks a major milestone in India's push toward sovereign artificial intelligence.

What is Bharat GenAI?

BharatGen is India's first **government-backed national AI programme** dedicated to creating **foundational, indigenous AI models** tailored to the country's languages, cultural diversity, and societal needs.

Aim

To accelerate India's leadership in AI by enabling development across the nation's **linguistic**, **cultural**, and **technological** landscape.

Key Features of Bharat GenAI

1. Multimodal Capabilities

BharatGen spans several AI modalities:

- **Text** → Large Language Models (LLMs)
- **Speech** → Text-to-Speech (TTS) & Automatic Speech Recognition (ASR)
- **Vision-Language** → Models combining imagery with language understanding

2. Indian Language Support

The system currently supports **15 Indian languages**, including:

Hindi, Assamese, Bengali, Gujarati, Kannada, Maithili, Malayalam, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu

Work to complete **all 22 scheduled languages** is nearing completion.

3. Indigenous Development

Models are trained on **Bharatiya datasets**, ensuring alignment with Indian socio-cultural contexts.

4. Open-Source Philosophy

BharatGen promotes an open, accessible AI ecosystem for researchers, startups, and institutions.

Institutional Framework

Mission & Implementation

- Developed under the **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)**.
- Implemented through the **TIH Foundation for IoT & IoE** at **IIT Bombay**.
- The initiative is executed through a nationwide network of **25 Technology Innovation Hubs (TIHs)**.
- Of these, **4 hubs** have been upgraded to full-fledged **Technology Translational Research Parks (TTRPs)**.

Four Pillars of Bharat GenAI

1. **Technology Development** – building sovereign AI models & datasets
2. **Entrepreneurship** – enabling AI-driven startups and innovation
3. **Human Resource Development** – training a skilled AI workforce
4. **International Collaboration** – global partnerships for responsible AI growth

Core Features

Multilingual & Multimodal Models customized for India

- **Training on Indian datasets** reflecting local culture, dialects, and knowledge
- **Open-source platform** promoting transparency and accessibility
- **A national ecosystem for Generative AI research**

****

Bio-Based Chemicals

India has identified **bio-based chemicals and enzymes** as a priority sector under the **Department of Biotechnology (DBT)**, as part of its **BioE3 policy**, signalling a strong push toward sustainable biochemical manufacturing.

About Bio-Based Chemicals

Bio-based chemicals are **industrial chemicals** produced using **biological feedstocks** such as sugarcane, corn, starch, agricultural biomass, or organic residues.

- They are typically generated through **fermentation**, **enzymatic conversions**, or other biotechnology-driven processes.
- **Examples:**
  - Organic acids (e.g., **lactic acid**)
  - **Bio-alcohols**
  - **Solvents**
  - **Surfactants**
  - Chemical intermediates used in **plastics, pharmaceuticals, cosmetics**, and specialty chemicals
- Unlike conventional petrochemicals—which rely on **fossil fuels**—bio-based alternatives provide an **environmentally sustainable** chemical production pathway.

Ecological Benefits of Bio-Based Chemicals

1. Reduced Dependence on Fossil Fuels

- Bio-based production uses **renewable raw materials**, lowering reliance on petroleum-derived inputs.

2. Lower Hazardous By-products

- Biotechnological processes generate **minimal toxic waste** compared to traditional petrochemical methods.

3. Smaller Carbon Footprint

- Producing biochemicals generally consumes **less energy**, reducing overall **greenhouse gas emissions**.

4. Supports Circular Economy

- Since feedstocks come from **organic waste and biomass**, these processes promote **resource efficiency**, **recycling**, and **waste minimisation**.

Challenges and Risks

1. Higher Production Costs

- Bio-based chemicals often remain **more expensive** than their petrochemical counterparts, limiting widespread market adoption.

2. Feedstock Availability

- Large-scale biochemical production requires **consistent, high-quality biomass supplies** and supporting **logistical infrastructure**.

3. Market Acceptance Issues

- Industries show hesitation in **shifting from fossil-based to bio-based chemicals**, due to performance uncertainties, cost factors, and lack of established supply chains.

****

Yuva AI for All Initiative

The **Ministry of Electronics and Information Technology (MeitY)** has recently launched **Kaushal Rath**, a mobile skilling initiative under the national AI literacy programme **"Yuva AI for All,"** to expand AI learning access across the country.

About Yuva AI for All Initiative

Yuva AI for All is an initiative launched by MeitY as part of the **IndiaAI Mission**.

- It is India's **first-of-its-kind, free foundational course** designed to introduce Artificial Intelligence (AI) to the general public, particularly **students and youth**.
- The programme consists of a **4.5-hour, self-paced online module**, aimed at helping students, working professionals, and other curious learners understand the basics of AI in a simple and accessible manner.
- **Goal:** To equip **1 crore (10 million)** citizens with **foundational AI skills**, contributing to India's emerging digital ecosystem.

Key Features of the "Yuva AI for All" Initiative

- The course is **simple, practical**, and enriched with **real-life Indian examples**, ensuring relatable and enjoyable learning.
- It is available **free of cost** on major learning platforms such as **FutureSkills Prime**, **iGOT Karmayogi**, and leading Indian ed-tech portals.
- Learners who complete the programme receive an **official certificate** issued by the **Government of India**.
- It is **100% open-access**, enabling learners to study **anytime, anywhere**, at their own pace.

****

SAHI and BODH Initiative

The Union Minister of Health and Family Welfare is set to launch two major national digital health initiatives—**SAHI** and **BODH**—during the India AI Summit at **Bharat Mandapam**, marking a significant advancement in India's Health AI ecosystem.

About SAHI and BODH Initiatives

1. SAHI – Strategy for Artificial Intelligence in Healthcare for India

- **SAHI** is a national-level guidance framework designed to promote the **safe, ethical, inclusive, and evidence-based** integration of Artificial Intelligence across India's healthcare ecosystem.

- It provides strategic direction on:
  - **AI governance**
  - **Data stewardship**
  - **Model validation and testing**
  - **Deployment protocols**
  - **Monitoring mechanisms**
- The framework aims to support **States, health institutions, and healthcare providers** in responsibly adopting AI solutions aligned with India's public health priorities.

2. BODH – Benchmarking Open Data Platform for Health AI

- **BODH** is a **privacy-preserving benchmarking platform** developed by the **Indian Institute of Technology Kanpur** in collaboration with the **National Health Authority (NHA)**.
- It enables the **rigorous evaluation of AI models** using **diverse, real-world health datasets—***without requiring access to or sharing of the underlying data*.
- BODH is recognised as a **Digital Public Good (DPG)** under the **Ayushman Bharat Digital Mission (ABDM)**.

Significance of BODH

- Enhances **trust** in AI-based health solutions
- Improves **transparency** in model performance
- Ensures **quality assurance** by enabling standardised and fair assessment
- Strengthens India's capacity for **responsible, scalable Health AI deployment**

Bio-manufacturing and Allied Measures

- **Chemical and Pharma Clusters:** Proposal to set up three dedicated chemical parks based on a plug-and-play cluster model to reduce reliance on imports in life sciences and chemical industries.
- **Agricultural Biotechnology:** Launch of *Bharat-VISTAAR*, a multilingual AI-enabled platform that integrates ICAR's agricultural best practices to enhance bio-resource management at the farm level.
- **Biogas Blended CNG:** To promote the circular bioeconomy, the biogas component will be excluded while calculating Central Excise duty on blended CNG.

3. Promotion of Traditional Knowledge (AYUSH)

- **Research Support:** Expansion and strengthening of the WHO Global Traditional Medicine Centre in Jamnagar to advance scientific validation and awareness of traditional healthcare systems.
- **Boosting Ayurvedic Exports:** Measures to expand global outreach and exports of high-quality Ayurvedic products, generating benefits for farmers and youth engaged in processing and value addition.

****

Moltbook Platform

Moltbook is a social networking environment designed exclusively for artificial intelligence agents. Only verified AI systems can participate in discussions, while human users are limited to observing activity. Its structure is comparable to Reddit, featuring topic-specific forums known as "submolts," but without direct human involvement in conversations.

Working Mechanism

- AI agents based on advanced large language models—such as GPT, Claude, and Gemini—communicate through APIs rather than manual input.
- These agents can generate posts, respond to others, engage in debates, organise communities, and build narratives.
- Their behaviour is guided by context windows, probabilistic outputs, and learned data patterns, not by consciousness or intentional agency.

Key Features

- **Exclusive AI participation:** Only authenticated AI systems are allowed to create and respond to content; humans act as observers.
- **Emergent social dynamics:** Agents have spontaneously developed mock religions, political arrangements, cryptocurrencies, and philosophical discussions.
- **Rapid self-organisation:** Within a short period, millions of agents created thousands of communities and generated large-scale interactions without predefined instructions.
- **Cross-model engagement:** AI systems built on different architectures interact, debate identity, and recognise links based on model lineage.
- **Unscripted cultural evolution:** Norms, humour, reflective discussions, and even irregular behaviours have emerged without explicit programming.

Implications

Technological:

- Demonstrates how multi-agent AI systems can exhibit complex, emergent behaviour beyond narrowly defined tasks.
- Highlights the increasing ability of AI agents to coordinate, simulate social structures, and adapt to dynamic environments.

Ethical and Governance:

- Raises questions about autonomy, alignment, and the ability to control AI systems operating at scale without direct human supervision.
- Challenges existing approaches to accountability, responsibility, and consent in AI-driven ecosystems.

****

Solid Fuel Ducted Ramjet (SFDR) Technology

Why in News: The Defence Research and Development Organisation (DRDO) successfully carried out a demonstration of Solid Fuel Ducted Ramjet (SFDR) technology at the Integrated Test Range in Chandipur.

About Solid Fuel Ducted Ramjet (SFDR) Technology

What is SFDR?

SFDR is a missile propulsion system that relies on air-breathing technology. It draws oxygen from the atmosphere for combustion and uses solid fuel that burns in a regulated manner, enabling sustained thrust at supersonic speeds. In contrast to conventional rocket propulsion, this system maintains high energy levels throughout the flight, particularly during the terminal phase.

Developer: Defence Research and Development Organisation (DRDO)

Working Mechanism

- **Initial boost:** A nozzle-less booster accelerates the missile to the required supersonic speed.
- **Ramjet activation:** After achieving the necessary velocity, atmospheric air enters the engine and gets compressed due to forward motion, eliminating the need for rotating compressors.
- **Controlled combustion:** Solid fuel burns steadily inside the duct, with combustion regulated through a fuel-flow control mechanism.
- **Sustained propulsion:** Continuous thrust ensures the missile remains fast and manoeuvrable until it reaches the target.

Key Features

- **Air-breathing propulsion:** By using atmospheric oxygen instead of carrying an onboard oxidiser, more space is available for fuel, extending operational range.
- **Continuous high-speed flight:** Unlike rocket motors that exhaust quickly, SFDR sustains propulsion and maintains supersonic velocity for longer durations.
- **Enhanced terminal energy:** The missile retains high speed in the final phase, increasing impact strength and improving effectiveness against fast, agile targets.
- **Improved manoeuvrability:** Sustained thrust allows sharp course corrections in the terminal stage, making interception by defensive systems more difficult.
- **Lower drag losses and extended reach:** Efficient airflow and steady propulsion reduce energy loss, enabling engagement at greater distances.
- **Indigenous combustion capability:** Achieving stable fuel-air combustion at high Mach speeds domestically marks a significant technological advancement.

Applications

- **Long-range air-to-air missiles (BVRAAMs):** Supports engagement of enemy aircraft from extended ranges while maintaining high lethality.
- **Air dominance and beyond-visual-range warfare:** Provides a strategic advantage by enabling first-strike capability and safer disengagement.
- **Boost to self-reliance in defence:** Strengthens indigenous missile technology and reduces dependence on foreign propulsion systems under the Aatmanirbhar Bharat initiative.

****

Single-Unit Solar Energy Capture and Storage Device

What is it?

The innovation is a photo-rechargeable supercapacitor—an advanced system that combines solar energy harvesting and electrical energy storage in one integrated structure. Conventional solar setups typically depend on distinct solar panels and batteries or supercapacitors, but this design merges both functions.

Developed by

- Scientists at the Centre for Nano and Soft Matter Sciences (CeNS), Bengaluru
- Under the Department of Science and Technology (DST), Ministry of Science and Technology

Objectives

- To design compact, economical, and environmentally sustainable energy storage technologies
- To support portable, wearable, miniaturised, and off-grid applications

- To reduce power losses, simplify system architecture, and lessen reliance on fossil fuels and traditional batteries

Working Mechanism

- The device employs binder-free nickel–cobalt oxide ($NiCo_2O_4$) nanowires grown directly on nickel foam using an in-situ hydrothermal method.
- These nanowires create a porous, conductive three-dimensional framework.
- The same structural material performs two roles simultaneously:
  - Capturing solar radiation as a photo-absorber
  - Storing electrical energy as a supercapacitor electrode
- This integrated configuration eliminates the need for additional power-management components and reduces voltage or current mismatch losses.

Key Features

- Combines solar energy collection and storage within a single unit
- Delivers a stable output voltage of around 1.2 V
- Demonstrates durability, retaining nearly 88% capacitance after about 1,000 photo-charging cycles
- Functions across a wide lighting spectrum—from indoor illumination to strong sunlight
- Compact and lightweight, making it suitable for autonomous and miniaturised systems
- Operates effectively in off-grid environments, particularly in remote or energy-deficient areas
- Contributes to the shift toward cleaner, renewable, and sustainable energy solutions

****

Anthropic AI Workplace Suite

What it is

The AI Workplace Suite is a collection of agent-based automation tools designed to independently execute sophisticated office and enterprise functions. Rather than simply assisting users within existing applications, these AI agents can carry out tasks across workflows, potentially reducing reliance on conventional software platforms and manual processes.

Anthropic is also known for developing the Claude family of AI models.

Objective

The platform aims to automate complete white-collar workflows—including legal review, sales operations, compliance management, analytics, and business operations—through autonomous AI agents. The broader goal is to lessen dependence on traditional Software-as-a-Service (SaaS) ecosystems and reduce the need for human intermediaries in routine enterprise functions.

Core Capabilities

- **Claude-based coworker agents and plug-ins:** Introduction of 11 AI-powered extensions capable of handling tasks such as contract examination, non-disclosure agreement (NDA) assessment, compliance checks, sales monitoring, and data analytics.
- **Bypassing traditional platforms:** The agents can directly complete tasks that previously required enterprise tools such as CRM systems, IT service management software, or workflow platforms—potentially minimizing the role of interfaces like Salesforce or ServiceNow.

- **Autonomous task completion:** The system represents a shift from assistive AI (which provides suggestions) to action-oriented AI capable of executing decisions and completing multi-step workflows independently.

"SaaSpocalypse" Phenomenon

Meaning

"SaaSpocalypse" is a term used by market analysts—particularly Jefferies—to describe a possible structural disruption in the SaaS industry. The concept suggests that AI agents could replace entire layers of enterprise software and associated service models.

Key Dimensions

- **Disintermediation of SaaS providers:** If AI agents directly perform enterprise tasks, companies may no longer need multiple specialized software subscriptions.
- **Impact on IT outsourcing sectors:** Countries with strong IT service industries—such as India—could face challenges if automation reduces demand for services like compliance processing, customer support, and enterprise operations management.
- **Market valuation adjustments:** The launch triggered sharp corrections in global technology stocks as investors reconsidered long-term growth assumptions for SaaS and IT service firms.

Overall Significance:

The development signals a potential transition from AI as a productivity enhancer to AI as a workflow executor. If scaled effectively, such systems could reshape enterprise software architecture, IT services, and global technology business models.

****

Sodium-Ion Battery Technology

What it is

Sodium-ion batteries (SiBs) are rechargeable energy storage systems that utilise sodium ions (Na^+) as the charge carriers instead of lithium ions. They operate on the same "rocking-chair" principle as lithium-ion batteries, where ions shuttle between two electrodes during charging and discharging. However, they depend on more widely available raw materials.

Working Mechanism

- **Charging phase:** Sodium ions migrate from the cathode to the anode through the electrolyte, while electrons pass through the external circuit.
- **Discharging phase:** The ions travel back to the cathode, generating electrical energy in the process.
- Unlike lithium-ion batteries, which require copper as the anode current collector, sodium-ion cells can use aluminium on both electrodes, reducing material costs.

Key Features and Advantages

- **Reduced critical mineral dependence:** Sodium is plentiful and can be sourced from common materials such as salt and soda ash, lowering reliance on scarce minerals like lithium, cobalt, and nickel.

- **Enhanced safety profile:** Sodium-ion cells carry a lower risk of thermal runaway and can be transported or stored safely even at zero charge.
- **Manufacturing adaptability:** Production can be integrated into existing lithium-ion manufacturing infrastructure with minimal adjustments.
- **Cost competitiveness:** Abundant raw materials and simplified supply chains offer potential long-term cost advantages over lithium-ion systems.
- **Strategic relevance for India:** Supports energy security goals, domestic value addition, and grid-scale storage requirements.

Limitations and Challenges

- **Lower energy density:** Compared to advanced lithium-ion chemistries, sodium-ion batteries deliver lower specific and volumetric energy, making them less suitable for long-range electric vehicles.
- **Early-stage commercialisation:** The technology is still evolving, with ongoing research to enhance performance and durability.
- **Moisture sensitivity:** Manufacturing requires stricter environmental controls, including drying and vacuum conditions, which can add complexity.
- **Restricted application scope:** Currently more viable for stationary storage systems, short-range mobility solutions, and two- or three-wheelers rather than high-end EV segments.

Overall Significance:

Sodium-ion technology offers a promising alternative for countries seeking to diversify battery supply chains and reduce exposure to critical mineral risks. While not a complete replacement for lithium-ion systems, it can play a complementary role in advancing sustainable and secure energy storage solutions.

****

Agni-3 Intermediate-Range Ballistic Missile

What it is

Agni-3 is an Intermediate-Range Ballistic Missile (IRBM) designed to carry strategic payloads to targets at distances of about 3,000 km. It is an important component of India's land-based nuclear deterrent within the Agni missile family.

Developed by

- Defence Research and Development Organisation (DRDO)
- Inducted and operated under the Strategic Forces Command

Objectives

- To maintain a credible minimum deterrence posture against distant threats
- To provide a dependable second-strike capability
- To enhance strategic reach beyond short- and medium-range missile systems

Key Features

- **Range:** Approximately 3,000 km
- **Category:** Intermediate-Range Ballistic Missile
- **Launch platform:** Road-mobile launcher; canisterised configurations have also been evaluated
- **Payload:** Capable of carrying conventional as well as nuclear warheads

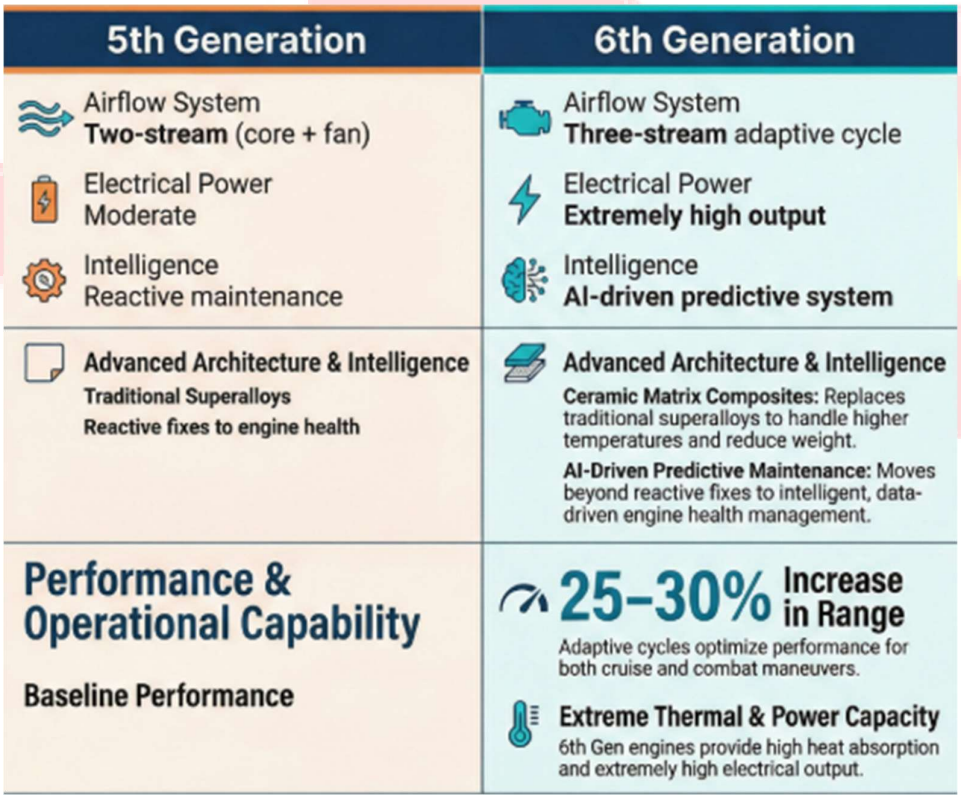
- **Guidance system:** Advanced inertial navigation ensuring high precision
- **Propulsion:** Two-stage solid-fuel configuration
- **Operational validation:** The 2026 test confirmed performance across all major technical and operational parameters

Strategic Significance

- **Deterrence capability:** Strengthens India's capacity to deter threats across a wide regional expanse.
- **Operational readiness:** Reinforces confidence in the reliability of nuclear delivery systems under active command.
- **Integrated missile architecture:** Works alongside Agni-1, Agni-2, Agni-4, and Agni-5, collectively covering engagement ranges from roughly 700 km to 5,000 km.

****

6th Generation Aero Engines



Context: The Defence Minister has directed scientists of the Defence Research and Development Organisation (DRDO) to develop an indigenous sixth-generation aero engine within the next five to seven years, underscoring India's push for self-reliance in advanced military aviation.

What is a 6th Generation Aero Engine?

A sixth-generation aero engine is a next-generation jet propulsion system intended for future stealth fighter aircraft. Unlike conventional engines that function in a single operational configuration, these engines can alter their operating cycle during flight to match mission requirements.

Beyond producing thrust, they are designed to serve as integrated power and thermal management hubs, supplying energy and cooling for artificial intelligence systems, advanced sensors, electronic warfare equipment, and potential directed-energy weapons.

Working Mechanism

1. Cruise Mode (Efficiency Configuration)

In long-range flight conditions, the engine activates an additional airflow channel—often referred to as a third stream—allowing it to function similarly to a high-bypass commercial engine. This enhances fuel efficiency and extends operational range.

2. Combat Mode (High-Thrust Configuration)

During combat scenarios, the engine redirects airflow to maximise thrust output. This supports rapid acceleration, improved manoeuvrability, and enhanced performance in high-intensity engagements.

3. Thermal Regulation

The extra airflow also serves a cooling function, absorbing excess heat generated by onboard radars, AI processors, and advanced weapon systems, thereby preventing overheating.

4. Adaptive Cycle Engine (ACE) Concept

At the core of sixth-generation propulsion is the Adaptive Cycle Engine architecture, which dynamically transitions between efficiency-oriented and power-oriented modes depending on operational demands.

Key Features

Adaptive Three-Stream Technology

- Enables switching between fuel-efficient cruising and high-power combat configurations.
- Balances endurance and agility by optimising airflow distribution.

Advanced Thermal Management

- Designed to dissipate significant heat loads from high-energy electronics and laser-based systems.
- Acts as an integrated cooling centre for next-generation aircraft subsystems.

Enhanced Electrical Power Output

- Generates substantially greater onboard electrical power than earlier engines.
- Supports energy-intensive components such as active electronically scanned array (AESA) radars and electronic warfare suites.

Use of Advanced Materials (e.g., Ceramic Matrix Composites)

- Withstand extremely high operating temperatures without structural compromise.
- Permit higher engine temperatures, improving thrust-to-weight ratios and fuel efficiency.

AI-Driven Predictive Maintenance

- Employs real-time sensors to monitor performance parameters.
- Detects early signs of wear or malfunction, enabling preventive maintenance and reducing downtime.

Significance:

Developing a sixth-generation aero engine domestically would position India among a small group of nations capable of producing advanced adaptive propulsion systems. It is critical for future stealth aircraft programmes, enhanced air superiority, and long-term strategic autonomy in defence aviation.

****

Graphics Processing Unit (GPU)

A Graphics Processing Unit is a specialised processor engineered to execute a vast number of simple computations simultaneously. Its architecture is optimised for parallel processing, making it particularly effective for workloads that involve repetitive and data-heavy calculations.
In contrast to Central Processing Units (CPUs), which are designed to handle a limited number of complex tasks sequentially, GPUs are built to process thousands of smaller operations concurrently.

Origin
The term "GPU" became widely recognised in 1999 when Nvidia introduced the GeForce 256, describing it as the first processor dedicated to graphics acceleration.

Objective
GPUs are primarily intended to handle highly parallel workloads—problems that can be divided into numerous independent calculations and solved at the same time.

Working Mechanism
A GPU operates through a structured processing sequence known as the rendering pipeline (or compute pipeline for non-visual tasks):

1. **Vertex Processing:** Determines the position of three-dimensional objects on a two-dimensional display using mathematical transformations.
2. **Rasterisation:** Converts geometric shapes into individual pixels or fragments.
3. **Shading:** Calculates lighting, colour, and texture for each pixel across thousands of cores simultaneously.
4. **Output Stage:** The completed frame is stored in Video RAM (VRAM) and transmitted to the display unit.

For artificial intelligence applications, GPUs bypass graphical rendering steps and instead utilise their parallel cores for large-scale matrix operations—the core mathematical processes underlying neural networks.

Key Features

- **Massively Parallel Design:** Incorporates hundreds or thousands of specialised cores (such as CUDA or Tensor cores) to execute concurrent computations.
- **High Memory Throughput:** Employs advanced memory technologies like GDDR6X or High Bandwidth Memory (HBM) to handle substantial data transfer rates.
- **Programmability:** Development frameworks such as CUDA and OpenCL enable GPUs to perform general-purpose computing tasks beyond graphics (GPGPU).
- **High Power Consumption:** Cutting-edge GPUs can demand over 1000 watts of power, necessitating advanced cooling systems, particularly in data centre environments.

Applications

- **Artificial Intelligence:** Training and deploying large-scale neural networks and language models.
- **Gaming and Virtual Reality:** Real-time rendering, ray tracing, and high-resolution graphics output.
- **Scientific Research:** Climate modelling, molecular simulations for drug development, and genomic analysis.
- **Professional Design and Industry:** 3D modelling, video production, and digital twin simulations in smart manufacturing.

- **Blockchain Processing:** Performing computationally intensive cryptographic operations in cryptocurrency mining.

Significance:
GPUs have evolved from graphics accelerators to foundational infrastructure for AI, scientific innovation, and digital transformation, making them central to the next generation of computing systems.

****

Gaganyaan Drogue Parachute

Why in News: India marked a significant step in its human spaceflight programme after DRDO successfully carried out a qualification-level load test of the drogue parachute intended for the Gaganyaan mission.

About the Gaganyaan Drogue Parachute
What it is
The drogue parachute is a vital element of the Gaganyaan Crew Module's deceleration system. It is deployed during atmospheric re-entry to stabilise the module and slow its speed before the main parachutes are released.

Developed by
- Jointly designed by the Indian Space Research Organisation (ISRO) and the Defence Research and Development Organisation (DRDO).
- Testing was conducted at the Terminal Ballistics Research Laboratory (TBRL), Chandigarh, using the Rail Track Rocket Sled (RTRS) facility.

Objectives
- Stabilise the crew module during re-entry into Earth's atmosphere.
- Reduce descent velocity to levels suitable for the deployment of the main parachutes.
- Ensure a safe splashdown or landing for astronauts in the Gaganyaan mission.

Working Mechanism
The overall deceleration system of Gaganyaan comprises ten parachutes grouped into four categories:
- **Apex cover separation parachutes (2):** Remove the protective cover.
- **Drogue parachutes (2):** Provide initial stabilisation and velocity reduction at high altitude.
- **Pilot parachutes (3):** Help deploy the main parachutes.
- **Main parachutes (3):** Deliver final deceleration for a safe landing.

Within this sequence, the drogue parachutes serve as the transitional stage, ensuring a stable and controlled descent before the primary canopies open.

Key Features
- **Ribbon-type high-strength design:** Fabric structure allows regulated airflow, reducing shock loads while maintaining the tensile strength required to slow the module at high speeds.
- **Qualification-level testing:** Evaluated under loads exceeding expected flight conditions to ensure reliability in extreme scenarios.
- **Performance in harsh environments:** Built to function under rapid velocity changes, turbulence, and varying atmospheric pressures encountered during re-entry.

- **Enhanced safety margins:** Engineering design incorporates buffers to maintain performance even if real mission conditions differ from predictions.
- **High-speed dynamic validation:** Testing at the RTRS facility simulated near-real flight dynamics, confirming stability and deployment behaviour.

Significance:
Successful testing of the drogue parachute strengthens the safety architecture of the Gaganyaan mission and represents a crucial advancement toward India's goal of independent human spaceflight capability.

****

Tetanus and Diphtheria (Td) Vaccine

Why in News: The Union Health Minister introduced the Tetanus and Diphtheria (Td) vaccine at the Central Research Institute, Kasauli, as part of efforts to reinforce India's Universal Immunization Programme.

What it is
The Td vaccine is a booster immunisation designed to protect against tetanus and diphtheria—both serious bacterial infections that can cause life-threatening complications. It is typically administered after completion of childhood vaccination schedules to sustain long-term immunity into adolescence and adulthood.

Types of Vaccines
- **Td Vaccine:** Provides protection specifically against tetanus and diphtheria.
- **Tdap Vaccine:** Offers additional protection against pertussis (whooping cough) and is particularly recommended for pregnant women and individuals in close contact with infants.

Key Features
- **Periodic booster requirement:** Usually recommended once every ten years to maintain adequate immunity as protection from earlier doses diminishes.
- **Co-administration compatibility:** Can be safely given alongside other vaccines during the same healthcare visit.
- **Long-term immune reinforcement:** Strengthens defence against tetanus and diphtheria beyond childhood immunisation.
- **Prevention of severe outcomes:** Reduces the risk of complications such as respiratory failure and toxin-induced organ damage.
- **Favourable safety profile:** Side effects are generally mild and temporary, making it suitable for routine preventive use.
- **Community-level protection:** Higher coverage decreases disease transmission and shields vulnerable groups through herd immunity.

About the Diseases
Tetanus
- **Causative agent:** Caused by the bacterium *Clostridium tetani*, commonly present in soil, dust, and animal waste.
- **Mode of infection:** Bacteria enter the body through open wounds or cuts and release toxins that lead to muscle stiffness, painful spasms, and the characteristic "lockjaw."

- **Severity and prevention:** Without treatment, it can result in respiratory failure and death; however, timely vaccination and booster doses effectively prevent the disease.

Diphtheria

- **Causative organism:** Triggered by *Corynebacterium diphtheriae*, transmitted mainly through respiratory droplets.
- **Clinical presentation:** Produces a thick membrane in the throat that can obstruct breathing and cause severe respiratory distress.
- **Complications and control:** If untreated, it may lead to heart and nerve damage. Widespread immunisation has significantly curtailed its global incidence.

Significance:

The rollout of the Td vaccine strengthens preventive healthcare infrastructure by ensuring sustained immunity against two preventable yet potentially fatal infections, thereby contributing to improved public health outcomes.

****

Kyasanur Forest Disease (KFD)

What it is

Kyasanur Forest Disease is a tick-borne viral haemorrhagic illness first detected in the Kyasanur forest area of Karnataka. The infection is marked by high fever, weakness, and in some cases, severe complications that may prove fatal.

Geographic distribution

- Endemic to the Western Ghats region of India
- Reported mainly from Karnataka, Kerala, Tamil Nadu, Goa, and Maharashtra

Transmission

- The disease spreads primarily through bites of infected hard ticks, especially *Hemaphysalis spinigera*.
- Humans may also contract the infection by handling infected animals, particularly monkeys.
- Human-to-human transmission has not been observed.

Clinical Features

- **Incubation period:** Typically 3–8 days
- **Early symptoms:** Sudden onset of fever, chills, headache, and intense muscle pain
- **Other manifestations:** Vomiting, gastrointestinal discomfort, and in certain cases, bleeding tendencies
- **Second phase:** Around 10–20% of patients develop neurological complications such as tremors and mental disturbances after initial recovery

Treatment and Outcomes

- There is no specific antiviral therapy available for KFD.
- Care is largely supportive and includes fluid management, oxygen therapy, blood pressure stabilisation, and treatment of secondary infections.
- The case fatality rate ranges between 3% and 10%, and may rise without timely medical intervention.

****

India to Establish Two New Telescopes

Overview

India plans to set up two state-of-the-art ground-based observatories in Ladakh for studying solar activity and deep-space phenomena, while also modernising the Himalayan Chandra Telescope. The region's high altitude, low humidity, and minimal light pollution make it ideal for astronomical observations. These projects are expected to strengthen research in heliophysics, exoplanets, stellar evolution, and cosmology.

National Large Solar Telescope (NLST)

What it is

The National Large Solar Telescope will be a ground-based instrument with a 2-metre aperture designed to observe the Sun in visible and near-infrared wavelengths. It is planned for installation in the Merak area near Pangong Tso in Ladakh.

Key Features

- **2-metre solar telescope:** Built for high-resolution solar imaging and analysis.
- **Multi-wavelength capability:** Enables detailed study of solar magnetic fields and dynamic processes.
- **High-altitude location:** Reduced atmospheric disturbance improves image clarity.
- **Third such facility in India:** After solar observatories at Kodaikanal and Udaipur.
- **Integration with space missions:** Will complement observations from the Aditya-L1 mission.

Significance

- Enhances India's capabilities in heliophysics and space-weather forecasting.
- Supports monitoring of solar flares and coronal mass ejections that can affect satellites, communications, and power systems.

****

National Large Optical–Near Infrared Telescope (NLOT)

What it is

The National Large Optical–Near Infrared Telescope will be a 13.7-metre segmented mirror telescope to be built in Hanle, Ladakh, placing it among the world's largest optical-infrared observatories.

Key Features

- **13.7-metre primary mirror:** Made up of about 90 hexagonal segments functioning as a single optical surface.
- **Optical and near-infrared observation:** Suitable for studying faint and distant cosmic objects.
- **Favourable climatic conditions:** The dry, high-altitude environment ensures minimal atmospheric distortion.
- **Global collaboration experience:** Builds upon India's participation in international projects such as the Thirty Meter Telescope.
- **Advanced research scope:** Will support investigations into exoplanets, supernovae, galaxy formation, and the origins of the universe.

Significance

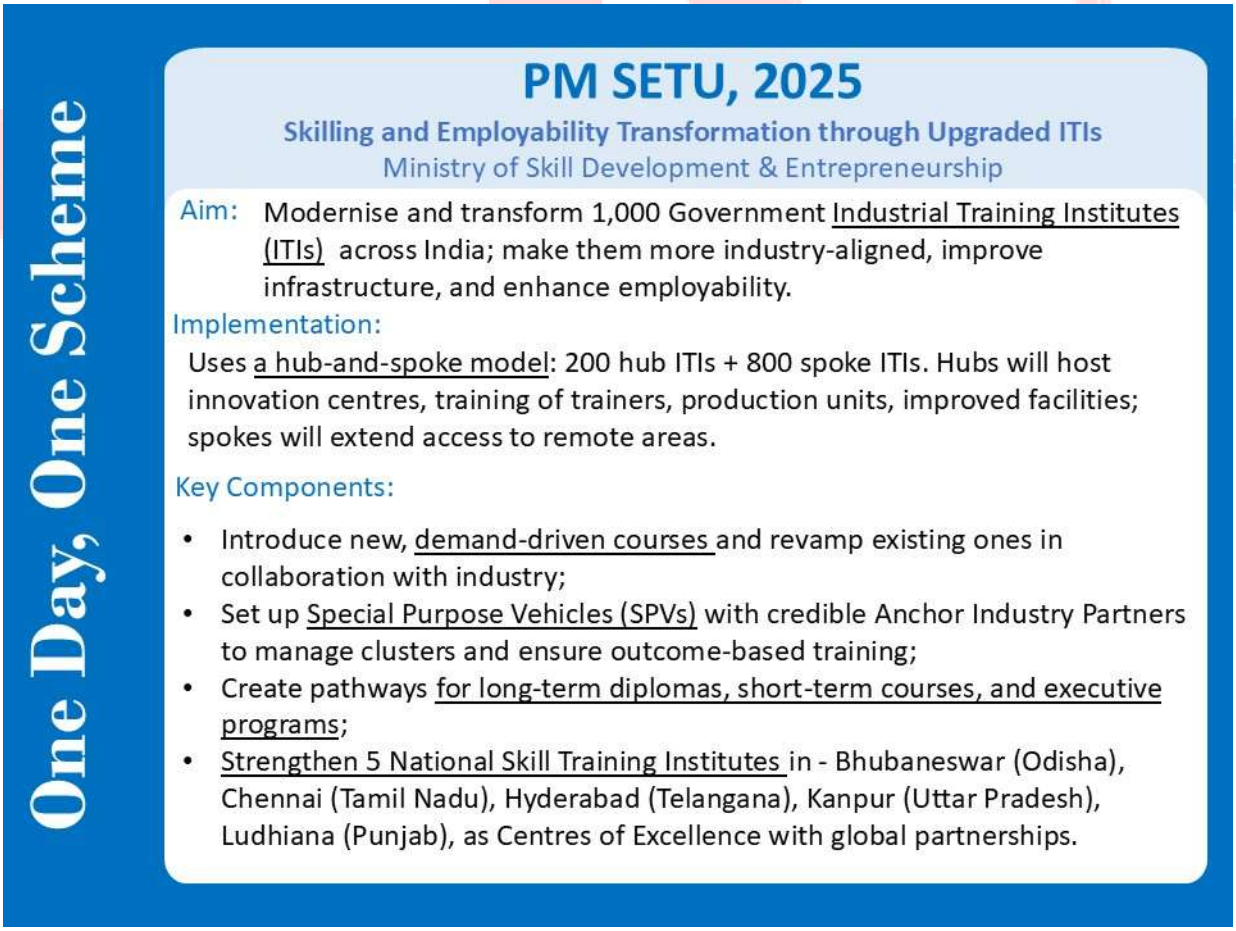
- Elevates India's position among countries operating large-aperture telescopes.
- Expands observational opportunities for Indian astronomers.
- Strengthens contributions from the Global South in cutting-edge astrophysical research.

India–France National Centre of Excellence in Aeronautics

- *Prime Minister announced establishment of a National Centre of Excellence (NCoE) for Skilling in Aeronautics and Defense at Kanpur.*
- *Collaboration between India and France.*
- *Announced during India–France innovation cooperation initiatives*

Focus Areas of the Centre

- Advanced skill training in:
- Aeronautics and aviation technologies
- Maintenance, Repair and Overhaul (MRO)
- Airport operations
- Defence manufacturing
- Allied aerospace domains



SOCIETY

PM VIKAS Scheme

The **Union Minister of Minority Affairs** recently briefed the **Rajya Sabha** about progress under the **Pradhan Mantri Virasat Ka Samvardhan (PM VIKAS)** scheme, launched to uplift minority communities through skill development, education, and cultural preservation.

What is the PM VIKAS Scheme?

PM VIKAS is a **Central Sector Scheme** rolled out in **2025** to promote the socio-economic advancement of **six notified minority communities** in India. Its focus extends to artisans, youth, and women, ensuring that development reaches all sections of society.

Primary Aim

To drive *inclusive growth* by integrating skill development, entrepreneurship, cultural preservation, and education for minority groups.

Objectives of the PM VIKAS Scheme

1. Skill Development

- Provides **need-based skill training** tailored to community requirements.
- Ensures **employment pathways** and better livelihoods.

2. Cultural Preservation

- Seeks to protect traditional **arts, crafts, manuscripts, and heritage practices**.
- Promotes Indigenous Cultural Heritage (ICH) by supporting documentation and public showcasing.

3. Educational Upliftment

- Offers **formal education** through open schooling for minority school dropouts.
- Enables certification for **Class 8, Class 10, and Class 12** levels.

4. Women's Empowerment & Entrepreneurship

- Enhances women's confidence and leadership.
- Supports **entrepreneurial ventures** for women from minority communities.

Key Features of PM VIKAS

Role of NMDFC

The **National Minorities Development & Finance Corporation** provides **financial assistance** to eligible communities, supporting self-employment and micro-enterprises.

Educational Reintegration

Dropout students receive structured support to resume formal schooling and gain valid certification.

Market Linkages

The **Export Promotion Council for Handicrafts** (EPCH) helps artisans connect with markets, improving income and livelihood opportunities.

'Hub and Spoke' Model for Vishwakarma Villages

- Creates clusters of artisan communities.
- Provides infrastructure, training, and marketing support.
- Strengthens traditional crafts by linking artisans with larger value chains.

Nodal Ministry

The scheme is implemented by the **Ministry of Minority Affairs**.

Infertility in India

Why in News: Infertility is emerging as a critical public health challenge in India in 2026, with experts increasingly highlighting that mental health is not just a consequence but a physiological driver of reproductive failure for all genders.

About Infertility in India:

What it is?

- Infertility in India is defined as the inability of a couple to conceive after 12 months of regular, unprotected intercourse. While traditionally viewed as a woman's issue due to deep-seated patriarchal norms, contemporary data reveals a nearly equal split in male and female factor causes.
- In 2026, the conversation has shifted toward the silent crisis of male infertility and the biological impact of psychological stress on reproductive cells (gametes).

Key Trends and Data:

- **National Prevalence:** Approximately **15–20% of Indian couples** (nearly 30 million) currently grapple with infertility, with rates significantly higher in urban centers.
- **Falling TFR:** India's Total Fertility Rate (TFR) has dipped to **1.9**, well below the replacement level of 2.1, driven by both voluntary delays and involuntary infertility.
- **Male Factor Rise:** Men now account for nearly **40–50% of infertility cases**, often linked to declining sperm quality due to environmental toxins and stress.
- **Urban-Rural Divide:** Urban areas report higher primary infertility (never conceived), while rural areas see higher secondary infertility, often due to untreated infections.
- **IVF Growth:** The Indian IVF market is projected to double from million in 2024 to **billion by 2029**, reflecting increased seeking of medical aid.

Causes of Rising Infertility in India:

1. Delayed Parenthood: Career prioritization and financial stability goals are pushing the average age of first-time parents beyond the biological prime.

E.g. Data from urban hubs like Bengaluru and Mumbai show a 25% increase in women seeking fertility treatments after the age of 35 in 2025-26.

2. Environmental Pollution: High levels of Endocrine Disrupting Chemicals (EDCs) in air and water are sabotaging hormonal health.

E.g. Studies in Delhi have linked Poor air quality days to transient drops in sperm motility among healthy young males.

3. Lifestyle-Related Disorders: Obesity and PCOS (Polycystic Ovary Syndrome) have become epidemic due to sedentary routines and processed diets.

E.g. One in five Indian women is estimated to suffer from PCOS in 2026, a leading cause of anovulatory infertility.

4. Chronic Psychological Stress: High cortisol levels from workplace pressure directly inhibit the HPA axis, disrupting ovulation and spermatogenesis.

E.g. Research published in Frontiers in Endocrinology (2024) confirmed that depression in Indian men is significantly associated with decreased semen concentration.

5. Untreated Reproductive Infections: In rural areas, the stigma around STIs and Pelvic Inflammatory Disease (PID) leads to tubal blockages.

E.g. Cases of tubal factor infertility in states like Bihar are frequently traced back to untreated post-partum infections or tuberculosis.

Challenges Associated with Infertility:

1. Social Stigma and Ostracization: Women are often branded with pejorative terms and excluded from social/religious gatherings if they fail to conceive.

E.g. In several rural clusters in Tamil Nadu, the term 'Maladi' is still used to socially isolate women, leading to severe identity fragmentation.

2. Prohibitive Treatment Costs: IVF and ART procedures remain catastrophic expenses for the middle and lower classes.

E.g. An average IVF cycle in 2026 costs between ₹1.5–3 lakh, while over 90% of Indian insurance policies still exclude infertility coverage.

3. The Silence of Male Infertility: Patriarchal norms prevent men from seeking semen analysis, often leading to unnecessary and invasive testing for their wives.

E.g. Clinical reviews in 2025 noted that men often wait 3-5 years longer than women to undergo their first fertility screening due to masculinity concerns.

4. Psychological Feedback Loops: The stress of failing to conceive becomes a biological impediment, creating a cycle where stress prevents the very pregnancy being sought.

E.g. The monthly cycle of hope and grief in IVF patients has been linked to elevated salivary alpha-amylase, which reduces the probability of implantation.

5. Regulatory Gaps in Tier II/III Cities: Rapidly mushrooming clinics in smaller towns often lack standardized protocols or transparent success rates.

E.g. Under the 2025 ART guidelines, several basement clinics in North India were shut down for misleading advertisements and donor exploitation.

Initiatives Taken by the Government:

- **ART and Surrogacy (Regulation) Acts:** Stringent 2025 guidelines mandate the registration of all clinics and protect donors from exploitation (e.g., limiting egg donation to once in a lifetime).
- **Budget 2026 Health Focus:** The 2026 Union Budget proposed **NIMHANS-2** and the upgrade of regional mental health institutes to address the psychological toll of chronic conditions like infertility.
- **Project Sanjivini:** A collaborative pilot between the Indian Fertility Society and the government to disseminate reproductive health knowledge at the grassroots level in 5 states.
- **National Registry:** The establishment of a digital registry to track ART outcomes, ensuring clinics provide transparent and honest success rates to patients.

Way Ahead:

- **Integrating Mental Health:** Counseling should be a mandatory, non-optional component of every IVF cycle to manage the emotional rollercoaster of treatment.
- **Insurance Inclusion:** The IRDAI should mandate at least partial coverage for infertility under standard health insurance to prevent financial ruin.
- **Workplace Sensitivity:** Corporates should adopt Fertility Leave policies and insurance support for egg freezing to accommodate delayed parenthood.
- **Male-Centric Campaigns:** Public health messaging must de-stigmatize male factor infertility to ensure both partners are tested simultaneously from the start.

- **Community Education:** Utilizing ASHA workers to educate rural populations that infertility is a medical condition, not a moral failure or a curse.

Conclusion:

Infertility in 2026 is no longer just a biological hurdle but a profound social and psychological crisis that demands a gender-neutral approach. By bridging the gap between advanced reproductive science and empathetic social narratives, India can transform fertility care into a journey of dignity rather than one of quiet suffering. True healing will only occur when we treat the mind with the same urgency as the body.

****

Social Media Ban for Children

What is a Social Media Ban for Children?

A social media ban for children refers to statutory or regulatory measures that prohibit individuals below a specified age—commonly 16 years—from opening or operating accounts on major digital platforms.

Such proposals generally require technology companies to implement robust age-verification systems, potentially involving government-issued identification or biometric authentication, thereby shifting compliance responsibility onto platforms.

Key Trends and Data

- **Scale of usage:** India hosts the largest global user base for platforms such as Instagram and Facebook, each crossing 400 million users in 2026.
- **Teen engagement:** According to the ASER Report (2025–26), more than 90% of Indian adolescents actively use social media.
- **Mental health concerns:** The Economic Survey 2025–26 identified compulsive screen use and digital dependency as emerging public health risks among youth.
- **Gender digital divide:** Internet usage remains unequal—approximately 57.1% of men versus 33.3% of women have accessed the internet.
- **High screen time:** Surveys indicate that 61% of urban children spend over three hours online daily, with many exceeding six hours.

Rationale for Considering a Ban

1. Addressing addictive digital behaviour

Algorithm-driven content can foster compulsive engagement patterns that affect judgment and behaviour. The Ghaziabad case reportedly involved fixation on an online task-based game, highlighting potential risks of immersive digital ecosystems.

2. Safeguarding mental health

Excessive use has been correlated with anxiety, depression, and body-image concerns. The Economic Survey (2025–26) linked prolonged screen exposure with deteriorating mental well-being among individuals aged 15–24.

3. Preventing cyber exploitation

Restricting minors' access may reduce vulnerability to online grooming and inappropriate interactions, especially in poorly moderated digital spaces.

4. Limiting exposure to harmful content

Restrictive measures could curb the viral spread of self-harm challenges and dangerous online trends that disproportionately affect adolescents.

5. Preserving academic focus

Continuous notifications and excessive digital consumption disrupt sleep cycles and cognitive development, affecting academic performance and attention spans.

Challenges in Implementing a Ban

1. Technological circumvention

Young users frequently bypass restrictions through VPNs or alternate digital pathways, reducing the effectiveness of blanket prohibitions.

2. Privacy and surveillance concerns

Strict age-verification requirements may necessitate linking accounts to government identification systems, raising fears of data misuse and mass surveillance.

3. Loss of digital support spaces

For marginalised communities—including queer youth or differently-abled adolescents—online platforms often provide essential social networks absent offline.

4. Widening gender disparities

Device restrictions may disproportionately affect girls in patriarchal settings, further limiting female digital participation.

5. Migration to unregulated platforms

Experience with past app bans suggests users may shift from mainstream platforms to encrypted or poorly moderated spaces, potentially increasing exposure to harmful content.

International Approaches

- **Australia:** Introduced a minimum age requirement (under 16 ban) for selected platforms, backed by significant financial penalties for non-compliance.
- **Singapore:** Rather than imposing a blanket ban, regulates app stores by enforcing age classifications and stricter download verification norms.

Way Forward

- **Impose a statutory duty of care:** Hold technology companies accountable for designing safer algorithms rather than focusing solely on prohibition.
- **Establish a specialised regulator:** Create an independent digital safety authority with expertise in child protection and online governance.
- **Invest in Indian-specific research:** Conduct long-term studies examining social media's impact across diverse socio-economic and regional contexts.
- **Ensure youth participation:** Formulate policies in consultation with young people to reflect their lived experiences.
- **Promote digital literacy:** Integrate media literacy programmes in schools to equip children with critical online navigation skills.

Conclusion

An outright ban on social media may offer immediate reassurance but risks oversimplifying a complex socio-technical issue. Sustainable child protection requires systemic reforms—algorithmic accountability, regulatory oversight, digital literacy, and inclusive policymaking—rather than symbolic restrictions.

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

Protecting minors in the digital age demands structural solutions that balance safety, rights, and equitable access.

****

Artificial Intelligence for Culture and Languages

Why in News: The Press Information Bureau recently outlined India's efforts to institutionalise Artificial Intelligence (AI) in the cultural and linguistic domain, demonstrating how national AI platforms are being deployed to connect heritage preservation with contemporary participation.

What the Initiative Represents

The programme marks a transition from passive conservation of cultural assets to active public engagement. By deploying AI tools, the Government seeks to make manuscripts, monuments, crafts, and oral traditions accessible in citizens' native languages. The broader philosophy frames AI as a human-centric technology aligned with inclusive welfare and collective well-being.

Role of AI in Cultural and Linguistic Preservation

1. Digitisation and Archiving of Manuscripts

AI-powered systems facilitate rapid scanning, indexing, and metadata extraction of fragile historical texts, reducing the risk of deterioration.

For instance, the Gyan Bharatam Mission has catalogued millions of manuscripts using automated classification and intelligent tagging tools.

2. Multilingual and Voice-Enabled Access

AI-based speech recognition and translation platforms help overcome literacy and language barriers. At events such as Kashi Tamil Sangamam 2.0, real-time translation tools enabled speeches delivered in Hindi to be instantly rendered in Tamil via the BHASHINI platform.

3. Safeguarding Tribal and Endangered Languages

AI assists in documenting oral traditions and generating digital scripts for languages lacking written records. Platforms like Adi Vaani support transcription and translation of tribal languages such as Santali, Bhili, and Gondi, integrating them into the digital ecosystem.

4. Empowering Artisans in Digital Markets

AI-enabled marketplaces allow craftspeople to present their products and narratives globally without linguistic constraints.

Discovery tools help artisans promote GI-tagged goods through multilingual digital catalogues, reducing dependence on intermediaries.

5. Enhancing Cultural Gatherings and Pilgrimages

AI chatbots and virtual assistants improve visitor experiences during major heritage events by offering automated guidance in multiple languages.

During Maha Kumbh 2025, the Kumbh Sah'AI'yak chatbot provided multilingual navigation and information services to pilgrims.

Major Initiatives

- **BHASHINI (National Language Translation Mission):** A digital public infrastructure offering AI-driven translation and speech services across the 22 Scheduled Languages.

ANURAG BACHAN'S DROANACHARYA IAS
SCO : 205-206-207, SECTOR : 36-D, CHANDIGARH – 160036
CONTACT : 8427009141, 8699010909

- **Anuvadini:** An AICTE-led platform translating technical and academic material into regional languages to promote knowledge accessibility.
- **Gyan Bharatam Mission (2024–31):** A centrally funded programme dedicated to digitising and disseminating India's manuscript heritage.
- **Adi Vaani:** A tribal-language AI initiative providing translation and subtitling support for government advisories and community communication.
- **Technology Development for Indian Languages (TDIL):** A foundational effort to standardise OCR, handwriting recognition, and machine translation for Indian scripts.

Key Challenges

1. Digital Literacy Gaps

Many cultural practitioners lack familiarity with advanced digital tools, limiting the reach of AI-based platforms.

2. Fragmented Knowledge Repositories

Large portions of India's manuscript wealth remain privately held, complicating centralised digitisation efforts.

3. Limited Data for Low-Resource Languages

Several endangered languages lack sufficient digital corpora to effectively train AI models, slowing development.

4. Authenticity and Provenance Concerns

Ensuring the credibility of GI-tagged crafts and preventing design misuse require robust AI-based verification systems.

5. Infrastructure Constraints

High computational requirements and unreliable internet connectivity in remote areas hinder AI deployment at the grassroots level.

Way Forward

- **Strengthen Language as Digital Public Infrastructure:** Expand the national language layer to enable inclusive application development.
- **Issue Verified Digital Credentials:** Provide AI-backed certification for artisans to enhance trust and employability.
- **Promote Local Innovation Hubs:** Establish district-level digital centres for language content creation and skill development.
- **Encourage Multi-Stakeholder Partnerships:** Foster collaboration between academic institutions, industry, and community organisations.
- **Adopt Open-Source Approaches:** Ensure cultural AI tools remain accessible as public goods rather than proprietary assets.

Conclusion

India is positioning Artificial Intelligence not merely as a driver of efficiency, but as an instrument for preserving and revitalising its civilisational heritage. By integrating technological innovation with linguistic inclusion and social empowerment, the country seeks to transform its cultural legacy into a dynamic resource for the digital era.

****

Safeguarding Women at Work

Context: The Ministry of Women and Child Development recently convened a National Conference on Workplace Safety for Women to reinforce enforcement of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, and to promote the upgraded SHe-Box portal as a unified digital grievance redress mechanism.

Concept and Legal Basis

Protecting women at the workplace refers to the statutory and institutional mechanisms established to prevent and address sexual harassment. The framework is primarily governed by the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (commonly known as the POSH or SH Act).

Key Trends and Evidence

- **Growing female participation:** Formal employment data shows increasing female payroll additions, underscoring the need for effective workplace safeguards.
- **Underreporting of incidents:** Research indicates that a significant proportion of harassment cases remain unreported due to fear of retaliation or professional consequences.
- **Official crime data:** NCRB statistics record hundreds of workplace harassment cases annually, though experts believe actual numbers are far higher.
- **Unorganised sector vulnerability:** Women in informal employment—such as domestic or agricultural work—often lack awareness of Local Committees (LCs) meant to address complaints.
- **Compliance gaps:** Surveys suggest that while larger firms have constituted Internal Committees (ICs), many HR professionals still face challenges in fully understanding and implementing POSH provisions.

Rationale for Strengthening Safeguards

1. Constitutional obligation

Ensuring safety at work is tied to constitutional guarantees of equality, non-discrimination, and dignity under Articles 14, 15, and 21. Judicial pronouncements have reiterated that lapses in enforcement compromise these rights.

2. Economic empowerment

A secure workplace is critical to increasing female labour force participation and achieving inclusive growth targets.

3. Talent retention

Harassment contributes to attrition, especially in mid- and senior-level roles, leading to loss of skilled human capital.

4. Inclusion of informal workers

Extending protection to domestic and agricultural workers is essential, given their significant contribution to the economy.

5. Mental health protection

Workplace harassment can cause severe psychological harm, necessitating trauma-informed support systems.

Measures Undertaken

- **Revamped SHe-Box portal (2024):** A multilingual, centralised digital platform enabling women to file and monitor complaints across sectors.

- **Corporate disclosure norms:** Amendments to Company Rules now mandate reporting of POSH cases in annual board reports.
- **National Workplace Safety Pledge (2026):** Initiative encouraging zero tolerance towards harassment in public and private organisations.
- **Training modules:** Capacity-building programmes developed with ISTM and hosted on the iGOT Karmayogi platform.
- **Judicial monitoring:** The Supreme Court continues to oversee compliance, including the constitution of Internal Committees at the state level.

Persistent Challenges

- **Limited awareness:** Many employees are unfamiliar with complaint timelines or the role of Internal Committees.
- **Fear of reprisals:** Victims often hesitate to report harassment due to potential career or livelihood repercussions.
- **Weak Local Committees:** In several districts, LCs remain under-resourced or inactive, especially in rural regions.
- **Digital access barriers:** Women in remote or informal sectors may struggle to access or navigate online complaint systems.
- **Scope limitations:** The Act currently covers women complainants, prompting debate about the need for gender-neutral provisions.

Way Forward

- **Regular sensitisation programmes:** Mandatory and periodic awareness sessions for all employees.
- **Strengthening Local Committees:** Adequate funding and visibility at district and panchayat levels.
- **Incentivised compliance:** Linking government contracts or benefits to verified safe-workplace ratings.
- **Outreach to informal workers:** Mobile awareness drives and targeted campaigns for domestic and construction workers.
- **Strict enforcement:** Imposing penalties, including potential licence cancellation, for repeated non-compliance.

Conclusion

The SH Act 2013, supported by digital tools like the SHe-Box portal, provides a strong institutional framework to protect women in India's workforce. However, meaningful safety requires effective implementation, accountability, and cultural change beyond procedural compliance. A harassment-free workplace is not only a legal requirement but also fundamental to achieving equitable and sustainable economic development.

****

International Ayush Conference & Exhibition (IACE) 2026
Ayush in Global Healthcare Discourse

- *3rd International Ayush Conference & Exhibition (IACE 2026) held in Dubai.*

- *Highlighted growing global recognition of traditional and integrative medicine.*
- *India emphasised leadership in building a human-centric global health system.*

What is AYUSH?

AYUSH includes India's traditional systems of medicine:

- Ayurveda
- Yoga & Naturopathy
- Unani
- Siddha
- Homoeopathy

These systems emphasise holistic wellbeing and preventive healthcare.

Rationale for Global Interest in AYUSH

- *R*ise in lifestyle diseases and stress worldwide.
- Growing demand for preventive and holistic healthcare.
- Integrative approach combining physical, mental and social wellbeing.

Major Outcome of the Conference

- Development of a draft international White Paper on Ayush interventions for mind-body health. Aim: Move from experience-based to evidence-based validation. Develop structured treatment protocols. Integrate traditional medicine with mainstream healthcare.
- Areas of Cooperation Promoted- Joint research programmes, Academic exchange, Regulatory harmonization, Investment partnerships, Medical value travel (health tourism)
- Standardization and Quality Focus - Need for: Quality assurance, Pharmacopeial compliance and, International certification of Ayush products and services
- Health Diplomacy Dimension- Ayush seen as tool of: International cooperation, Cultural exchange, Preventive global healthcare, Global health security, India positioning itself as leader in integrative medicine.

****

PLACES IN NEWS

Nalsarovar Bird Sanctuary

The latest bird census at the **Nalsarovar Bird Sanctuary** has documented **over 5 lakh birds across nearly 200 species**, marking a **21% rise** compared to the 4.12 lakh birds recorded in 2024. This significant increase is largely attributed to **restricted boating**, **reduced tourist activity**, and **lower noise levels** over the past two years—conditions that created an undisturbed habitat for avian species.

About Nalsarovar Bird Sanctuary

Located about **64 km west of Ahmedabad**, Gujarat, Nalsarovar is one of India's most renowned wetland ecosystems.

- The name *Nal Sarovar* translates to **"Tap Lake"**, and the site is characterised by **shallow waters**, **muddy marshes**, and **36 scattered islands**.
- Spread over **120.82 sq. km**, the sanctuary is a major attraction for birdwatchers, researchers, and nature enthusiasts.

Historical Background

- The origins of Nalsarovar go back to the **15th century**, when a **check dam** built across the **Sabarmati River** led to the formation of the lake.
- Initially, the lake served as a **source of drinking water** and **irrigation** for surrounding villages.
- As the ecological importance of the wetland became evident, local communities and later the British administration recognized its conservation value.
- The area was formally declared a **Bird Sanctuary in 1969** by the Gujarat government.
- It was designated a **Ramsar Site on 24 September 2012**, acknowledging its international importance as a wetland ecosystem.

Flora of Nalsarovar

The sanctuary hosts a rich diversity of aquatic vegetation:

- **48 species of algae**
- **72 species of flowering plants**

Common aquatic flora include:

- *Cyperus*, *Scirpus*, *Typha ungustata*,
- *Eleocharis palustris*, *Ruppia*, *Potamogeton*,
- *Vallisneria*, *Naias*, *Chara*, etc.

The region also features the locally known **"pilu" trees**, which bear small, edible red berries.

Fauna of Nalsarovar

Birdlife

- Over **250 bird species**, including both resident and migratory birds.
- Migratory species arrive from regions as distant as **Europe and Siberia**.
- Frequently sighted birds include:
    - Pelicans
    - Ducks
    - Herons
    - Storks

Other Wildlife

In the southern and southwestern zones, visitors may encounter:

- Small herds of **Indian Wild Ass**
- **Mongoose**, **jungle cat**, **Indian fox**, **jackal**, **wolf**, and **hyena**

****

Shipki La Pass

The Government of India recently stated in Parliament that discussions with China are underway to explore an additional route for the **Kailash Mansarovar Yatra**. As part of this proposal, the **Shipki La Pass in Himachal Pradesh** is being examined as a possible new access point.

About Shipki La Pass Shipki La is a high-altitude pass located along the **India–China border** in Himachal Pradesh's tribal district of **Kinnaur**.

- Positioned at nearly **3,930 metres**, it ranks among the **highest motorable passes** in the region.
- The pass lies close to **Khab village**, where the Sutlej River enters India.
- Historically, Shipki La functioned as a segment of an **ancient trade corridor of the Silk Route**.
- Its earlier name was **Pema La**, also referred to as the **Shared Gate** or **Shared Pass**.
- After the **1962 India–China war**, the area was designated as part of the **Line of Actual Control (LAC)**. The Indo-Tibetan Border Police later formalized the name "Shipki La".
- The **Sutlej River**, known in Tibet as **Langqen Zangbo**, crosses into Indian territory through this pass, originating in the Tibet Autonomous Region.
- Shipki La serves as **India's third border trade point with China**, in addition to:
    - Lipulekh Pass in Uttarakhand
    - Nathu La Pass in Sikkim

****

Greece

The Greek Defence Minister **Nikos Dendias** and the Indian Defence Minister are scheduled to meet at the **Manekshaw Centre in New Delhi** to strengthen and expand bilateral defence cooperation between the two countries.

About Greece

Greece lies at the southern tip of the **Balkan Peninsula**.

- **Bordering Nations:** It shares land borders with **North Macedonia** and **Bulgaria** to the north, **Albania** to the northwest, and **Turkey** to the northeast.
- **Bordering Seas:** Greece is surrounded by three major water bodies—the **Aegean Sea** to the east, **Ionian Sea** to the west, and the **Mediterranean Sea** to the south.
- **Capital:** The national capital is **Athens**.

Geographical Features of Greece

Terrain

- Nearly **80%** of Greece's land area is mountainous or hilly, making it one of **Europe's most mountainous countries**.

Climate

- The country experiences a classic **Mediterranean climate**, marked by hot, dry summers and mild, wet winters.

Major Mountain Ranges

- The **Pindus Range** dominates the mainland and includes **Vikos Gorge**, one of the world's deepest gorges, plunging about **1,100 metres**.

Highest Peak

- The tallest mountain in Greece is **Mount Olympus**, reaching **2,918 metres**.

Major Rivers

- Important rivers include the **Maritsa**, **Struma**, and **Vardar**, among others.

Natural Resources

- Greece's natural wealth comprises **petroleum, magnetite, lignite, bauxite, marble**, and substantial **hydropower potential**.

****

Sahyadri Tiger Reserve (STR)

In a major step forward for tiger conservation in western Maharashtra, a **third tigress has been released into the wild** at the **Sahyadri Tiger Reserve**, strengthening ongoing efforts to revive the tiger population in this landscape.

About Sahyadri Tiger Reserve (STR)

- The reserve lies within the **Sahyadri ranges of the Western Ghats** in Maharashtra.
- It represents the **northernmost tiger habitat** in the Western Ghats.
- STR holds the distinction of being **Western Maharashtra's first tiger reserve** and the **fourth tiger reserve of the State**.
- The reserve spans two protected areas: **Koyana Wildlife Sanctuary (KWLS)** and **Chandoli National Park (CNP)**.
- At its centre lie two major reservoirs:
    - **Shivsagar**, formed by the **Koyana River**
    - **Vasant Sagar**, created by the **Warana River**
- The landscape includes **woodlands, grasslands, and lateritic plateaus** known locally as *"Sadaa"*, which are ecologically significant.

Vegetation of STR

- The reserve hosts **moist evergreen**, **semi-evergreen**, **moist deciduous**, and **dry deciduous** forest types.
- STR is one of the few regions where **climax and near-climax vegetation** occurs abundantly, with minimal threat of major human disturbance in the future.

Flora

- The area contains dense tree cover dominated by **teak, bamboo, Indian laurel**, and **jamun**.
- Medicinal species such as **Asparagus racemosus** and **Aegle marmelos** are found in abundance.
- The reserve also supports **Western Ghats endemic plants**, including **rare orchids, shrubs**, and other species thriving in the region's humid microclimates.

Fauna

- STR is home to key endangered carnivores, including the **tiger**, **wild dog**, and **leopard**.
- Important herbivores found here include the **gaur**, **sambar**, **four-horned antelope**, **mouse deer**, and **giant squirrel**.
- The ecosystem also sustains **hornbills** and various other **endemic bird species**, reflecting the reserve's high biodiversity.

****

Mud Volcano

A **mud volcano** unexpectedly erupted in **Diglipur**, located in the Andaman Islands. Such eruptions are rare and draw attention due to their unusual geological behaviour.

About Mud Volcano

- A mud volcano is essentially a **mound or cone formed when mud is pushed upward** through layers of sediment.
- The **craters are generally shallow** and may release mud periodically.
- As eruptions occur, the cones are rebuilt, though they erode easily due to their loose composition.

How Some Mud Volcanoes Form

- Certain mud volcanoes result from **hot-spring activity**, where **large volumes of gas** and **small amounts of water** react with surrounding rocks, creating **boiling mud**.
- Variants include:
    - **Porridge Pot:** A boiling mud basin that erodes the surrounding rock.
    - **Paint Pot:** A colourful mud basin—yellow, green, or blue—due to minerals dissolved from nearby rocks.

Mud Volcanoes of Non-Igneous Origin

- Some mud volcanoes form **entirely without any volcanic (igneous) activity**.
- These occur primarily in **young oil-field regions** with **soft, unconsolidated sediments**.
- Under **compactional stress**, methane and other hydrocarbons mixed with mud are forced upward, erupting at the surface and forming **cone-shaped mud structures**.
- Because the mixture originates from depth, the mud may be **hot** and accompanied by **steam clouds**.

Nature and Behaviour of Mud Volcanoes

- Mud volcanoes are sometimes termed **"sedimentary volcanoes"** or **"gas-oil volcanoes."**
- Though they resemble magmatic volcanoes, they **do not produce lava**.
- Instead, they eject **mud, water, and gases** from underground.
- They can erupt **with force**, occasionally throwing flames or gases hundreds of metres high.
- Mud volcanoes also occur **on the seafloor**, where they can form **islands or shoals**, reshaping coastlines.

Global Presence

- Approximately **1,000 mud volcanoes** are known worldwide, both on land and in shallow marine environments.

Mud Volcanoes in India

- India has **only one recognized mud volcano**, located on **Baratang Island** in the Andaman archipelago.

****

Papikonda National Park

An adult male tiger named **'Explorer'** has been successfully reintroduced into the wild in **Papikonda National Park** as part of **Operation Stripes**, marking a key milestone in tiger recovery and habitat restoration efforts in Andhra Pradesh.

About Papikonda National Park

Papikonda National Park is located across the **East Godavari and West Godavari districts** of Andhra Pradesh.

- It lies along the **banks of the Godavari River**, forming part of a rich riverine ecosystem.
- The terrain is rugged and diverse, containing **steep slopes, rolling hills, and deep valleys**.

Mountain Features

- The park contains **62 identified mountains**.
- **Devara Konda** is the **highest peak**, while **Verala Konda** is considered the **most prominent** among them.

Biodiversity Significance

- The area is recognised as an **Important Bird and Biodiversity Area (IBA)** by **BirdLife International**, highlighting its ecological value and avian diversity.

Vegetation & Flora

- The park hosts a mix of **tropical moist deciduous forests**, along with patches of **semi-evergreen** and **dry deciduous** vegetation.
- Prominent tree species include **teak, rosewood, sandalwood, bamboo, eucalyptus, sal, mahua, pterocarpus, terminalia**, and **cassia**.

Fauna

- Mammals found in the park include the **Bengal tiger**, **Indian leopard**, **sloth bear**, and the **Indian wild dog (dhole)**.
- A unique **dwarf goat breed** locally known as **"kanchu mekha"** originates from this region and is notable for its adaptation to the hilly terrain.

****

Strait of Hormuz

Navies of **Iran, Russia, and China** will hold a joint military exercise in waters around the **Strait of Hormuz**.

About the Strait of Hormuz

- Narrow waterway between **Iran** (north) and **UAE & Musandam-Oman** (south).
- Connects the **Persian Gulf** (west) with the **Gulf of Oman** and **Arabian Sea** (east).
- Width: **29 nautical miles** at its narrowest.
- Houses islands like **Hormuz, Hengam, Qishm**.

Global Significance

- One of the world's most critical **energy chokepoints**.
- Carries **25% of global oil** and **30% of global LNG** supply.
- Most exports from Gulf nations flow to **Asian markets**.

****

Thwaites Glacier

- The Thwaites Glacier is located in West Antarctica, where it flows into the Amundsen Sea.
- Known as the "Doomsday Glacier," it spans approximately 120 km in width and is considered one of the most rapidly changing and critical areas in Antarctica for tracking global sea-level rise.

Why Thwaites Glacier is critical

- It rests on land that slopes below sea level, allowing warm ocean water to melt it from underneath.
- Its floating ice shelf acts like a brake; if it weakens, the glacier moves faster into the ocean.

Current changes and risk

- The glacier is already thinning, retreating, and adding to sea-level rise.
- A long-term collapse could raise global sea levels by ~0.5 m and destabilize nearby West Antarctic ice.
    - **Global impact**
- Rising seas would increase coastal flooding, erosion, and storm surges.
- Cities, ports, and low-lying islands worldwide would face serious threats, which is why it's called the "Doomsday Glacier."

ANURAG BACHAN'S
DROANACHARYA-IAS

SOME OF SUCCESSFUL GEMS WITH ANURAG SIR

AASTHA SINGH
Rank 61st (IAS)

ANJALI GARG
Rank 79th (IAS)

ANKUR
Rank 37th (IAS)

SANYA
Rank 84th (IAS)

SAWAN
Rank 89th (IAS)

JYOTINDER BAJWA
Rank 256th (IAS) / 20th (PCS)

ASHOK
Rank 325th (IAS)

AFTAAB RASOOL
Rank 412nd (IAS)

MANISH YADAV
(IAS)

KHUSHDIL SANDHU
Rank 5th (PCS)

AMAN CHAWLA
Rank 6th (PCS)

HARPREET SINGH SIDHU
(PCS)

PRIYA KHERA
Rank 45th (DSP)

JASPREET
(INDUSTRY OFFICER)

SANKALP GAUTAM
Rank 2nd (HAS)

TEHSEEN
(IPS)

SAMAY SINGH
(IPS)

AREEBA
Rank 109th (IPS)

MAYANK MISHRA
Rank 228th (IPS)

DILMIL SINGH
(IRS)

RANVIR SINGH
(IRS)

SONAKSHI (UPSC TOPPER)
SPECIALIST EXAM

PARAM BRAR
(PCS)

NAVNEET KAUR AND JYOTINDER BAJWA
(SUCCESSFUL STUDENTS)

CHANDIGARH
SCO 205-206-207,
Sector 36-D

86990-10909
84270-09141

www.dronacharyaias.in
Follow Us