

# Monthly Current Affairs

March 2026



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## Governance & Policy

### SEBI Mandates Disclosure of Registration Details on Social Media Platforms

#### What's the News?

- The **Securities and Exchange Board of India (SEBI)** has issued a circular mandating that all regulated entities and registered intermediaries disclose their official registration details on social media.
- Market participants such as **Investment Advisers (IAs)** and **Research Analysts (RAs)** must now prominently display their registered name and **SEBI registration number** on their digital profiles.
- The move is aimed at enhancing transparency, curbing the influence of unregistered "finfluencers," and protecting retail investors from misleading financial advice.

#### Why This Move?

- Surge in Digital Financial Content:** Rapid growth of investment-related content on platforms like YouTube, Instagram, WhatsApp, and Telegram.
- Rising Investor Risk:** A SEBI survey (conducted by Kantar across 90,000 households) revealed that **62% of retail investors** rely on "finfluencer" recommendations, often bypassing formal advisory channels.
- Need for Differentiation:** To clearly distinguish between authorized SEBI-regulated entities and unregistered individuals posting financial advice.

#### Compliance Requirements

##### For Regulated Entities (Single Registration):

- Display **registered name and SEBI registration number** on social media homepage near the handle name.
- Mention the same details at the **beginning of every post, video, or content** related to securities market.

##### For Regulated Entities (Multiple Registrations):

- Provide a **web link on homepage** directing to a website listing all SEBI-registered names and numbers.
- Disclose only the **relevant registration details** at the beginning of each specific content piece (based on the service being discussed).

##### For Agents of Regulated Entities:

- Single registration agents:** Must disclose both the **principal entity's** registration details and their own registered name/number on homepage and at the start of each content.
- Multiple registration agents:** Provide web link listing all principal entities' details plus their own registrations on homepage; disclose relevant principal entity and own registration details at the beginning of each content.

#### Coverage and Scope

##### Applicable Entities:

- Stock brokers, Depository participants, Registrar to an Issue and Share Transfer Agents (RTAs).
- Investment Advisers, Research Analysts.

- Mutual Funds, Asset Management Companies (AMCs).
- Alternative Investment Funds (AIFs), Portfolio Managers.
- Real Estate Investment Trusts (REITs), Infrastructure Investment Trusts (InvITs), Small and Medium REITs (SMREITs).
- Collective Investment Schemes (CIS).

##### Covered Platforms:

- YouTube, Instagram, Facebook, WhatsApp, X (Twitter), LinkedIn, Threads, Telegram, Reddit.
- Includes both public posts and **closed/semi-closed groups**.

##### Legal Framework:

- Issued under:** Section 11(1) of the **SEBI Act, 1992**.
- Applies to:** All intermediaries registered under **Section 12** of the SEBI Act.

### NITI Aayog-UNICEF Partnership to Strengthen Nutrition in Aspirational Districts

#### What's the News?

- NITI Aayog** and **UNICEF India** have signed a **Statement of Intent (Sol)** to strengthen nutrition and health outcomes in **Aspirational Districts and Blocks**.
- The partnership will be implemented through the **IMPAct4Nutrition (I4N) platform** to institutionalise and expand nutrition efforts.
- Key focus areas include **maternal and child nutrition, Anganwadi infrastructure strengthening, and nutrition literacy enhancement**.
- The collaboration aims to mobilise **corporate support through CSR** and improve uptake of **Integrated Child Development Services (ICDS)**.

#### Statement of Intent (Sol)

##### Overview

- The **Sol** formalises the partnership between **NITI Aayog** and **UNICEF India** for targeted nutrition interventions.
- It focuses on **underdeveloped regions** identified under the **Aspirational Districts Programme**.
- The agreement emphasises **convergence of schemes** and **multi-stakeholder collaboration**.

##### Objectives

| Objective                 | Description                                                |
|---------------------------|------------------------------------------------------------|
| <b>Maternal Nutrition</b> | Improve health indicators for pregnant and lactating women |
| <b>Child Nutrition</b>    | Reduce stunting, wasting, and underweight prevalence       |
| <b>Infrastructure</b>     | Strengthen Anganwadi centres and service delivery          |
| <b>Awareness</b>          | Enhance nutrition literacy at community level              |
| <b>CSR Mobilisation</b>   | Engage private sector through IMPAct4Nutrition platform    |

## IMPAct4Nutrition (I4N) Platform

### Overview

- **IMPAct4Nutrition** is a collaborative platform connecting **businesses, government, and civil society** for nutrition action.
- It enables **corporate sector participation** in addressing malnutrition through **CSR initiatives**.
- The platform facilitates **resource mobilisation** and **technical expertise sharing**.

### Functions

- **Mobilising corporate support** for nutrition programmes in aspirational areas.
- **Strengthening implementation systems** for health and nutrition interventions.
- **Creating convergence** between public schemes and private sector resources.

## Aspirational Districts Programme (ADP)

### Background

- Launched in **January 2018** by the **Government of India**.
- Implemented by **NITI Aayog** with support from various stakeholders.
- Currently covers **112 underdeveloped districts** across India.

### Five Core Themes

| Theme                          | Focus Areas                                         |
|--------------------------------|-----------------------------------------------------|
| <b>Health &amp; Nutrition</b>  | Maternal health, child nutrition, immunisation      |
| <b>Education</b>               | School infrastructure, learning outcomes, enrolment |
| <b>Agriculture &amp; Water</b> | Irrigation, crop productivity, water conservation   |
| <b>Financial Inclusion</b>     | Banking access, digital payments, livelihood        |
| <b>Basic Infrastructure</b>    | Roads, electricity, housing, sanitation             |

### Features

- **Competitive federalism:** Districts ranked based on progress indicators.
- **Convergence:** Integration of multiple government schemes for maximum impact.
- **Monitoring:** Real-time data tracking through dedicated dashboard.

## Related Government Initiatives

### Nutrition-Focused Schemes

- **Poshan Abhiyaan (National Nutrition Mission):** Targets reduction in stunting, undernutrition, and anaemia.
- **Integrated Child Development Services (ICDS):** Provides nutrition, health, and pre-school education.
- **Anganwadi Services:** Frontline delivery mechanism for nutrition and early childhood care.
- **Anaemia Mukt Bharat:** Aims to reduce anaemia prevalence across age groups.

### Institutional Framework

- **NITI Aayog:** Premier policy think tank of Government of India.
- **Ministry of Women and Child Development:** Nodal ministry for nutrition programmes.
- **National Health Mission:** Supports health system strengthening in aspirational areas.

## Additional Info

### Constitutional & Legal Provisions

- **Article 47** (Directive Principles): State shall raise nutrition levels and improve public health.
- **Article 21** (Fundamental Right): Right to life includes right to food and nutrition.
- **National Food Security Act, 2013:** Legal entitlement to subsidised food grains.

### Sustainable Development Goals (SDGs)

- **SDG 2:** Zero Hunger – End malnutrition by 2030.
- **SDG 3:** Good Health and Well-being – Reduce maternal and child mortality.
- **SDG 10:** Reduced Inequalities – Focus on underdeveloped regions.

## President Murmu Appoints New Governors and L-Gs in Major Reshuffle

### What's the News?

- President **Droupadi Murmu** has approved the appointment and reshuffle of Governors and Lieutenant Governors (L-Gs) across nine states and Union Territories.
- The reshuffle involves the transfer of existing Governors and the appointment of new faces, including former diplomats and military veterans.
- Key changes were triggered by the resignation of the West Bengal Governor and the upcoming administrative requirements in several poll-bound regions.

### New Appointments and Transfers

- **Delhi and Ladakh:**
  - **Taranjit Singh Sandhu** (Former Diplomat): Appointed as the **Lieutenant Governor of Delhi**.
  - **Vinai Kumar Saxena:** Transferred from Delhi to serve as the **Lieutenant Governor of Ladakh**.
- **West Bengal and Tamil Nadu:**
  - **R.N. Ravi:** Transferred from Tamil Nadu to become the **Governor of West Bengal**.
  - **Rajendra Vishwanath Arlekar:** Governor of Kerala, assigned **additional charge** as the **Governor of Tamil Nadu**.
- **Other State Governors:**
  - **Bihar:** **Lt. General (Retired) Syed Ata Hasnain**.
  - **Maharashtra:** **Jishnu Dev Varma** (transferred from Telangana).
  - **Telangana:** **Shiv Pratap Shukla** (transferred from Himachal Pradesh).
  - **Himachal Pradesh:** **Kavinder Gupta** (former LG of Ladakh).
  - **Nagaland:** **Nand Kishore Yadav** (former Bihar Assembly Speaker).

### Constitutional Provisions

- **Article 153:** Provides for a Governor for each state.
- **Article 155:** Governor appointed by President by warrant under hand and seal.
- **Article 156:** Governor holds office during pleasure of President.

- **7th Constitutional Amendment Act, 1956:** Allows same person as Governor for two or more states

### Eligibility Criteria

- **Citizen of India**
- **Minimum 35 years of age.**
- No office of profit under Government of India or State Government.

### Role and Powers of Governor

#### Executive Powers

- **Head of State Executive:** All executive actions taken in Governor's name.
- **Appointment Powers:** Appoints Chief Minister, Council of Ministers, Advocate General.
- **Administrative Control:** Oversees state administration through Council of Ministers.

#### Legislative Powers

- **Summoning Legislature:** Can summon, prorogue, or dissolve State Legislative Assembly.
- **Bill Assent:** Gives assent to bills passed by State Legislature.
- **Ordinance Making:** Can promulgate ordinances when legislature not in session.

#### Discretionary Powers

- **Reservation of Bills:** Can reserve bills for President's consideration.
- **Report to President:** Can send report for President's Rule under Article 356.
- **Information Seeking:** Can seek information from Chief Minister on state affairs.

## Essential Commodities Act 1955: Government Invokes ECA for LPG Supply Security

### What's the News?

- **Central Government** invoked the **Essential Commodities Act (ECA), 1955** to ensure uninterrupted **LPG supply** for domestic consumers.
- **Oil refiners** have been directed to prioritize **LPG production** for public sector Oil Marketing Companies (OMCs) including **IndianOil, Bharat Petroleum, and Hindustan Petroleum.**
- The move comes amid **oil supply disruption** triggered by **West Asia tensions** affecting global energy markets.
- **Ministry of Petroleum and Natural Gas (MoPNG)** chaired high-level meeting to coordinate supply prioritization.

### Essential Commodities Act 1955 – Overview

- **Enactment:** Passed by **Indian Parliament** in 1955.
- **Purpose:** Empowers government to regulate **production, supply, distribution, and pricing** of essential commodities.
- **Objective:** Prevent **hoarding, black marketing,** and ensure fair availability of essential goods.
- **Administering Ministry:** **Ministry of Consumer Affairs, Food and Public Distribution.**

### Provisions of ECA

- **Central Government Powers:**

- Control production, supply, and distribution of essential commodities.
- Fix prices of essential goods when necessary.
- Impose **stock limits** to prevent hoarding.

- **Essential Commodities Covered:**

- Food items (cereals, pulses, edible oils)
- Fuel products (petroleum, LPG)
- Drugs and pharmaceuticals
- Fertilizer

- **Invocation Conditions:**

- Emergency situations affecting supply chain
- Price volatility threatening consumer interests
- National security concerns related to essential goods

### 2020 Amendments to ECA

- **Essential Commodities (Amendment) Act, 2020:**

- Promulgated on **June 5, 2020** as part of farm reforms.
- Relaxed stock limit restrictions on agricultural produce.
- Stock limits can now be imposed only when **retail prices increase significantly.**

- **Key Changes:**

- Reduced government intervention in agricultural commodity markets
- Encouraged private investment in storage infrastructure
- Maintained emergency powers for exceptional circumstances

## Alleged 'Blue Book' Protocol Breach During Presidential Visit to West Bengal

### What's the News?

- A major political row erupted following allegations of **protocol breaches** during President **Droupadi Murmu's** recent visit to West Bengal.
- The President expressed displeasure over the absence of the **Chief Minister** and other state ministers at her reception at **Bagdogra Airport.**
- The **Ministry of Home Affairs (MHA)** sought an urgent report from the West Bengal government regarding violations of the **"Blue Book"** guidelines, including last-minute venue changes and logistical lapses.

### The Blue Book?

- **Definition:** A confidential manual issued by the **Ministry of Home Affairs (MHA)** that outlines the detailed security, logistical, and protocol framework for visits by high constitutional dignitaries.
- **Scope:** It strictly governs the protection and reception of the **President, Vice-President,** and **Prime Minister** of India.
- **Custody:** Numbered copies are maintained at the district level by the **District Magistrate (DM)** and the **Superintendent of Police (SP)** to ensure uniform administrative coordination.

- **Key Components:**

- **Advanced Security Liaison (ASL):** Mandates multi-agency coordination

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(Police, Intelligence Bureau, and State Administration) before the visit.

- **Logistical Standards:** Specifies standards for transport (bulletproof vehicles), venue safety, and emergency medical preparedness.

### Presidential Reception Protocol?

- **Table of Precedence:** The **President of India** holds **Rank 1**, the highest position in the constitutional hierarchy.
- **Official Reception:** By convention, the **Governor** and the **Chief Minister** must receive the President upon arrival in the state and see them off at departure.
- **Delegation:** If the Chief Minister is unavailable, a **senior minister** must be officially nominated and approved by the **President's Secretariat** to represent the state government.
- **Pre-Approved Lists:** The list of all individuals allowed to meet or receive the dignitary must be vetted and approved in advance; any deviation is technically classified as a protocol breach.

### West Bengal Incident: Key Details

| Issue                        | Allegation                               | State Government Response      |
|------------------------------|------------------------------------------|--------------------------------|
| <b>Airport Reception</b>     | CM did not receive President at Bagdogra | CM not in approved lineup      |
| <b>Venue Change</b>          | Event venue shifted without approval     | Administrative necessity cited |
| <b>Dais Arrangement</b>      | Protocol hierarchy not followed          | No breach occurred             |
| <b>Security Coordination</b> | Inadequate advance planning              | Full cooperation provided      |

- **President's Arrival:** Siliguri Mayor **Gautam Deb** received President Murmu at Bagdogra airport on March 7, 2026.
- **CM's Absence:** Mamata Banerjee stated she was **not part of the approved lineup** or dais plan for the event.
- **Venue Shift:** President Murmu flagged concerns about **venue changes** during her Darjeeling district visit.
- **Political Row:** **BJP demanded CM's resignation** over alleged protocol breach, escalating Centre-State tensions.
- **Report Submission:** West Bengal government submitted its report to the Centre on the matter.

### Constitutional & Legal Framework

#### President's Position in India

- **Article 52:** Establishes the **President of India** as the Head of State.
- **Article 60:** President takes oath to preserve, protect and defend the Constitution.
- **Article 62:** Governs the election and term of the President.

- **Executive Authority:** All executive actions of Government of India are taken in President's name (**Article 77**).

#### Federal Relations

- **Article 256:** States must exercise executive power in compliance with Union directions.
- **Article 257:** States must not impede Union's executive powers.
- **Article 355:** Union duty to protect states against external aggression and internal disturbance.
- **Article 356:** President's Rule provisions (relevant to Centre-State relations).

#### Additional Information

##### Related Protocol Documents

- **Yellow Book:**
  - Governs security protocols for **Union Ministers**.
  - Issued by Ministry of Home Affairs.
  - Less stringent than Blue Book provisions.
- **Red Book:**
  - Covers protocol for **foreign dignitaries** visiting India.
  - Managed by Ministry of External Affairs.
  - Includes state visit guidelines.
- **Green Book:**
  - Pertains to **VIP movement** and traffic management.
  - Coordinated with local police authorities.
  - Ensures smooth transit for constitutional functionaries.

#### Previous Protocol Controversies

- **2019 Maharashtra:** Dispute over Governor's oath-taking ceremony arrangements
- **2020 Delhi:** Security coordination issues during President's Republic Day preparations
- **2022 Kerala:** CM's absence from airport reception sparked debate
- **2024 Tamil Nadu:** Flag hoisting ceremony precedence disagreement

## Cabinet Approves Extension of Jal Jeevan Mission Until 2028

### What's the News?

- The Union Cabinet, chaired by the Prime Minister, has approved the extension of the **Jal Jeevan Mission (JJM)** to ensure the completion of the "Har Ghar Jal" targets.
- The mission, which aims to provide safe and adequate drinking water through individual household tap connections, will now continue until **December 2028**.
- This extension is supported by an additional financial outlay of **₹1.51 lakh crore** to cover pending works and difficult geographical terrains.
- The restructured programme, termed **JJM 2.0**, will focus on **structural reforms in rural drinking water supply**.
- As of March 2026, over **12.58 crore rural households** have been provided functional household tap connections under the mission.

## JJM 2.0

- **Objective:** Ensure **Har Ghar Jal** (tap water connection to every rural household) covering approximately **19.36 crore rural households**.
- **Implementation Period:** Extended from original 2019-24 timeline to **December 2028**.
- **Financial Outlay:**
  - Original outlay: **₹3.60 lakh crore** (Central share: ₹2.08 lakh crore)
  - Revised outlay: **₹8.69 lakh crore**
  - Budget 2026-27 allocation: **₹67,670 crore**
- **Coverage Progress:** Approximately **81.57% of rural households** now have functional tap water connections.

## Current Progress and Impact

- **Coverage Growth:**
  - Since the mission's inception in 2019, tap water coverage has increased from **16.6%** (3.23 crore households) to over **78%** (more than 15.22 crore households).
- **Health and Socio-Economic Benefits:**
  - **Disease Prevention:** According to **WHO** estimates, providing safe water through JJM can prevent approximately **4 lakh deaths** caused by diarrheal diseases and avoid **14 million DALYs** (Disability Adjusted Life Years).
  - **Women Empowerment:** Significant reduction in the "drudgery" of rural women who previously traveled long distances to fetch water, allowing more time for education and income-generating activities.
- **Certified States:** Several states and Union Territories, including **Goa, Gujarat, Haryana, and Puducherry**, have already achieved 100% **Har Ghar Jal** certification.

## Additional Information

- **Launch:** Jal Jeevan Mission was launched in **August 2019** under the **Ministry of Jal Shakti**.
- **Nodal Ministry:** **Ministry of Jal Shakti** oversees implementation.
- **Key Metrics:**
  - Total rural households targeted: **19.36 crore**
  - Households covered till March 2026: **12.58 crore**
  - Percentage coverage: **~81.57%**

## Sujal Gaon ID: Digital Mapping for Rural Water Supply Schemes

### What's the News?

- **Union Jal Shakti Minister** launched the **Sujal Gaon ID** initiative for **digital mapping** of rural water supply schemes across India.
- The program aims to create a **unique identification system** for every village water supply infrastructure to enable better monitoring and management.
- The initiative integrates with existing **Jal Jeevan Mission** frameworks to enhance transparency and accountability in water supply delivery.

- **Digital mapping** will help track implementation progress, identify gaps, and ensure sustainable water access in rural areas.

## Sujal Gaon ID: Overview

- **Purpose:** Create a **unique digital identity** for each rural water supply scheme to enable end-to-end tracking.
- **Coverage:** All **village-level water infrastructure** including pipelines, treatment plants, and storage facilities.
- **Key Features:**
  - **Geo-tagging** of water assets for precise location mapping
  - **Real-time monitoring** of water supply status
  - **Integration** with existing government databases
  - **Public accessibility** for transparency and grievance redressal.
- **Implementing Agency:** **Department of Drinking Water and Sanitation, Ministry of Jal Shakti**.

## Strategic Objectives

- **Transparency:** Enable citizens to access information about their village water supply schemes.
- **Accountability:** Track performance of implementing agencies and contractors.
- **Efficiency:** Reduce duplication and ensure optimal resource allocation.
- **Sustainability:** Monitor water quality and quantity for long-term viability.
- **Data-Driven Governance:** Support evidence-based policy decisions through comprehensive data analytics.

## Additional Info

- **Jal Jeevan Mission (JJM) 2.0:**
  - The mission has been extended until **December 2028** to ensure universal tap water coverage.
  - The total financial outlay has been increased to **₹8.69 lakh crore**, up from the initial **₹3.60 lakh crore**.
  - Emphasis has shifted toward **Operation and Maintenance (O&M)** and institutional reforms.
- **Sujalam Bharat Framework:**
  - Developed with the support of **BISAG-N (Bhaskaracharya National Institute for Space Applications and Geo-informatics)**.
  - It serves as the "Aadhaar for rural water systems," integrating asset inventories, water quality reports, and community feedback.
- **Governance & Community Tools:**
  - **Jal Arpan:** A process for the formal handover of completed schemes to **Gram Panchayats (GPs)** to foster local ownership.
  - **Jal Seva Aankalan:** The primary tool used for assessing service delivery quality at the village level.

- **Meri Panchayat App:** A digital application for citizen oversight and reporting disruptions.
- **Jal Utsav:** An annual, community-led event for reviewing maintenance and celebrating water security.

## Appropriation Bill 2026 Passed by Parliament

### What's the News?

- **Parliament** has passed the **Appropriation Bill 2026** during the **Budget Session 2026**, with both **Lok Sabha** and **Rajya Sabha** approving the legislation.
- **Finance Minister Nirmala Sitharaman** addressed the Rajya Sabha, asserting that the government's budgeting process remains **transparent and realistic**.
- The Bill authorises the **withdrawal of funds** from the **Consolidated Fund of India** for government expenditure for the financial year.
- This is a **Money Bill**, which means it originates in the **Lok Sabha** and Rajya Sabha can only make recommendations.

### Appropriation Bill

- **Purpose:** The Bill seeks to authorise payment and appropriation of certain sums from the **Consolidated Fund of India** for government services.
- **Legal Requirement:** No money can be withdrawn from the Consolidated Fund without parliamentary approval through this Bill.
- **Timing:** Introduced after the **Union Budget** is presented and voted upon by Parliament.
- **Scope:** Covers all government expenditure proposals approved during the budget discussion.

### Constitutional Provisions

- **Article 114:** Deals with the Appropriation Bill – no amount can be withdrawn from the Consolidated Fund except under appropriation made by law.
- **Article 110:** Defines Money Bills, including Appropriation Bills.
- **Article 266:** Establishes the **Consolidated Fund of India** – all government revenues and expenditures flow through this fund.
- **Presidential Recommendation:** The Bill requires the **President's recommendation** before introduction in Parliament.

### Significance for Governance

- **Parliamentary Control:** Ensures **legislative oversight** over executive spending.
- **Financial Accountability:** Government must justify every expenditure before Parliament.
- **Budget Implementation:** Enables actual release of funds for various schemes and programs.
- **Transparency:** FM Sitharaman emphasised the government's commitment to **realistic budgeting**.

### Additional Info

- **Types of Appropriation Bills:**
  - **Main Appropriation Bill:** Passed after the main Budget

- **Supplementary Appropriation Bill:** For additional expenditure during the year
- **Vote on Account:** Allows interim spending before full Budget passage

- **Parliamentary Process:**

- Introduced in **Lok Sabha** only (as Money Bill)
- **Rajya Sabha** can discuss but not amend
- Requires **simple majority** for passage
- Receives **President's assent** to become law

- **Related Constitutional Bodies:**

- **Comptroller and Auditor General (CAG):** Audits government expenditure
- **Public Accounts Committee (PAC):** Reviews government spending
- **Finance Commission:** Recommends fund distribution between Centre and States

- **Key Metrics:**

- **₹41,430 crore** mentioned by FM in Rajya Sabha discussion on expenditure
- **₹1.4 lakh crore** allocated to States as Finance Commission Grants for FY 2026-27

## Government Withdraws Jan Vishwas (Amendment) Bill, 2025

### What's the News?

- The Union Government has withdrawn the **Jan Vishwas (Amendment) Bill, 2025** from the **Lok Sabha**.
- The decision was taken to further refine and amend certain provisions of the bill before its re-introduction.
- Union Minister for **Commerce and Industry, Piyush Goyal**, moved the motion for withdrawal, stating the need for a more comprehensive revision to better align with the objectives of **Ease of Doing Business** and **Ease of Living**.

### Jan Vishwas (Amendment) Bill, 2025?

- **Objective:** The primary goal of the bill is to **decriminalize** minor offenses across multiple central acts to reduce the compliance burden on individuals and businesses.
- **Mechanism:** It proposes to replace criminal imprisonment with monetary penalties for technical or procedural lapses that do not involve malafide intent.
- **Key Focus Areas:**
  - **Reducing Judicial Burden:** By shifting minor defaults to an administrative adjudication mechanism, the bill aims to reduce the backlog of cases in the judiciary.
  - **Rationalizing Penalties:** It seeks to introduce a periodic revision of fines and penalties to ensure they remain effective deterrents without being unnecessarily punitive.
  - **Trust-based Governance:** The bill is a pillar of the "Minimum Government, Maximum Governance" approach, fostering a relationship of trust between the state and its citizens.

## Significance of Decriminalization

- **Investment Climate:** By removing the "fear of imprisonment" for minor administrative slips, the bill makes India a more attractive destination for **Foreign Direct Investment (FDI)** and domestic entrepreneurship.
- **Ease of Living:** It ensures that ordinary citizens and small-scale entrepreneurs are not subjected to long-drawn criminal proceedings for petty non-compliances.
- **Administrative Efficiency:** The bill empowers **Adjudicating Officers** to levy penalties, speeding up the resolution of disputes outside the traditional court system.

## Additional Info

- **Background of Jan Vishwas:**
  - The original **Jan Vishwas (Amendment of Provisions) Act, 2023** amended **42 Central Acts** across various sectors, including environment, agriculture, media, and health.
  - The 2025 version was intended to expand this scope further, covering more statutes and fine-tuning the administrative processes.
- **Legislative Procedure for Withdrawal:**
  - A member in charge of a bill may at any stage move for leave to withdraw the bill on the ground that it is to be replaced by a new bill or that the government does not intend to proceed with it.
  - This process is governed by the **Rules of Procedure and Conduct of Business in Lok Sabha**.
- **Constitutional Context:**
  - While "Criminal Law" falls under the **Concurrent List** (Seventh Schedule), the central acts being amended fall within the respective domains of the **Union List** or **Concurrent List**.

## National Highways Fee Rules 2026 Amended to Strengthen Toll Compliance What's the News?

- The **Government of India** notified amendments to the **National Highways Fee Rules, 2026** to strengthen toll compliance and digital enforcement.
- The amended rules came into effect from **17th March 2026**.
- **Cash payments** at National Highway toll plazas will be discontinued from **1st April 2026**.
- Only **digital payment modes** including **FASTag** and **UPI** will be accepted at toll plazas.
- The amendment introduces a structured definition of "**unpaid user fee**" and recovery mechanism.
- Over **1,150 toll plazas** across National Highways will be affected by this transition.

## Amendments & Provisions

- **Digital-Only Payments:** Cash transactions phased out; only **FASTag** and **UPI** accepted.

- **Unpaid User Fee Definition:** Clear legal definition introduced for toll evasion cases.
- **Recovery Mechanism:** Structured process for recovering unpaid toll fees established.
- **Enhanced Penalties:** Stricter consequences for toll payment violations.
- **Digital Enforcement:** Technology-driven monitoring of toll compliance.
- **Implementation Timeline:** Rules effective from March 2026; cash discontinuation from April 2026.

## Objectives

- **Traffic Flow Improvement:** Reduction in congestion at toll plazas.
- **Operational Efficiency:** Faster vehicle processing at toll points.
- **Transparency Enhancement:** Digital records reduce manual intervention.
- **Revenue Protection:** Minimize toll evasion and revenue leakage.
- **Modernization:** Align with technology-driven highway systems vision.
- **User Convenience:** Seamless payment experience for commuters.

## Implementation Framework

- **Nodal Ministry:** Ministry of Road Transport and Highways (MoRTH).
- **Implementing Agency:** National Highways Authority of India (NHAI).
- **Coverage:** All **National Highway toll plazas** across India.
- **Affected Infrastructure:** Over **1,150 fee plazas** nationwide.
- **Payment Modes:**
  - **FASTag:** RFID-based electronic toll collection
  - **UPI:** Unified Payments Interface for digital transactions
- **Transition Period:** February-March 2026 for stakeholder preparedness.

## Additional Info

- **National Highways Authority of India (NHAI):**
  - An autonomous statutory body under **MoRTH**, constituted by the **NHAI Act, 1988**.
  - It is responsible for the development, maintenance, and management of National Highways.
- **FASTag Technology:**
  - Utilizes **Radio Frequency Identification (RFID)** technology for making toll payments directly from a linked prepaid or savings account.
- **Distance-Based Tolling vs. Fixed Tolling:**
  - **Current system:** Users pay a fixed fee at a plaza regardless of whether they traveled 5 km or 50 km.
  - **GNSS system:** Ensures "pay-as-you-use," making it more equitable for short-distance commuters.
- **Logistics Performance Index (LPI):**
  - Strengthening toll compliance and reducing transit time directly impacts India's ranking

in the **World Bank's LPI**, which is crucial for lowering the national logistics cost (currently estimated at **13-14%** of GDP).

## Reform Express Initiative: Indian Railways Announces Five New Reforms

### What's the News?

- **Indian Railways** has announced **five new reforms** under the '**Reform Express**' Initiative to modernize rail operations.
- **Union Minister Ashwini Vaishnaw** unveiled the reforms focusing on **cargo transportation, infrastructure quality, and passenger convenience**.
- These reforms bring the **total number of railway reforms in 2026 to nine**, aimed at improving efficiency and service delivery.

### Reform in Salt Transportation

- **Objective:** To increase rail's share in salt transport by addressing operational inefficiencies.
- **Details:**
  - India produces nearly **35 million tonnes** of salt annually, with **9.2 million tonnes** currently moved by rail.
  - Railways' modal share stands at **25% for industrial salt** and **65% for edible salt**.
  - **62%** of rail-salt traffic covers **1,000 to 2,500 km**, a distance well-suited for railways.
- **New Solution:** Introduction of **stainless steel, top-loading, and hydraulic side-discharge containers** to prevent wagon corrosion, reduce handling losses, and enable seamless multimodal movement.

### Reform in Automobile Transportation

- **Objective:** To increase the rail coefficient for passenger vehicles, currently at **24%**, by removing design and infrastructure constraints.
- **Details:**
  - India produces **31 million automobiles** annually, including **5 million passenger vehicles**.
- **New Solution:** Allowing the automobile industry to **design specialized, route-specific wagons** to navigate physical constraints such as tunnels and bridges governed by the **Schedule of Dimensions (SOD)**, thereby optimizing capacity and reducing transit time.

### Strengthening Construction Quality

- **Objective:** To ensure accountability, transparency, and timely delivery of railway infrastructure projects.
- **Changes:**
  - **Eligibility Criteria:** Increased single-project experience threshold from 35% to **50%** of project value; mandates **at least 20% prior experience** in railway-related work.
  - **Bid Security:** Fixed at **2%** of project value to discourage frivolous bids.
  - **Bid Capacity:** Mandatory assessment for all projects above **₹10 crore**.

- **Subcontracting Limit:** Reduced from 70% to **40%**, ensuring contractors execute at least **60%** of work directly.
- **Predatory Bidding:** Bids more than **5%** below the estimated cost require an **additional 5% performance guarantee**.

### Passenger Convenience: Ticketing Reforms

- **Objective:** To curb ticket black marketing and improve access for genuine passengers.
- **Measures:**
  - **Aadhaar-based OTP verification** introduced to eliminate fake accounts.
  - **Nearly 3 crore fake IRCTC accounts** identified and removed.
  - **Cancellation Windows:** Revised to **72, 24, and 8 hours** before departure, aligning with early chart preparation (now 9-18 hours prior).
  - **Refund Process:** Requirement of filing a **Ticket Deposit Receipt (TDR)** for e-tickets removed; refunds now processed automatically.
  - **Counter Tickets:** Can now be cancelled at **any railway station** nationwide, not just the originating station.

### Passenger Convenience: Boarding & Class Upgrade

- **Objective:** To provide greater travel flexibility.
- **Measures:**
  - **Change of Boarding Station:** Passengers can now digitally change their boarding station up to **30 minutes before the train's departure** from its origin station.
  - **Class Upgrade:** Permitted up to **30 minutes before departure**, compared to the earlier restriction of before chart preparation.

## Cabinet Extends IVFRT Scheme for 5 Years to Modernise Immigration

### What's the News?

- **Union Cabinet** approved the extension of **Immigration, Visa, Foreigners Registration & Tracking (IVFRT)** scheme for **5 years**.
- The scheme aims to make India's **immigration system faster, safer, and more efficient** through digital modernization.
- **Ministry of Home Affairs (MHA)** will continue implementing the scheme with enhanced technological infrastructure.
- The extension focuses on **strengthening border security** while improving **visa and foreigner services**.
- This represents the **third phase (IVFRT 3.0)** of the ongoing immigration modernization program.

### About the IVFRT Scheme?

The IVFRT platform is a centralised, technology-driven system designed to integrate and streamline all functions related to immigration, visa issuance, and the registration of foreigners in India.

- **Objective:** To provide secure, efficient, and seamless management of international travellers while strengthening national security.
- **Evolution:** Initially approved in 2010, the scheme has undergone several phases of expansion. This latest extension builds on the previous phases (including IVFRT 3.0) to further enhance capabilities.
- **Coverage:** The system currently spans **117 immigration posts, 15 Foreigners Regional Registration Offices (FRROs)**, and **854 district-level registration authorities** across the country.

### Focus Areas: Modernisation and Service Delivery

The renewed scheme focuses on three broad areas to transform India's immigration ecosystem.

- **Emerging Technologies:** Adoption of mobile-based services and **self-service kiosks** to enable seamless and secure passenger movement.
- **Infrastructure Upgrade:** Expansion and strengthening of core infrastructure across Immigration Check Posts, FRROs, and data centres to build a resilient and scalable nationwide system.
- **Enhanced Service Delivery:** Optimisation of technology-enabled services through unified digital platforms, aiming to improve user experience without compromising security.

### Performance and Strategic Context

The extension is driven by the scheme's proven track record and the need to address new legislative and security requirements.

- **Improved Efficiency:**
  - Over **91% of e-Visa applications** have been processed within 72 hours in recent years.
  - Average passenger clearance time at immigration checkpoints has dropped to **2.5-3 minutes** (including biometrics), compared to 5-6 minutes under manual processes.
  - Under the **Fast Track Immigration-Trusted Traveller Programme**, automated e-gates have further reduced clearance time to about **30 seconds** for eligible travellers.
- **Legal and Security Backing:**
  - The scheme is now reinforced by the **Immigration and Foreigners Act, 2025**, which provides a modern legal framework to manage immigration, track foreigners, and counter illegal migration.
  - The modernisation is framed not just as a technical upgrade, but as a **strategic transformation** to support international mobility, tourism, and economic growth while ensuring robust security.

### Additional Info

#### Related Government Initiatives

- **e-Visa Facility:** Available for citizens of **160+ countries** for tourism, business, and medical purposes
- **Face Recognition System:** AI-based identification at immigration counters

- **Integrated Border Management System:** Coordinated border security across agencies
- **National Immigration Portal:** Single-window platform for all immigration services
- **Smart Policing Initiatives:** Technology-driven law enforcement integration

#### Institutional Framework

- **Bureau of Immigration (BoI):** Under MHA, handles immigration operations
- **Foreigners Regional Registration Office (FRRO):** City-level foreigner registration
- **Foreigners Registration Office (FRO):** District-level registration offices
- **Multi-Agency Coordination:** IB, CBI, State Police, and Airport Authorities

#### Constitutional & Legal Framework

- **Article 21:** Right to life and personal liberty (applicable to foreigners with restrictions)
- **Foreigners Act, 1946:** Primary legislation for foreigner regulation
- **Passport (Entry into India) Act, 1920:** Entry documentation requirements
- **Citizenship Act, 1955:** Citizenship and registration provisions
- **SDG 16:** Peace, Justice and Strong Institutions

#### Key Statistics

- **Annual Visa Applications:** ~8-9 million processed through digital systems
- **e-Visa Arrivals:** ~3 million foreign tourists annually (pre-pandemic data)
- **FRRO/FRO Offices:** 20+ major cities with registration facilities
- **Immigration Check Posts:** 100+ ICPs across air, sea, and land borders
- **Foreigner Registrations:** ~5-6 lakh foreigners registered annually

## PRISM-SG Portal: Digital Platform to Fast-Track Road Over Bridge Approvals

### What's the News?

- The **Ministry of Road Transport and Highways** has launched the **PRISM-SG Portal** (Portal for Rail-Road Inspection & Stages Management – Steel Girders).
- The portal was launched by Union Ministers **Nitin Gadkari and Ashwini Vaishnaw** in **New Delhi**.
- It aims to **digitise approval and inspection processes** for steel girders used in **Road Over Bridges (ROBs)**.
- The initiative is expected to reduce approval timelines from **12 months to 3-4 months**, accelerating infrastructure project completion.

### PRISM-SG Portal: Key Features

- **Full Form:** Portal for Rail-Road Inspection & Stages Management – Steel Girders.
- **Launched By:** Ministry of Road Transport and Highways in collaboration with **Ministry of Railways**.
- **Target Beneficiaries:**
  - **Road Owning Departments** (State and Central).

- **Indian Railways** for coordination on ROB projects.
- **Contractors, fabricators, and inspection agencies** involved in bridge construction.
- **Core Functions:**
  - **End-to-end online processing** from document submission to final approvals.
  - **Digital inspection scheduling** and report uploads.
  - **Real-time monitoring** of project stages and approvals.

### Features & Benefits?

- **End-to-End Digitisation:** Enables online submission of documents, technical scrutiny, raising and resolution of queries, approvals, scheduling of inspections, and uploading of inspection reports, photographs, and test results.
- **Real-Time Monitoring:** Provides a dashboard for stakeholders to track the status of approvals and fabrication stages in real-time.
- **Audit Trail:** Maintains a complete, unalterable digital record of every approval and inspection, ensuring **accountability and transparency**.
- **Reduced Approval Timeline:** Expected to cut the approval and inspection cycle from approximately **12 months to about 3-4 months** – a reduction of nearly **70%**.
- **Integration:** Complements the existing **RRCAS portal** (used for GAD and structural drawings) to create a **360-degree digital approval ecosystem** for bridge projects.

### Additional Info

- **Road Over Bridges (ROBs):**
  - Critical infrastructure for **eliminating level crossings** and improving rail-road safety.
  - Reduces **accidents, traffic congestion, and railway delays** at crossings.
  - Part of **National Infrastructure Pipeline (NIP)** and **Gati Shakti Master Plan**.
- **Related Digital Initiatives:**
  - **PM Gati Shakti National Master Plan:** Integrates infrastructure planning across 16 ministries.
  - **National Infrastructure Pipeline (NIP):** ₹111 lakh crore investment plan for 2019-25.
  - **Bharatmala Pariyojana:** Focuses on highway development including ROB construction.
  - **e-Office & e-Procurement:** Broader digital governance framework for government projects.
- **Infrastructure Statistics:**
  - India has over **1.7 lakh level crossings** across its railway network.
  - **Unmanned level crossings** being progressively eliminated through ROB construction.
  - Government target: **Eliminate all unmanned level crossings** by 2029.

## Gruh-Sugam Portal

### What's the News?

- The **National Housing Bank (NHB)** has launched the **Gruh-Sugam Portal** (also referred to as **Gruha-Sugam**) for streamlined housing loan access.
- The portal was launched by **NHB Managing Director** in the presence of representatives from **Ministry of Defence and Ministry of Home Affairs**.
- It specifically targets **defence personnel, paramilitary forces, and government employees** for hassle-free housing finance.
- The platform offers **interest subvention benefits** and **digitized loan processing** for eligible beneficiaries.

### Gruh-Sugam Portal: Key Features

- **Launched By:** **National Housing Bank (NHB)**, the apex housing finance institution in India.
- **Target Beneficiaries:**
  - **Armed Forces Personnel** (Army, Navy, Air Force).
  - **Paramilitary Forces** (CAPF, Assam Rifles, etc.).
  - **Central and State Government Employees**.
- **Core Functions:**
  - **Single-window access** to housing loan products from multiple lenders.
  - **Online application and tracking** system for loan status.
  - **Integration with participating banks and HFCs** (Housing Finance Companies).
- **Special Provisions:**
  - **Interest subvention scheme** for eligible categories.
  - **Priority processing** for defence and paramilitary personnel.
  - **Flexible repayment options** tailored to service conditions.

### Additional Info

- **National Housing Bank (NHB):**
  - Established in **1988** under the **National Housing Bank Act, 1987**.
  - **Wholly owned subsidiary of Reserve Bank of India (RBI)** since 2019.
  - Functions as **apex institution for housing finance** in India.
  - Regulates and supervises **Housing Finance Companies (HFCs)**.
- **Related Housing Initiatives:**
  - **Pradhan Mantri Awas Yojana (PMAY):** Affordable housing scheme with urban and rural components.
  - **PMAY-Urban (PMAY-U):** Targeted at urban poor with interest subsidy.
  - **PMAY-Gramin (PMAY-G):** Focuses on rural housing under Ministry of Rural Development.
  - **Affordable Housing Fund (AHF):** NHB-managed fund for low-income housing projects.
- **Interest Subvention Scheme:**

- Government provides **interest rate concession** on housing loans.
- Typically **3-4% subsidy** on loan interest for eligible categories.
- Benefit directly credited to borrower's loan account.
- Aims to reduce **EMI burden** on lower and middle-income groups.
- **Housing Statistics in India:**
  - **Urban housing shortage:** Approximately **10 million units** as per government estimates.
  - **Rural housing:** PMAY-G has sanctioned over **2 crore houses** since inception.
  - **Defence Housing:** Over **5 lakh defence personnel** require affordable housing solutions.
  - **Credit Penetration:** Housing loan penetration remains low at **9% of GDP** compared to global averages.

## Central Armed Police Forces (General Administration) Bill, 2026

### What's the News?

- The **Central Armed Police Forces (General Administration) Bill, 2026** was introduced in the **Rajya Sabha** to regulate recruitment, deputation, and service conditions of CAPF officers.
- The Bill mandates reservation of senior leadership posts for **Indian Police Service (IPS)** officers while creating a unified statutory framework for all CAPFs.
- Key provisions include **50% of Inspector General (IG)** posts and **minimum 67% of Additional Director** posts to be filled by IPS officers.
- The legislation aims to strengthen **internal security coordination** between Centre and States while addressing service conditions of Group A General Duty Officers.

### The CAPF General Administration Bill, 2026?

- **Unified Oversight:** Proposes the establishment of a **National CAPF Management Authority** to act as a centralized policy-making body under the **Ministry of Home Affairs (MHA)**.
- **Cadre Review Mechanism:**
  - Mandates a statutory **Cadre Review** every **five years** for all forces.
  - Aims to eliminate "stagnation" by ensuring timely promotions for officers.
- **Promotion and Parity:**
  - Focuses on balancing the ratio of **Indian Police Service (IPS)** officers on deputation with **Organized Group 'A' Service (OGAS)** cadre officers.
  - Introduces standardized criteria for "Non-Functional Financial Upgradation" (**NFFU**) to ensure pay parity with other civil services.
- **Standardized Recruitment:**
  - Centralizes the recruitment process for specialized technical and medical roles within the CAPFs to reduce vacancy delays.
  - Enhances the lateral entry protocols for personnel from the **Indian Army** into the

**Assam Rifles** and other border-guarding forces.

### Concerns & Points of Contention?

Critics, including former CAPF officers, argue the bill is regressive and undermines the forces' operational integrity.

- **Reversal of Supreme Court Ruling:** The bill is seen as overturning a Supreme Court direction to grant CAPF cadre officers full **Organised Group A Service (OGAS)** status, which would have phased out IPS deputation at IG rank and addressed stagnation.
- **Stagnation & Morale:** The bill is perceived to prioritize IPS career progression over CAPF cadre officers, many of whom face stagnation and are denied **Non-Functional Financial Upgradation (NFFU)**—a benefit available to all other 62 organised services.
- **Constitutional & Legal Questions:**
  - Raises concerns under **Articles 14 (Right to Equality)** and **16 (Equality of Opportunity in Public Employment)** by permanently excluding cadre officers from leading their own institutions.
  - The bill's validity is likely to be challenged in court on grounds that Parliament cannot simply overrule a considered Supreme Court judgment.

### Additional Info

- **CAPF Organizations Covered:**
  - **BSF** (Border Security Force)
  - **CRPF** (Central Reserve Police Force)
  - **CISF** (Central Industrial Security Force)
  - **ITBP** (Indo-Tibetan Border Police)
  - **SSB** (Sashastra Seema Bal)
  - **NSG** (National Security Guard)
  - **Assam Rifles**
- **Constitutional Context:**
  - Falls under **Union List (Entry 2)** – Police forces for Union Territories
  - Relates to **Article 246** – Parliamentary legislative competence
- **Previous Legal Framework:**
  - Service conditions were governed by separate rules for each force
  - Administrative orders lacked statutory backing
  - No unified legislation for officer management across CAPFs

## Centre Allows Temporary Distribution of Superior Kerosene Oil (SKO) via PDS and Petrol Pumps

### What's the News?

- The **Central Government** has issued a gazette notification allowing temporary distribution of **Superior Kerosene Oil (SKO)** under the **Public Distribution System (PDS)** in **21 States and Union Territories**.

- Select **petrol pumps** are permitted to store and distribute limited quantities of SKO for **60 days** to ease LPG supply pressure.
- The move comes amid **global energy supply concerns** affecting domestic LPG availability.
- States previously declared **PDS SKO-free** will receive ad-hoc allocation under this emergency measure.

### New Distribution Framework for SKO

- **PDS Integration:**
  - The expansion to 21 States/UTs ensures that vulnerable populations have a reliable secondary source for cooking and lighting.
  - Allocation is managed by the **Ministry of Petroleum and Natural Gas (MoPNG)**, adjusting based on the level of **LPG penetration** in each state.
- **Retail Outlet (RO) Sale:**
  - For the first time in a contingency window, SKO will be available at market rates through petrol pumps.
  - This bypasses the traditional **Fair Price Shop (FPS)** bottlenecks, allowing for quicker public access during the 60-day emergency period.
- **Objective:** To stabilize the domestic fuel market and prevent "energy poverty" in the wake of external shocks to the **LPG supply chain**.

### Significance of Superior Kerosene Oil (SKO)

- **Technical Quality:**
  - Unlike crude kerosene, **SKO** is a highly refined paraffinic hydrocarbon.
  - It has a higher **smoke point** and lower **sulfur content**, making it safer for indoor domestic use and reducing respiratory health risks.
- **Strategic Buffer:**
  - While the **Pradhan Mantri Ujjwala Yojana (PMUY)** has successfully transitioned millions to clean energy, SKO remains a critical "bridge fuel" for remote areas and during international energy crises.
- **Market Regulation:**
  - The sale via retail outlets helps curb the black marketing of subsidized PDS kerosene by providing a legal, market-priced alternative for non-subsidized users.

### Additional Info

- **Regulatory Framework:**
  - **Kerosene (Restriction on Use and Fixation of Ceiling Price) Order, 1993:** Governs the distribution, pricing, and prevents the diversion of PDS kerosene for unauthorized uses (like fuel adulteration).
  - **Direct Benefit Transfer in Kerosene (DBTK):**
    - Implemented in select districts to transfer subsidies directly to the bank accounts of beneficiaries, reducing leakage.
- **Environmental Impact:**
  - Although SKO is "superior" to traditional kerosene, it is still a fossil fuel. The government maintains a policy of

"Kerosene-Free" cities (e.g., Delhi, Chandigarh) to promote cleaner alternatives like **Natural Gas (PNG)** and **LPG**.

- **Role of Oil Marketing Companies (OMCs):**
  - Entities like **IOCL**, **BPCL**, and **HPCL** are responsible for the logistics of moving SKO from refineries to the newly authorized retail points.

## Indian Railways Bans Tobacco and Alcohol Advertisements

### What's the News?

- **Indian Railways** has enforced a strict **ethical advertising policy** prohibiting all **tobacco and alcohol advertisements** across trains and railway stations.
- **Railway Minister Ashwini Vaishnaw** announced the ban as part of efforts to promote **public health** and maintain **family-friendly environments** in railway premises.
- The policy aligns with **Cigarettes and Other Tobacco Products Act (COTPA), 2003** and broader **public health objectives**.
- Railways continues to explore **alternative revenue streams** without compromising ethical standards or raising ticket prices.

### Provisions of the Advertising Policy

- **Prohibited Categories:**
  - **Tobacco products** including cigarettes, bidis, and chewing tobacco.
  - **Alcoholic beverages** of all types.
  - Any content deemed **objectionable or inappropriate** for family audiences
- **Coverage Area:**
  - All **train interiors and exteriors**.
  - **Railway station premises** including platforms and waiting areas.
  - **Digital displays** and static advertising boards
- **Enforcement:**
  - Existing contracts to be **reviewed and terminated** if non-compliant.
  - **Penalties** for violators including contract cancellation.
  - **Monitoring mechanism** through railway commercial departments.

### Revenue Model & Financial Impact

- **Alternative Revenue Streams:**
  - **Food and catering services** expansion.
  - **Retail kiosks** and commercial spaces at stations.
  - **Digital advertising** for approved product categories.
  - **Premium services** and experiential offerings.
- **Financial Context:**
  - Railways aims to generate revenue **without increasing ticket prices**.
  - Advertising remains significant **non-fare revenue source**.

- Policy balances **ethics and economics** in public sector operations.
- **Smart Station Initiatives:**
  - **Station redevelopment** projects include commercial components.
  - **Amrit Bharat Station Scheme** integrates revenue-generating facilities.

### Additional Info

- **Legal Framework:**
    - **Cigarettes and Other Tobacco Products Act (COTPA), 2003** – Tobacco advertising restrictions
    - **Article 47** of Constitution – Directive Principle on public health improvement
    - **National Health Policy, 2017** – Tobacco control objectives
    - **Consumer Protection Act, 2019** – Unfair trade practice provisions
  - **Indian Railways Statistics:**
    - Carries over **25 million passengers daily**
    - Operates **7,000+ stations** across India
    - Major **public sector employer** with 1.2+ million employees
    - Significant **advertising reach** through network coverage
  - **Previous Advertising Policies:**
    - Guidelines existed but enforcement was inconsistent
    - Some stations already restricted certain categories
    - New policy brings **uniform nationwide implementation**
-

## Social Issues

### NCB Dismantles "Team Kalki" Pan-India Darknet Drug Network

#### What's the News?

- The **Narcotics Control Bureau (NCB)** has successfully dismantled a sophisticated pan-India drug trafficking syndicate operating under the name **'Team Kalki'**.
- The network utilized the **darknet** and encrypted messaging platforms to distribute synthetic drugs across various states.
- Two primary operators, who reportedly established their partnership while serving time in **Tihar Jail**, have been arrested following a three-month-long intelligence operation.
- The crackdown is part of a broader effort to curb the rising influence of digital platforms in the illegal drug trade.

#### What is 'Team Kalki'?

- **Syndicate Origin:** The network was spearheaded by **Anurag Thakur** and **Vikas Rathi**, habitual offenders who previously faced charges under the **NDPS Act**.
- **Global Sourcing:** The syndicate sourced high-quality narcotics like **LSD** and **MDMA** from international vendors located in the **Netherlands, Poland, and Germany**.
- **Operational Scale:** Active since early 2025, the network is suspected to have successfully dispatched over **1,000 consignments** to customers across India.
- **Reputation:** The vendor account maintained a **four-star rating** on the dark web forum **'Dread'**, indicating a high volume of completed transactions.

#### Modus Operandi?

- **Digital Anonymity:** Transactions and communications were conducted via the darknet and the **Session** messaging application, which offers end-to-end encryption and hides digital footprints.
- **Payment Systems:** Payments were accepted exclusively in **cryptocurrencies** (primarily **Monero** and **USDT**) to obscure the financial trail. Funds were routed through multiple layers of "unhosted" and "cold" wallets.
- **Delivery Techniques:**
  - **Dead Drop:** In parts of Delhi, parcels were hidden at pre-determined spots for buyers to collect, avoiding direct contact.
  - **Logistics:** For pan-India deliveries, the syndicate used **Speed Post** and private couriers, frequently rotating booking offices to evade detection.

#### Key Metrics and Seizures?

- **Interceptions:** NCB intercepted 13 domestic parcels and 2 international consignments linked to the network.
- **Drug Haul:**
  - **2,338 LSD blots** (a potent hallucinogen).
  - **3.6 kg of liquid MDMA** and 160 MDMA pills.

- **73.61 gm of Charas** and **3.64 gm of Amphetamine**.
- **Geographic Reach:** Major distribution hubs were identified in **Delhi, Tamil Nadu, Telangana, Kerala, and Karnataka**.
- **Estimated Value:** The total international market value of the seized contraband is approximately **₹5 crore**.

#### Additional Info

- **Narcotics Control Bureau (NCB):**
  - It is the nodal drug law enforcement and intelligence agency of India, functioning under the **Ministry of Home Affairs**.
  - It is responsible for coordinating actions by various central and state agencies under the **Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985**.
- **Darknet and Law Enforcement:**
  - The **darknet** refers to encrypted online content that is not indexed by conventional search engines, often used for illegal activities.
  - Previous NCB operations against darknet cartels include **Operation Zambada** and **Operation Ketamelon**.
- **NDPS Act, 1985:**
  - This legislation prohibits the production, sale, and consumption of narcotic drugs and psychotropic substances except for medical and scientific purposes.
  - It provides for stringent punishment and the forfeiture of property derived from illicit traffic.

### Supreme Court Invokes Passive Euthanasia Framework for the First Time

#### What's the News?

- The **Supreme Court of India** has applied the legal framework for **passive euthanasia** for the first time since its landmark 2018 guidelines.
- The Court allowed the withdrawal of life support for a 30-year-old man, **Harish Chand**, who had been in a **Permanent Vegetative State (PVS)** for over 11 years following a head injury.
- This decision marks the first practical implementation of the "right to die with dignity" by the highest court, moving beyond theoretical legal principles to actual clinical application.

#### The Judicial Decision?

- **Case Background:** The patient's parents approached the court stating there was no hope of recovery and the family was under extreme financial and emotional distress.
- **Medical Board Report:** A specialized medical board constituted by **AIIMS** confirmed that the patient's condition was irreversible and that he was sustained only by mechanical feeding and nursing care.

- **Court's Reasoning:** The Bench emphasized that under **Article 21**, the "Right to Life" includes the "Right to die with dignity," and prolonging a vegetative existence against the family's wishes constitutes a violation of that dignity.

### Passive Euthanasia Framework?

- **Definition:** Passive euthanasia involves the withdrawal or withholding of medical treatment (like ventilators or feeding tubes) that allows a terminally ill patient to die in the natural course.
- **Legal Status:** It was legalized in India through the **Common Cause vs. Union of India (2018)** judgment.
- **Procedural Guidelines (Modified 2023):**
  - **Medical Boards:** Two boards are required—a **Primary Medical Board** (at the hospital) and a **Secondary Medical Board** (including a doctor nominated by the District Chief Medical Officer).
  - **Judicial Oversight:** The 2023 amendment removed the mandatory requirement of a Judicial Magistrate's presence, making the process faster; the hospital now informs the local **Judicial Magistrate First Class (JMFC)** after the boards' decision.
  - **Living Will:** Individuals can now record an "advance medical directive" (Living Will) to state in advance that they do not wish to be kept on life support if they reach an irreversible state.

### Additional Info

- **Active vs. Passive Euthanasia:**
  - **Active Euthanasia:** Involves a deliberate act to end a life (e.g., lethal injection). It remains **illegal** in India.
  - **Passive Euthanasia:** Involves "omission" of treatment. It is **legal** under strict judicial and medical supervision.
- **Constitutional Basis:**
  - **Article 21:** Interpreted by the SC to mean that the sanctity of life is not just about "breathing" but living with a minimum standard of dignity.
  - **Aruna Shanbaug Case (2011):** The starting point for the euthanasia debate in India, where the SC first allowed passive euthanasia under "exceptional circumstances" following a petition for a nurse who was in a PVS for 42 years.

## SC Rules Parental Salary Alone Cannot Define OBC Creamy Layer Status

### What's the News?

- The **Supreme Court of India** has ruled that the "Creamy Layer" status for **Other Backward Classes (OBC)** candidates cannot be determined solely on the basis of parental salary or income.
- The Court clarified that the exclusion of the "Creamy Layer" must be based on a combination of social, educational, and economic factors, rather than a singular economic yardstick.

- This judgment reinforces that salary and income from agriculture are generally excluded when calculating the income ceiling for the children of government employees, unless they fall under specific rank-based exclusions.

### The Judicial Ruling?

- **The Verdict:** The Bench stated that any government notification identifying the "Creamy Layer" purely on an income basis—without considering social and educational backwardness—is a violation of the **Indra Sawhney (1992)** judgment.
- **Salary vs. Income:** The Court reiterated that "salary" is distinct from "income from other sources" (such as business, trade, or profession). For those in government service, the exclusion is determined by the **rank/post** held by the parents.
- **Legal Consistency:** The ruling quashed attempts to simplify the criteria into a flat income-based model, ensuring that the benefit of reservation reaches the "Non-Creamy Layer" (those who are genuinely socially and educationally backward).

### Understanding the Creamy Layer Criteria?

- **The Income Threshold:** Currently, the ceiling is set at **₹8 lakh per annum**. This applies to families whose income from sources other than salary and agricultural land exceeds this limit for three consecutive years.
- **Exclusion by Rank (Government Employees):**
  - **Category I:** Children of persons holding constitutional posts (e.g., President, Judges of SC/HC).
  - **Category II:** Children where both or either parent is a **Class I/Group A** officer, or both parents are **Class II/Group B** officers.
- **Non-Government Employees:** For those in the private sector or self-employed, the **₹8 lakh** limit applies to their total annual income.
- **Key Distinction for Exams:** For a candidate whose parents are in government service but do not hold Class I or II posts, their high salary (even if it exceeds ₹8 lakh) **does not** automatically place them in the Creamy Layer, provided they have no other major sources of income.

### Additional Info

- **Indra Sawhney vs. Union of India (1992):**
  - The "Mandal Case" where the SC upheld **27% reservation** for OBCs in central government jobs.
  - It mandated the exclusion of the "Creamy Layer" to ensure that the most advanced members of a backward class do not monopolize reservation benefits.
- **Constitutional Provisions:**
  - **Article 16(4):** Empowers the State to make provisions for reservation in appointments for any backward class which is not adequately represented in the services.
  - **Article 340:** Provides for the appointment of a Commission to investigate the conditions of backward classes.

- **102nd Amendment Act:** Granted constitutional status to the **National Commission for Backward Classes (NCBC)** under **Article 338B**.
- **Governance:** The **Department of Personnel and Training (DoPT)** issues the Office Memorandums (OM) that define the technical specifications for Creamy Layer identification.

## World Happiness Report 2026: India Improves Ranking Amid Global Social Media Concerns

### What's the News?

- The **World Happiness Report 2026** was released, assessing happiness levels across **149 countries** globally.
- **Finland** retained the **top position** for the ninth consecutive year, maintaining its status as the world's happiest nation.
- **Afghanistan** remained at the **bottom position**, continuing to face severe humanitarian and economic challenges.
- **India improved its ranking** compared to the previous year, showing positive progress in well-being indicators.
- The 2026 report specifically **flagged social media risks** as a significant factor affecting happiness, particularly among youth.

### India's Performance & Ranking

- India's rank in **World Happiness Report 2026: 105th** out of 149 countries.
- India showed **improvement from previous year's ranking**, indicating progress in well-being metrics.
- Key factors influencing India's score include:
  - **Economic development** and GDP per capita growth
  - **Social support** systems and community bonds
  - **Health expectancy** improvements
  - **Freedom of life choices**
- India performs relatively better in **social support** and **community connections** compared to economic indicators.

### Global Rankings: Top 10 Countries

- **Finland:** 1st position (9th consecutive year at top)
- **Denmark:** 2nd position
- **Iceland:** 3rd position
- **Sweden:** 4th position
- **Israel:** 5th position
- **Netherlands:** 6th position
- **Norway:** 7th position
- **Luxembourg:** 8th position
- **Switzerland:** 9th position
- **Australia:** 10th position

### Key Findings: Social Media & Happiness

- **2026 Report Theme:** Focus on **social media impact on well-being**, especially among younger populations.
- **Concerns Identified:**

- **Excessive social media use** correlates with lower happiness scores
- **Mental health impacts** including anxiety and depression linked to digital consumption
- **Sleep disruption** from nighttime social media engagement
- **Social comparison** leading to reduced life satisfaction

### Policy Recommendations:

- **Digital wellness programs** in educational institutions
- **Screen time guidelines** for children and adolescents
- **Mental health support** integrated with digital literacy
- **Community-building initiatives** to counter digital isolation

### Report Methodology & Parameters

- **Data Source:** Gallup World Poll surveys conducted across 149 countries.
- **Six Key Indicators** used to measure happiness:
  - **GDP per capita:** Economic output per person
  - **Social support:** Having someone to count on in times of trouble
  - **Healthy life expectancy:** Years of life in good health
  - **Freedom to make life choices:** Autonomy in life decisions
  - **Generosity:** Willingness to donate to charity
  - **Perceptions of corruption:** Trust in government and business
- **Evaluation Period:** Data collected over **3-year rolling average** for stability
- **Life Evaluation Question:** Based on **Cantril Ladder Scale** (0-10 rating of current life)

### Additional Info

- **Publishing Organization:** **UN Sustainable Development Solutions Network (SDSN)**
- **Report History:**
  - First World Happiness Report published in **2012**
  - Released annually around **March 20** (International Day of Happiness)
  - 2026 edition is the **15th edition** of the report
- **International Day of Happiness:**
  - Established by **UN General Assembly** in 2012
  - Date: **March 20** every year
  - Recognizes happiness as a **fundamental human goal**
- **Challenges Identified for India:**
  - **Income inequality** affecting happiness distribution
  - **Urban-rural divide** in well-being metrics
  - **Mental health awareness** and service accessibility
  - **Work-life balance** in growing economy

## Supreme Court: Religious Conversion Ends Scheduled Caste (SC) Status

### What's the News?

- The **Supreme Court of India** has ruled that individuals who convert to religions other than **Hinduism, Sikhism, or Buddhism** lose their **Scheduled Caste (SC)** status immediately and completely.
- The verdict affirms that such converts are ineligible for constitutional reservations, statutory benefits, and legal protections reserved for SCs, including those under the **SC/ST (Prevention of Atrocities) Act**.
- The ruling came while upholding an **Andhra Pradesh High Court** decision in a case involving a pastor who sought protection under the SC/ST Act despite having practiced Christianity for over a decade.

### SC Status and Religious Conversion?

- **The Verdict:** A bench of Justices **Prashant Kumar Mishra** and **N.V. Anjaria** held that the bar under the **Constitution (Scheduled Castes) Order, 1950**, is "categorical and absolute."
- **Key Observations:**
  - **Instant Loss of Status:** The loss of SC status is not gradual; it occurs the moment an individual "professes" and practices a religion outside the permitted three.
  - **Mutual Exclusivity:** The Court stated that practicing a religion like Christianity (which does not traditionally recognize the caste system) and claiming SC status are "mutually exclusive" positions.
  - **Certificate Validity:** Continued possession of a caste certificate after conversion does not entitle a person to SC benefits if their religious practice has changed.
- **Impact on Legal Protection:** The Court clarified that a converted Christian cannot invoke the **SC/ST (Prevention of Atrocities) Act** for alleged offenses, as the act is a "protective legislation" meant exclusively for notified community members.

### Additional Info

- **The Constitution (Scheduled Castes) Order, 1950:**
  - **Article 341:** Empowers the **President** to specify castes, races, or tribes to be deemed Scheduled Castes.
  - **Paragraph 3:** Originally restricted SC status to Hindus only.
  - **Evolution of Inclusion:**
    - **1956 Amendment:** Extended SC status to members of the **Sikh** religion.
    - **1990 Amendment:** Extended SC status to members of the **Buddhist** religion.
- **Criteria for Re-conversion:**
  - To regain SC status through re-conversion, an individual must provide "credible and unimpeachable evidence" of:

- Bona fide re-conversion to the original religion.
- Unequivocal renunciation of the previous religion.
- **Social Acceptance:** Acceptance and assimilation back into the original caste fold by the community.

- **Definition of "Profess":**

- The Court relied on the **1964 Punjabrao vs. D.P. Meshram** case, defining "profess" as an open and public declaration of faith, evidenced by conduct and rituals rather than just private belief.

- **Historical Context:**

- The exclusion of Christians and Muslims from the SC list is based on the premise that these religions do not historically recognize the social disability of "untouchability" as practiced in the Hindu fold.

# Empowerment

## Government Launches 'Say No To Proxy Sarpanch' Campaign

### What's the News?

- The **Ministry of Panchayati Raj (MoPR)** has initiated a nationwide social media campaign titled **"Say No To Proxy Sarpanch"** to combat the deeply rooted **"Sarpanch Pati"** culture.
- The campaign aims to empower elected women representatives by ensuring they exercise their constitutional authority independently, rather than being sidelined by male relatives.
- Launched in observance of **International Women's Day**, the initiative seeks to spark a national discourse on genuine grassroots leadership and encourage a behavioral shift in rural governance.

### Sarpanch Pati Practice?

- **Definition:** The phenomenon where husbands or male relatives (referred to as **"Sarpanch Pati"**, **"Mukhiya Pati"**, or **"Pradhan Pati"**) take decisions and perform official duties on behalf of elected women representatives.
- **Impact:** Undermines the democratic mandate given to women through constitutional reservations in local self-government institutions.
- **Prevalence:** Widespread across rural India despite legal provisions for women's participation.

### Campaign Objectives?

- **Raise Awareness:** Generate nationwide discourse against proxy representation in Panchayati Raj institutions.
- **Celebrate Authentic Leadership:** Highlight and promote genuine women sarpanches and their contributions.
- **Behavioural Change:** Encourage communities to respect the democratic authority of elected women representatives.
- **Public Participation:** Engage citizens to share perspectives on proxy culture and support women leaders.
- **Implementation:** Collaboration with state panchayati raj departments and grassroots functionaries.

### Constitutional & Legal Framework

#### 73rd Constitutional Amendment Act, 1992

- **Article 243D:** Provides for **reservation of seats** for women in Panchayats.
- **One-Third Reservation:** Mandates not less than **33% reservation** for women in PRIs.
- **State Discretion:** States can increase reservation percentage beyond the constitutional minimum.
- **Rotational Reservation:** Seats reserved for women rotate across different constituencies.

#### Related Provisions

- **Article 243G:** Empowers Panchayats to prepare plans for **economic development** and social justice.
- **Article 243A:** Establishes **Gram Sabha** as the foundation of Panchayati Raj system.

- **State Election Commission:** Conducts free and fair elections to Panchayati Raj Institutions.

#### Women Representation in PRIs

- **Total Women Representatives:** Over **14 lakh women** serve as elected representatives in PRIs across India.
- **Reservation Enhancement:** Several states have increased women's reservation to **50%** in local bodies.
- **Leadership Positions:** Women hold significant positions as Sarpanches, Ward Members, and Panchayat Samiti members.

## 70th Session of the UN Commission on the Status of Women (CSW70)

### What's the News?

- The **70th Session of the Commission on the Status of Women (CSW70)** convened at the United Nations Headquarters in New York in **March 2026**.
- The session brought together representatives of Member States, UN entities, and non-governmental organizations (**NGOs**) to address global gender equality and the empowerment of women.
- A high-level Indian delegation, led by the **Minister of State for Women and Child Development**, participated to highlight India's progress in **Women-Led Development** and access to justice.

### The Commission on the Status of Women?

- **Establishment:** It is a functional commission of the **United Nations Economic and Social Council (ECOSOC)**, established in **1946**.
- **Mandate:** It serves as the principal global intergovernmental body exclusively dedicated to the promotion of gender equality and the rights of women.
- **Membership:** It consists of **45 Member States** elected by **ECOSOC** for four-year terms based on equitable geographical distribution.
- **Function:** It monitors the implementation of the **Beijing Declaration and Platform for Action** and the **2030 Agenda for Sustainable Development**.

### CSW70 (2026) – Priority Theme

#### Access to Justice for Women and Girls

- **Theme Focus:** "Ensuring and strengthening access to justice for all women and girls".
- **Objectives:**
  - Eliminate legal barriers preventing women from accessing justice systems.
  - Strengthen judicial mechanisms for gender-based violence cases.
  - Promote legal literacy among women in rural and marginalized communities.
  - Ensure affordable and timely justice delivery.

### Constitutional & Legal Framework in India

#### Constitutional Provisions

- **Article 14:** Guarantees **equality before law** and equal protection of laws.

- **Article 15:** Prohibits discrimination on grounds of sex.
- **Article 15(3):** Enables special provisions for women and children.
- **Article 39(a):** Directs state to ensure equal means of livelihood for men and women.
- **Article 42:** Provides for just and humane conditions of work and maternity relief.
- **Article 51A(e):** Fundamental duty to renounce practices derogatory to women's dignity.

#### Related Legislation

- **Protection of Women from Domestic Violence Act, 2005:**
  - Provides civil remedies for domestic violence survivors.
  - Establishes Protection Officers and Service Providers.
- **Criminal Law (Amendment) Act, 2013:**
  - Strengthened laws against sexual offences.
  - Introduced stricter punishments for crimes against women.
- **Posh Act, 2013:**
  - Prevents sexual harassment at workplace.
  - Mandates Internal Complaints Committees.
- **National Commission for Women Act, 1990:**
  - Establishes statutory body for women's rights protection.
  - Reviews safeguards provided under Constitution and laws.

#### Additional Information

##### India's Women Empowerment Initiatives

- **Beti Bachao Beti Padhao (BBBP):**
  - Launched in 2015 to address declining child sex ratio
  - Focuses on education and empowerment of girl child
- **Mahila Shakti Kendra:**
  - Community-level support for rural women
  - Provides skill development and employment opportunities
- **One Stop Centre (OSC) Scheme:**
  - Integrated support for women affected by violence
  - Provides medical, legal, and psychological assistance
- **Ujjawala Scheme:**
  - Prevention of trafficking and rescue of victims
  - Rehabilitation and reintegration support
- **Working Women Hostel:**
  - Provides safe accommodation for working women
  - Supports women's economic participation

##### International Commitments

- **Beijing Platform for Action (1995):**
  - 12 critical areas of concern for women's empowerment
  - Reviewed every 5 years at CSW sessions
- **CEDAW (1979):**
  - Convention on Elimination of All Forms of Discrimination Against Women

- India ratified in 1993 with some reservations
- **SDG 5 Targets:**
  - End all forms of discrimination against women
  - Eliminate violence and harmful practices
  - Ensure full participation in leadership and decision-making
  - Universal access to reproductive health and rights

#### Statistics on Women in India

| Indicator                         | Status                               |
|-----------------------------------|--------------------------------------|
| Women in Lok Sabha (17th)         | ~14.6%                               |
| Women in Rajya Sabha              | ~24.5%                               |
| Women Panchayat Representatives   | Over 14 lakh                         |
| Female Labour Force Participation | ~37% (2023-24)                       |
| Sex Ratio (2011 Census)           | 943 females per 1000 males           |
| Maternal Mortality Ratio          | 97 per 100,000 live births (2018-20) |

### Transgender Persons (Protection of Rights) Amendment Bill, 2026 Introduced in Lok Sabha

#### What's the News?

- The Union Government has introduced the **Transgender Persons (Protection of Rights) Amendment Bill, 2026** in the Lok Sabha.
- The Bill seeks to amend the **Transgender Persons (Protection of Rights) Act, 2019**, to address legal ambiguities and administrative challenges.
- **Union Minister for Social Justice Dr. Virendra Kumar** introduced the Bill on behalf of the government.
- Change includes **removal of self-perceived gender identity** provision from the original Act.
- The amendment has sparked **debate among transgender communities** and civil rights groups across multiple states.

#### Redefining Transgender Identity?

The Bill narrows the definition of transgender persons to include:

- **Socio-cultural identities:** Hijra, kinner, aravani, jogta, eunuch
- **Intersex variations:** Persons with congenital biological variations in sexual characteristics, chromosomal patterns, gonadal development, or endogenous hormone production
- **Forced alteration victims:** Individuals compelled to adopt transgender identity through mutilation, castration, hormonal procedures, or coercion

**Exclusions:** The definition explicitly excludes persons identifying based solely on **self-perceived gender identity** or **gender fluidity**, and those with different sexual orientations.



## Medical Certification Process?

- **Medical Authority:** Introduces a medical board headed by a Chief Medical Officer or Deputy Chief Medical Officer to examine gender certification cases
- **District Magistrate's Role:** Must review medical board recommendations and may seek additional expert assistance before issuing certificates (removing automatic issuance)
- **Mandatory Revision:** Persons undergoing **Sex Reassignment Surgery (SRS)** must apply for revised gender certificates (currently optional)
- **Reporting Requirement:** Medical institutions performing SRS must report procedures to the District Magistrate
- **Name Change Provision:** New provision allowing transgender persons to change first names in official documents, subject to the new definition criteria

## Enhanced Offences and Penalties?

The Bill significantly expands criminal provisions with **graded punishments**:

- **Denial of access to public places**
- **Forced labour or bonded labour**
- **Expulsion from homes or villages**
- **Physical, sexual, verbal, emotional, or economic abuse**
- **Compelling children to present transgender identity** (punishable with 10-14 years imprisonment and fines up to ₹3 lakh)

**Penalties range from rigorous imprisonment to life terms, with fines up to ₹5 lakh.**

## Additional Info

- **Historical and Legal Context:**
  - **NALSA vs. Union of India (2014):** The Supreme Court recognized the "Third Gender" and upheld the right to self-identify one's gender.
  - **The 2019 Act:** Provided a legal framework for non-discrimination in education, employment, and healthcare, but was criticized for its weak penalty clauses.
- **Constitutional Provisions:**
  - **Article 14:** Guarantees equality before the law.
  - **Article 15:** Prohibits discrimination on grounds of sex.
  - **Article 21:** Protects the right to life and personal liberty, which the SC has interpreted to include the right to dignity and gender identity.
- **National Council for Transgender Persons (NCTP):**
  - A statutory body established to advise the government on policy formulation.
  - It comprises representatives from various Union Ministries, State Governments, and five members from the transgender community.

## Krishi Sakhi Initiative: Empowering Women Farmers Through Insurance Literacy

### What's the News?

- The **Agriculture Insurance Company of India Limited (AIC)** has launched the **Krishi Sakhi Initiative**, a nationwide campaign to empower **women farmers** through awareness, capacity building, and enhanced access to **crop insurance**.
- Aligned with the **UN Food and Agriculture Organization's** designation of 2026 as the *International Year of the Woman Farmer*, the initiative adopts a year-long, structured outreach model to promote gender-inclusive agricultural development.
- Focus areas include **insurance literacy**, risk mitigation training, and grassroots engagement to bridge the gap in institutional support for women in agriculture.

### Krishi Sakhi Initiative: Key Features

- **Implementing Agency:** **Agriculture Insurance Company of India (AIC)**, a public sector undertaking under the Ministry of Agriculture.
- **Target Beneficiaries:** Women farmers, particularly those engaged in crop production, livestock, and post-harvest activities; women constitute **over 30%** of India's agricultural workforce.
- **Core Objectives:**
  - Enhance awareness of **Pradhan Mantri Fasal Bima Yojana (PMFBY)** and other crop insurance schemes.
  - Strengthen women's participation in formal risk-mitigation mechanisms.
  - Promote financial inclusion and resilience in rural agrarian households.
- **Implementation Strategy:**
  - **Month-wise thematic activities:** Digital campaigns, community workshops, walkathons, and rural outreach drives.
  - **Capacity-building modules:** Training on insurance claim processes, documentation, and climate-risk management.
  - **Holistic outreach:** Integration of sanitation, hygiene, and health awareness alongside agricultural extension.

### Additional Info

- **Lakshpati Didi Scheme:**
  - A flagship initiative to empower women in **Self-Help Groups (SHGs)** to earn a sustainable annual income of at least **₹1 Lakh**.
  - The government has set an ambitious target to create **3 crore Lakshpati Didis** across rural India.
- **Agriculture Insurance Company of India (AIC):**
  - A specialized public sector insurer providing yield-based and weather-based crop insurance to Indian farmers.
  - It plays a pivotal role in the **Pradhan Mantri Fasal Bima Yojana (PMFBY)**.
- **National Rural Livelihoods Mission (NRLM):**



- The overarching framework (Deendayal Antyodaya Yojana - DAY-NRLM) that organizes rural poor into SHGs to foster financial inclusion and social mobilization.

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## Culture and Arts

### Oxford Museum Returns 16th Century Tirumangai Alvar Bronze to India

#### What's the News?

- The **Ashmolean Museum, Oxford** has announced the return of a **16th-century bronze statue** of **Tirumangai Alvar** to India.
- The **500-year-old sculpture** was originally taken from a **temple in Tamil Nadu** during the colonial period.
- This marks a significant milestone in **cultural heritage repatriation** efforts between UK and India.
- The statue will be handed over through **diplomatic channels** and housed in a **Indian museum** for public access.
- The return follows **provenance research** that established the artifact's **illegal export** from India.

#### About the Tirumangai Alvar Statue

- **Period:** 16th century CE (approximately 500 years old).
- **Material:** Bronze sculpture crafted using traditional lost-wax technique.
- **Subject:** Tirumangai Alvar – one of the 12 Alvar saints of Tamil Vaishnavism.
- **Origin:** Tamil Nadu temple (specific temple under investigation).
- **Dimensions:** Life-size devotional icon suitable for temple processions.
- **Artistic Style:** Vijayanagara period bronze craftsmanship.

#### Historical Context of the Artifact

- **Tirumangai Alvar:**
  - Lived in **8th-9th century CE**.
  - Last of the **12 Alvar saints** in Sri Vaishnava tradition.
  - Composed **divine hymns** in **Nalayira Divya Prabandham**.
  - Revered as **Kaliyan** in Tamil Vaishnavism.
- **Colonial Era Artifacts:**
  - Many Indian artifacts were **removed during British rule**.
  - Some taken through **archaeological surveys**.
  - Others acquired through **questionable transactions**.
  - Growing global movement for **repatriation of cultural property**.
- **Ashmolean Museum:**
  - Established in **1683**, oldest university museum in the world.
  - Houses extensive **South Asian art collection**.
  - Part of **University of Oxford, UK**.

#### India's Repatriation Efforts

- **Recent Returns:**
  - **2023-24:** Over **600 artifacts** returned to India from various countries.
  - **USA:** Multiple returns through **Homeland Security Investigations**.

- **UK:** Increasing cooperation on **stolen antiquities**.
- **Australia:** Return of **stolen temple bronzes**.
- **Key Agencies Involved:**
  - **Archaeological Survey of India (ASI):** Nodal agency for antiquities.
  - **Ministry of Culture:** Oversees repatriation negotiations.
  - **Indian Council for Cultural Relations (ICCR):** Cultural diplomacy.
  - **CBI:** Investigates art theft cases.
- **Legal Framework:**
  - **Antiquities and Art Treasures Act, 1972:** Regulates export of antiquities.
  - **UNESCO 1970 Convention:** Prevents illicit trafficking of cultural property.
  - **UNIDROIT Convention, 1995:** Stolen or illegally exported cultural objects.
- **Notable Repatriation Cases:**
  - **Nataraja Bronze (2021):** Returned from USA to Tamil Nadu.
  - **Ardhanarishvara Statue (2022):** Repatriated from UK.
  - **Durga Mahishasuramardini (2023):** Returned from Canada.
  - **Total artifacts returned since 2014: Over 3,000 pieces.**

### Medieval Gajapathi Inscription Discovered in Guntur Temple

#### What's the News?

- **Archaeologists** discovered a **15th-century Gajapathi inscription** on a stone pillar at the **Lakshmi Narasimha Swamy Temple** in **Guntur district, Andhra Pradesh**.
- The inscription is engraved on **both sides of a stone pillar** located inside the temple's **mandapa (hall)**.
- Written in **Telugu language** with **Sanskrit verses**, the inscription dates to the reign of the **Gajapathi dynasty** of Odisha.
- The discovery reveals historical links between the **Gajapathi Empire** and the **Andhra region** during medieval times.
- Historians believe the inscription belongs to the period of **Gajapathi King Purushottama Deva**.

#### Gajapathi Inscription: Key Details

- **Location:** Found at **Chintapallipadu village** in **Vatticherukuru mandal** of Guntur district.
- **Physical Features:**
  - Carved on a **black granite stone pillar**
  - Engraved on **both sides** of the pillar
  - Contains **Sanskrit verses** written in **Telugu script**.
- **Content:** The inscription mentions **Kumaraguru Mahapatra**, a **steward officer** of the Gajapathi administration.
- **Historical Period:** Dates to the **15th century** during the **Gajapathi Empire** rule.

- **Significance:** Provides evidence of **Gajapathi territorial expansion** into southern Andhra Pradesh.

### Gajapathi Empire: Historical Overview

- **Origin:** Medieval **Hindu monarchy** originating from the **Odisha region**.
- **Time Period:** Reigned from approximately **1434 to 1541 CE**.
- **Founding:** Established by **Kapilendra Deva**, the founder of the **Gajapathi Dynasty**.
- **Territorial Extent:** At its peak, the empire stretched from:
  - **Ganges River** in the north (near West Bengal)
  - **Kaveri River** in the south (including parts of Andhra and Tamil Nadu).
- **Notable Rulers:**
  - **Kapilendra Deva:** Expanded the empire from the **Ganges** in the north to the **Kaveri** in the south.
  - **Purushottama Deva:** Noted for his military successes and the legendary **Kanchi-Abhigana** tradition.
  - **Prataparudra Deva:** The last great ruler, during whose reign the empire faced challenges from the **Vijayanagara Empire** under **Krishnadevaraya** and the **Golconda Sultanate**.
- **The Title:** The term **Gajapati** literally translates to "Lord of the Elephants," signifying the empire's formidable elephant corps.

## Oscars 2026: Academy Awards Ceremony Highlights

### What's the News?

- **98th Academy Awards (Oscars 2026)** ceremony was held in **Los Angeles**, celebrating excellence in **global cinema**.
- **Golden K-Pop Artists** performance was **interrupted/halted** during the ceremony, sparking **social media reactions** and debates about **cultural representation**.
- Multiple categories recognized **international films** and **diverse storytelling** from various countries.
- The ceremony highlighted growing **global influence of non-Hollywood cinema**, including contributions from **Asian film industries**.

### Major Winners and Record-Breaking Moments

- **Best Picture:** **One Battle After Another**, produced by **Adam Somner**, **Sara Murphy**, and **Paul Thomas Anderson**.
- **Best Director:** **Paul Thomas Anderson (One Battle After Another)**, marking his first win in this category.
- **Best Actor:** **Michael B. Jordan (Sinners)**, achieving his first-ever Oscar victory.
- **Best Actress:** **Jessie Buckley (Hamnet)**, capping off a successful awards season run.
- **Best International Feature Film:** **Sentimental Value (Norway)**, directed by **Joachim Trier**.
- **Best Animated Feature:** **KPop Demon Hunters**, which also secured **Best Original Song** for the track

"Golden". This is the first time a **K-pop song** has won an Academy Award.

- **Technical Dominance:** **Frankenstein** won several categories, including **Best Costume Design**, **Best Makeup and Hairstyling**, and **Best Production Design**.

### Indian Presence and Notable Milestones

- **Official Entry:** India's official submission for the Best International Feature Film, **Homebound** (directed by **Neeraj Ghaywan**), reached the **15-film shortlist** but did not secure a final nomination.
- **Historic Tie:** Indian-origin filmmaker **Alexandre Singh** won **Best Live-Action Short Film** for **Two People Exchanging Saliva**. The win was a rare **tie** with the film **The Singers**, marking only the seventh tie in Oscar history.
- **Documentary Recognition:** Indian-American filmmaker **Geeta Gandbhir** received two nominations in a single year for **The Perfect Neighbor** (Best Documentary Feature) and **The Devil Is Busy** (Best Documentary Short).

## RISA: Timeless Tribal – Premium Brand to Globalise India's Tribal Crafts

### What's the News?

- The **Ministry of Tribal Affairs** has launched **RISA: Timeless Tribal**, a premium signature brand to position India's tribal weaves, embroidery, and handicrafts in high-value domestic and global markets.
- Implemented by **TRIFED (Tribal Cooperative Marketing Development Federation of India)**, the initiative focuses on **fair profit-sharing**, **design innovation**, and **direct market access** for tribal artisans.
- The brand name draws from **Risa**, a traditional handwoven stole of Tripura, symbolising cultural identity and everyday elegance—now reimagined for contemporary consumers.

### RISA Initiative: Key Features & Implementation

- **Phase 1 Coverage:**
  - **10 tribal clusters** across India
  - **5 tribal weaves:** Eri silk, Muga silk (Assam), Santal cotton (Jharkhand), Changpa Pashmina (Ladakh), Kotpad cotton (Odisha)
  - **2 embroideries:** Dongria (Odisha), Toda (Tamil Nadu)
  - **3 handicrafts:** Dokhra metal art (Chhattisgarh), Longpi pottery (Manipur), Turtuk brassware (Ladakh)
- **Core Objectives:**
  - **Design Intervention:** Modern product development while preserving traditional motifs; replicable frameworks for craft revival.
  - **Capacity Building:** Skill upgradation for high-end, export-ready production; emphasis on **women's economic empowerment**.

- **Infrastructure Development:** Strengthening weaving clusters and establishing stitching/finishing units.
- **Premium Packaging:** Eco-friendly, globally appealing packaging designed by **National Institute of Design (NID) Haryana**.
- **Strategic Partnerships:**
  - Collaboration with renowned designers (**Abu Jani Sandeep Khosla, Manish Tripathi, Anju Modi, Gaurav Jai Gupta, Sameera Dalvi**) via the **National Design Centre (NDC)** to bridge heritage with contemporary fashion.

#### Additional Info:

- **The Origin of "Risa":**
  - The brand name is inspired by the **Risa**, a traditional handwoven stole from **Tripura**.
  - **Tripuri Attire:** Traditional female attire in Tripura consists of three parts: **Risa** (chest wrap/stole), **Rignai** (lower garment), and **Rikutu** (wrap/head covering).
  - **Cultural Milestone:** Adolescent Tripuri girls receive their first Risa during the **Risa Sormani** ceremony (typically ages 12–14).
- **Geographical Indication (GI) Tag:**
  - **Tripura Risa Textile** was officially granted the **GI Tag** in early 2024, recognizing its unique origin and heritage.
  - It is used in religious festivals like **Garia Puja** and as a mark of honor for distinguished guests.
- **Bharat Tribes Fest 2026:**
  - A 13-day event organized by **MoTA** and **TRIFED** to showcase the art, cuisine, and commerce of over **300 master artisans** and **78 Van Dhan Vikas Kendras (VDVKs)**.

## Kalinjar Hill Declared National Geo-Heritage Site

### What's the News?

- The **Geological Survey of India (GSI)** has officially designated the hill region surrounding the historic **Kalinjar Fort** in **Uttar Pradesh** as a **National Geo-Heritage Site**.
- This recognition identifies the site as a rare geological marvel that preserves a massive timeline of Earth's crustal evolution.
- It is the **first** site in Uttar Pradesh to receive this prestigious scientific status, aiming to integrate geological conservation with heritage tourism.

### Kalinjar's Geo-Heritage Significance?

- **Eparchaeon Unconformity:** The site provides clear evidence of a rare geological phenomenon where two rock formations from vastly different periods meet.
- **Geological Gap:** It features **2.5-billion-year-old Bundelkhand granite** (Archean age) directly overlain by **1.2-billion-year-old Kaimur sandstone** (Vindhyan Supergroup).

- **Chronological Record:** This specific layering records a significant **1.3-billion-year gap** in the Earth's geological history, offering researchers a "window" into ancient environmental shifts.
- **Strategic Geography:** The elevated, rocky terrain of the **Vindhya Range** (at approximately **1,203 feet**) provided natural defensive advantages that historically made the fort nearly invincible.

### Additional Info

- **Kalinjar Fort: Historical & Cultural Context:**
  - **Dynastic Rule:** While its origins date back to the **Gupta period**, it reached its zenith under the **Chandela dynasty** (9th–13th century), who styled themselves as **Kalanjaradhipati** (Lord of Kalinjar).
  - **Military History:** The fort famously resisted invasions by **Mahmud of Ghazni, Qutb-ud-din Aibak, and Humayun**; it was eventually captured by **Akbar** in 1569.
  - **Religious Significance:** Home to the **Neelkanth Mahadev Temple**, where legend states Lord Shiva rested after consuming poison during the **Samudra Manthan**.
- **National Geo-Heritage Sites in India:**
  - These are geological features or landscapes of national importance, identified and maintained by the **GSI** under the **Ministry of Mines**.
  - India currently hosts over **30** such sites, including the **Lonar Crater** (Maharashtra) and the **Tirupati Eparchaeon Unconformity** (Andhra Pradesh).
  - **Draft Geo-heritage Sites and Geo-relics Bill:** Aimed at providing statutory protection to these sites to prevent illegal mining and encroachment.

### GSI's Geo-Heritage Program

- **Nodal Agency:** **Geological Survey of India** under **Ministry of Mines** manages geo-heritage declarations.
- **Total Sites:** India now has **34 official National Geological Heritage Monument Sites**.
- **Identification Criteria:** Sites must demonstrate rare, unique, or representative geological features.
- **Conservation Objective:** Protect geological formations from mining, construction, and environmental degradation.
- **Geo-Tourism Potential:** Promotes scientific tourism and public awareness of Earth's history.

# Environment

## Gitchak Nakana: New Subterranean Fish Species Discovered in Assam

### What's the News?

- Scientists have discovered a **new species of subterranean fish** named **Gitchak Nakana** in **Assam's groundwater systems**.
- The species is **blind** and **pigmentless**, adapted to living in **underground aquatic habitats**.
- Discovery published in **Nature Scientific Reports** journal in **February 2026**.
- Found in **karst limestone formations** and **underground water channels** of Assam.
- Named after **local indigenous community terminology** reflecting cultural connection to the region.
- Highlights **biodiversity richness** of Northeast India's subterranean ecosystems.

### Gitchak Nakana Species?

#### Overview

- **Scientific Classification:** New genus and species of cave-dwelling fish.
- **Habitat Type:** **Stygobitic** (obligate groundwater-dwelling organism).
- **Physical Characteristics:**
  - **Eyeless** or highly reduced eyes
  - **Lack of pigmentation** (appears white/translucent)
  - **Enhanced sensory organs** for navigation in darkness
  - **Smaller body size** compared to surface-dwelling relatives

#### Discovery Details

| Feature                     | Details                             |
|-----------------------------|-------------------------------------|
| <b>Location</b>             | Assam, Northeast India              |
| <b>Habitat</b>              | Subterranean groundwater systems    |
| <b>Geological Formation</b> | Karst limestone caves               |
| <b>Discovery Year</b>       | 2025-2026                           |
| <b>Publication</b>          | Nature Scientific Reports           |
| <b>Research Team</b>        | Indian and international scientists |

#### Adaptation Features

- **Troglomorphic Traits:** Physical changes for cave life.
- **Enhanced Lateral Line System:** Detects water vibrations.
- **Reduced Metabolism:** Survives in low-nutrient environments.
- **Long Lifespan:** Typical of subterranean species.

### Similar Discoveries in India

| Species                       | Location             | Year     |
|-------------------------------|----------------------|----------|
| <b>Indoreonectes evezardi</b> | Maharashtra caves    | 1870     |
| <b>Oreonectes menziessi</b>   | Northeast India      | 2010s    |
| <b>Schistura spp.</b>         | Various cave systems | Multiple |

|                       |       |      |
|-----------------------|-------|------|
| <b>Gitchak Nakana</b> | Assam | 2026 |
|-----------------------|-------|------|

## Oleum Gas Leak in Palghar Triggers Mass Evacuation

### What's the News?

- A major toxic gas leak occurred at a chemical manufacturing unit in the **Palghar** district of Maharashtra.
- The incident involved **Oleum gas**, leading to the precautionary evacuation of over **2,600 people**, including industrial workers and students from a nearby school.
- Emergency services, including the **Fire Brigade** and local police, managed to contain the leak with no reported fatalities, though several individuals sought medical help for minor irritations.

### The Incident and Response?

- **Location:** The leak originated from an industrial plant located in the **Maharashtra Industrial Development Corporation (MIDC)** zone in **Boisar**.
- **Scale of Evacuation:** Authorities moved approximately **2,600 individuals** to safe zones within a short timeframe to prevent mass inhalation.
- **Health Impact:** At least three to four persons complained of **eye irritation** and respiratory discomfort; they were shifted to a local hospital for observation.
- **Containment Strategy:** Responders used water curtains to suppress the gas clouds and neutralized the chemical source to prevent further spread into residential areas.

### What is Oleum Gas?

- **Chemical Composition:** Oleum, also known as **fuming sulfuric acid**, is a solution of sulfur trioxide ( $\text{SO}_3$ ) in sulfuric acid ( $\text{H}_2\text{SO}_4$ ).
- **Physical Properties:** It is a heavy, oily, and highly corrosive liquid that releases thick, choking fumes (sulfur trioxide gas) when exposed to air.
- **Industrial Utility:** It is a critical intermediate in the production of **sulfuric acid**, explosives, dyes, and synthetic detergents.
- **Hazard Profile:**
  - It reacts violently with water, producing significant heat and acidic mist.
  - Inhalation can cause severe damage to the respiratory tract, leading to **pulmonary edema** (fluid in lungs) in extreme cases.

### Additional Info

- **Chemical Disaster Management in India:**
  - **Legal Framework:**
    - **Environment Protection Act, 1986:** Formulated in the aftermath of the **Bhopal Gas Tragedy** to provide a framework for environmental safety.
    - **MSIHC Rules, 1989:** The **Manufacture, Storage, and Import of Hazardous Chemical Rules**

mandate that factories maintain an **On-site Emergency Plan**.

- **Public Liability Insurance Act, 1991:** Provides for immediate relief to persons affected by accidents occurring while handling hazardous substances on a "no-fault" liability basis.

○ **Institutional Mechanism:**

- **NDRF (National Disaster Response Force):** A specialized force under the **Ministry of Home Affairs** trained to handle **CBRN** (Chemical, Biological, Radiological, and Nuclear) disasters.
- **Petroleum and Explosives Safety Organization (PESO):** Regulates the safety of hazardous substances like compressed gases and explosives.

• **Constitutional Context:**

- **Article 21:** The Supreme Court has expanded the "Right to Life" to include the right to a **wholesome environment** and protection from industrial hazards.
- **Article 48A:** A Directive Principle that tasks the State with protecting and improving the environment.

## India Submits 7th National Biodiversity Report to CBD

### What's the News?

- India has submitted its **7th National Report** to the **Convention on Biological Diversity (CBD)**, assessing progress toward **2030 global biodiversity targets**.
- This marks India's **first full assessment** of progress under the **Kunming-Montreal Global Biodiversity Framework (KM-GBF)**.
- The report highlights achievements in **forest cover expansion** and **species recovery**, while flagging challenges in **land degradation** and meeting ambitious 2030 targets.
- The **National Biodiversity Authority (NBA)** led the preparation through a national validation workshop process.

### Kunming-Montreal Global Biodiversity Framework

#### Overview

- The **KM-GBF** is a landmark international agreement adopted to **halt and reverse biodiversity loss by 2030**.
- It sets **4 long-term goals for 2050** and **23 action-oriented targets for 2030**.

#### Targets

| Target             | Commitment                                             |
|--------------------|--------------------------------------------------------|
| <b>30 by 30</b>    | Protect 30% of land, inland waters, and oceans by 2030 |
| <b>Restoration</b> | Restore 30% of degraded ecosystems by 2030             |
| <b>Extinctions</b> | Achieve zero human-induced extinctions                 |

|                 |                                                             |
|-----------------|-------------------------------------------------------------|
| <b>Red List</b> | Publish National Red Data Books for flora and fauna by 2030 |
|-----------------|-------------------------------------------------------------|

### Significance for India

- India has aligned **23 national targets** with the **KM-GBF framework**.
- The framework guides India's **National Biodiversity Strategy and Action Plan (NBSAP)**.
- Progress reporting enables **global accountability** and **policy course-correction**.

### Convention on Biological Diversity (CBD)

#### Background

- **CBD** is an international treaty adopted at the **1992 Earth Summit** in Rio de Janeiro.
- India is a **party to CBD** and ratified the convention in **1994**.
- Under **Article 26** of CBD, parties must submit national reports to the **Conference of Parties (COP)**.
- **7th National Reports** were due by **February 2026**; **8th Reports** due by **June 2029**.

#### India's Reporting History

| Report        | Period Covered | Key Focus                                    |
|---------------|----------------|----------------------------------------------|
| <b>5th NR</b> | 2010-2014      | Progress on 12 National Biodiversity Targets |
| <b>6th NR</b> | 2015-2018      | Achievement of Aichi Targets                 |
| <b>7th NR</b> | 2019-2025      | KM-GBF 2030 Targets Assessment               |

### Institutional Framework

#### National Biodiversity Authority (NBA)

- **Statutory body** established under the **Biological Diversity Act, 2002**.
- Functions under the **Ministry of Environment, Forest and Climate Change (MoEF&CC)**.
- Responsible for **facilitating CBD reporting** and **implementing biodiversity policies**.

#### Related Legislation & Policies

- **Biological Diversity Act, 2002** (amended 2023) – Regulates access to biological resources.
- **National Biodiversity Strategy and Action Plan (NBSAP)** – India's roadmap for biodiversity conservation.
- **Forest Conservation Act, 1980** – Protects forest cover and biodiversity habitats.
- **Wildlife Protection Act, 1972** – Safeguards endangered species.

## Central Asian Nations Propose CMS Protection for Striped Hyena

### What's the News?

- **Tajikistan** and **Uzbekistan** have formally proposed the inclusion of the **Striped Hyena (*Hyaena hyaena*)** in **Appendix I** and **Appendix II** of the **Convention on the Conservation of Migratory Species of Wild Animals (CMS)**.
- The proposal is scheduled for consideration at the upcoming **15th Conference of the Parties (COP15)** of the **CMS**.
- This initiative seeks to establish a framework for transboundary cooperation to mitigate the rapid

decline of the species due to habitat loss and human-wildlife conflict across its range.

### Proposed CMS Protection?

- **Appendix I Inclusion:** If approved, this would mandate member states to provide strict protection to the species, prohibiting its taking and protecting its critical habitats.
- **Appendix II Inclusion:** This would encourage range states to enter into regional agreements for the coordinated management of the species, specifically addressing its movement across international borders.
- **Conservation Rationale:** The **Striped Hyena** is increasingly threatened by fragmentation of its landscape, illegal hunting, and accidental poisoning, necessitating a multi-nation conservation strategy.

### India's Role in CMS

- **Hosted CMS COP13** in Gandhinagar, Gujarat (2020)
- **Added 10 species** to CMS Appendix I during COP13
- **Launched Central Asian Flyway Action Plan** for migratory birds
- **Proposed conservation** for Great Indian Bustard under CMS

### Other Species Under CMS Protection

- **Mammals:** Snow Leopard, Tibetan Antelope, Asian Elephant
- **Birds:** Great Indian Bustard, Bengal Florican, Siberian Crane
- **Marine:** Whale Shark, Dugong, Oceanic Whitetip Shark

### The Striped Hyena Species?

- **Ecological Importance:** As a primary **scavenger**, the species provides essential ecosystem services by consuming carcasses, which helps in nutrient cycling and prevents the spread of diseases.
- **Global Status:** Currently categorized as **Near Threatened** on the **IUCN Red List**, with a total global population estimated to be fewer than **10,000 mature individuals**.
- **Habitat:** It inhabits arid and semi-arid regions, scrub forests, and grasslands across **North Africa**, the **Middle East**, **Central Asia**, and the **Indian Subcontinent**.

### Convention on Migratory Species (CMS):

- Known as the **Bonn Convention**, it is an intergovernmental treaty under the **United Nations Environment Programme (UNEP)**.
- It is the only global convention specializing in the conservation of migratory species, their habitats, and their migration routes.

## Two New Fruit Fly Species Discovered in Himalayan Foothills

### What's the News?

- **Entomologists** have discovered **two previously unknown species of fruit flies** in the **Himalayan foothills** of **Himachal Pradesh**.
- The new species have been named **Acidoxantha paratotoflava** and **Hemilea suneriae**.

- The discovery was made in the **Solan region** of Himachal Pradesh during extensive biodiversity research.
- Researchers also documented an **insect group never before recorded in India**.
- The findings were published in a **peer-reviewed scientific journal** after rigorous taxonomic verification.

### About the New Species

| Species Name                     | Characteristics                    | Discovery Location      |
|----------------------------------|------------------------------------|-------------------------|
| <b>Acidoxantha paratotoflava</b> | Medium-sized, greenish-yellow fly  | Solan, Himachal Pradesh |
| <b>Hemilea suneriae</b>          | Distinctive morphological features | Solan, Himachal Pradesh |
| <b>Family</b>                    | Tephritidae (True Fruit Flies)     | Himalayan Foothills     |

- **Taxonomic Classification:** Both species belong to the family **Tephritidae**, commonly known as **true fruit flies**.
- **Distinguishing Features:** Each species has unique morphological characteristics that differentiate them from known relatives.
- **Research Method:** Discovery made using **innovative traps and traditional nets** during field surveys.
- **Scientific Naming:** Species names follow international taxonomic conventions for new species identification.

### Research Team & Institution

- **Lead Researcher:** Entomologist **Manish Pal Singh** from the **College of Horticulture and Forestry, Hamirpur**.
- **Research Collaboration:** Multi-institutional team involving taxonomic experts and biodiversity specialists.
- **Study Duration:** Extended field surveys conducted over multiple seasons for comprehensive data collection.
- **Publication:** Findings published in **international peer-reviewed entomology journal**.

### Significance of the Discovery

#### Biodiversity Documentation

- **First Record in India:** This marks the **first documentation** of this insect group in Indian territory.
- **Species Richness:** Adds to the known **fruit fly diversity** in the Himalayan ecosystem.
- **Biogeographical Importance:** Himalayan foothills recognized as **biodiversity hotspot** for insect fauna.
- **Taxonomic Contribution:** Enhances global understanding of **Tephritidae family distribution**.

#### Ecological Importance

| Aspect             | Significance                                         |
|--------------------|------------------------------------------------------|
| <b>Pollination</b> | Fruit flies contribute to plant pollination services |
| <b>Food Chain</b>  | Serve as prey for birds, spiders, and other insects  |

|                            |                                                        |
|----------------------------|--------------------------------------------------------|
| <b>Ecosystem Health</b>    | Indicator species for environmental quality assessment |
| <b>Agricultural Impact</b> | Some species are pests; others are benign              |

- **Ecosystem Indicators:** Fruit fly diversity reflects overall ecosystem health in the region.
- **Agricultural Relevance:** Understanding fruit fly species helps in pest management strategies.
- **Conservation Value:** New species documentation supports biodiversity conservation efforts.

## Additional Information

### Fruit Flies in India

- **Known Species:** Approximately 200 species of fruit flies are documented in India.
- **Pest Species:** Only 35-40 species are considered agricultural pests.
- **Major Pest:** *Bactrocera zonata* (Peach fruit fly) is a significant polyphagous pest.
- **Regional Distribution:** Different species found across various agro-climatic zones.

### Taxonomic Classification

- **Order:** Diptera (True Flies)
- **Family:** Tephritidae (Fruit Flies)
- **Subfamily:** Trypetinae
- **Genus:** Acidoxantha and Hemilea

### Related Discoveries in India

| Discovery                    | Location                  | Year |
|------------------------------|---------------------------|------|
| <b>Raft Spider</b>           | Western Ghats             | 2025 |
| <b>Snail Species (7 new)</b> | Blue Mountains            | 2026 |
| <b>Fruit Fly (Siruvani)</b>  | Western Ghats, Tamil Nadu | 2021 |
| <b>Fruit Fly Species</b>     | Meghalaya                 | 2022 |

## Forest Survey of India Halts AI-based 'Anavaran' Deforestation Alert System

### What's the News?

- The **Forest Survey of India (FSI)** has suspended its **Anavaran** system, an Artificial Intelligence (AI)-driven tool designed to provide fortnightly alerts on deforestation across the country.
- The decision comes after state forest departments reported a high frequency of "false positives," where the system incorrectly identified seasonal changes or agricultural activities as deforestation.
- The system was intended to bridge the gap between the biennial **India State of Forest Reports (ISFR)** by providing near real-time monitoring of forest cover.

### Anavaran System Overview?

- **Launch:** January 2024 as a pilot project
- **Technology Stack:**
  - **Google Earth Engine** for data processing
  - **Sentinel-2** optical satellite imagery
  - **Sentinel-1** Synthetic Aperture Radar (SAR) for all-weather monitoring.
  - Machine learning algorithms for change detection.

- **Resolution:** 10-20 metre spatial resolution (significantly higher than global systems like Terra-I which operates at 250 metres).
- **Alert Frequency:** Every 15 days with precise geographic coordinates.
- **Performance Metrics:**
  - Average 561 alerts per month.
  - Peak of 1,028 alerts monthly during November-March (deforestation season).

### Reasons for Suspension

- **Internal Review:** The portal is currently under internal review with no clear timeline for resumption.
- **False Positives:** Concerns were raised about accuracy of alerts and potential false detections.
- **Technology vs Policy Readiness:** Debate emerged over whether state departments were equipped to act on AI-generated alerts.
- **Operational Challenges:** States confirmed they stopped receiving alerts after **December 2025**.

### Additional Information

- **Forest Survey of India (FSI):**
  - **Established:** 1981
  - **Headquarters:** Dehradun, Uttarakhand
  - **Ministry:** Ministry of Environment, Forest and Climate Change.
  - **Key Publication:** **India State of Forest Report (ISFR)** – published biennially.
- **Related Constitutional Provisions:**
  - **Article 48A:** Directive Principle – State shall endeavour to protect and improve the environment and safeguard forests.
  - **Article 51A(g):** Fundamental Duty – Citizens to protect and improve natural environment including forests.
- **Key Environmental Initiatives:**
  - **National Afforestation Programme (NAP)**
  - **Green India Mission** (under NAPCC)
  - **CAMPA Fund** (Compensatory Afforestation Fund Management and Planning Authority)
  - **Forest Conservation Act, 1980** (Recently amended in 2023)
- **International Frameworks:**
  - **UNFCCC** – India's NDC includes creating additional carbon sink of 2.5-3 billion tonnes CO<sub>2</sub> equivalent.
  - **SDG 15:** Life on Land – Protect, restore and promote sustainable use of terrestrial ecosystems.
  - **Bonn Challenge:** India pledged to restore 26 million hectares of degraded land by 2030.

## NHAI Releases First National Highways Green Cover Index (NH-GCI) Report

### What's the News?

- The **National Highways Authority of India (NHAI)** has released its inaugural annual report on the **National Highways Green Cover Index (NH-GCI)** for the year 2025-26.

- Developed in collaboration with the **National Remote Sensing Centre (NRSC)** of **ISRO**, the report uses satellite-based technology to provide a scientific and quantitative assessment of plantations along India's highway network.
- This technology-driven approach replaces traditional manual field inspections with remote sensing to monitor environmental sustainability along transport corridors.

### Green Cover Index: How It Works?

- **Measurement Metric:** Percentage of land covered by green canopy within each **1 km highway segment**.
- **Technology Stack:**
  - **Resourcesat-2/2A (LISS-IV)** satellite: 5-metre resolution multispectral data.
  - **Cartosat-2S** imagery: Cross-verification for enhanced accuracy.
  - Detection of **chlorophyll content** to assess vegetation health.
- **Coverage:** Highways under **Operation & Maintenance (O&M)** phase only.
- **Data Accessibility:** Published on **NRSC's Bhuvan web GIS portal** with interactive maps and standardized reports.

### Findings of NH-GCI 2025-26

- **Top Performing States:**
  - **Assam** – Highest green cover along National Highways.
  - Other northeastern states also showed **significant vegetation density**.
- **Monitoring Scope:** Covers **30,000 km** of National Highway network.
- **Data Utilization:** Enables **year-on-year comparison** and targeted interventions for plantation efforts.
- **Multi-Index Layout:** Supports **integrated environmental assessment** and climate impact monitoring.

### NHAI's Green Highway Initiatives

- **Green Highways Policy (2016):** Framework for **plantation and maintenance** along National Highways.
- **Plantation Achievements:**
  - Around **3.5 crore plants** planted from **2016-17 to 2022-23**.
  - Over **4.5 crore trees** planted along National Highways cumulatively.
  - **70,000 trees transplanted** during highway construction projects.
- **Miyawaki Plantation:** NHAI plans **denser green cover** using Miyawaki technique on land parcels along highways.
- **Harit Path App:** Mobile application launched to **monitor plantation** along National Highways.
- **Annual Awards:** NHAI to institute awards recognizing agencies carrying out **exemplary plantation work**.
- **Target:** Aim to plant **50 lakh trees annually** under plantation drives.

### Additional Information

- **National Highways Authority of India (NHAI):**
  - **Established:** 1995 (under NHAI Act, 1988).

- **Ministry:** Ministry of Road Transport and Highways.
- **Headquarters:** New Delhi.
- **Mandate:** Development, maintenance, and management of National Highways.

- **ISRO's National Remote Sensing Centre (NRSC):**
  - **Location:** Hyderabad, Telangana.
  - **Role:** Provides **satellite data** and remote sensing services for various government initiatives.
- **Benefits of Highway Green Cover:**
  - **Carbon Sequestration:** Reduces carbon footprint of transportation sector.
  - **Air Quality Improvement:** Filters vehicular emissions and dust.
  - **Soil Conservation:** Prevents erosion along highway embankments.
  - **Biodiversity Support:** Creates corridors for wildlife movement.
  - **Aesthetic Value:** Enhances visual appeal of highway stretches.

## Megamalai Wildlife Sanctuary: Nine New Species Discovered in Western Ghats

### What's the News?

- **Zoological Survey of India (ZSI)** documented **nine new species** at the **Megamalai Wildlife Sanctuary** in the southern Western Ghats.
- The discoveries include a **jumping spider**, **damselflies**, **mayflies**, and other endemic fauna recorded during recent faunal surveys.
- The sanctuary serves as a **critical biodiversity hotspot**, hosting numerous endemic and threatened species.
- This discovery highlights the **ecological significance** of the Western Ghats region for conservation research.

### Megamalai Wildlife Sanctuary: Overview

- **Location:** Situated in **Theni and Madurai districts of Tamil Nadu**, within the **Western Ghats** mountain range.
- **Area:** Covers approximately **26,910.81 hectares** of protected forest land.
- **Ecosystem:** Features diverse vegetation types including **evergreen forests**, **shrublands**, and **grasslands** across elevation gradients.
- **Status:** Declared as a **Wildlife Sanctuary** to protect the rich biodiversity of the region.
- **Connectivity:** Forms part of the **Srivilliputtur Megamalai Tiger Reserve** landscape.

### New Species Discoveries

- **Faunal Diversity:** The ZSI survey identified **nine previously undocumented species** in the sanctuary.
- **Key Discoveries Include:**
  - **Jumping Spider** (*Stenaclurillus megamalai*): Named after the sanctuary
  - **Damselfly** (*Thraulius vellimalaiensis*): Endemic to the region

- **Mayflies** (*Edmundsula meghamalaiensis*): Two species recorded
- **Wood Snake**: Endemic species found in the sanctuary.
- **Significance**: These discoveries add to the known biodiversity of the **Western Ghats biodiversity hotspot**.
- **Research Method**: Comprehensive **faunal survey** conducted across different habitat types within the sanctuary.

## India Submits First National Report on Nagoya Protocol Implementation

### What's the News?

- India has submitted its **First National Report (NR1)** on the implementation of the **Nagoya Protocol on Access and Benefit Sharing (ABS)** to the **Convention on Biological Diversity (CBD)**.
- The report was submitted by the **Ministry of Environment, Forest and Climate Change (MoEF&CC)**.
- It covers the period from **November 2017 to December 2025** and highlights India's progress in implementing the protocol.
- During this period, India issued **12,830 biodiversity access approvals** and established over **2.76 lakh Biodiversity Management Committees (BMCs)** across the country.

### Nagoya Protocol Overview

- The **Nagoya Protocol** is a supplementary agreement to the **Convention on Biological Diversity (CBD)** adopted in 2010.
- It provides a **legal framework** for fair and equitable sharing of benefits arising from the utilization of **genetic resources**.
- The protocol entered into force on **12 October 2014**, and India ratified it on the same date.
- Core objective is to ensure **Access and Benefit Sharing (ABS)** mechanisms for biodiversity conservation.

### Highlights of India's Report

| Metric                  | Details                                                |
|-------------------------|--------------------------------------------------------|
| Reporting Period        | 1 November 2017 to 31 December 2025                    |
| Access Approvals Issued | 12,830 approvals                                       |
| BMCs Established        | Over 2.76 lakh (2,76,653) committees                   |
| Legal Framework         | Biological Diversity Act, 2002 + ABS Regulations, 2025 |
| Previous Submission     | Interim National Report (November 2017)                |

### Institutional Framework for ABS in India

- **National Biodiversity Authority (NBA)**: Apex body for granting access approvals at the national level.
- **State Biodiversity Boards (SBBs)**: Facilitate implementation at state level.

- **Biodiversity Management Committees (BMCs)**: Local-level bodies for documenting and conserving biodiversity.
- **People's Biodiversity Registers (PBRs)**: Document local biodiversity knowledge and resources.

### Additional Info

- **Convention on Biological Diversity (CBD)**:
  - International treaty adopted at the **Earth Summit (Rio 1992)**
  - Three main objectives: Conservation, Sustainable Use, and Fair Benefit Sharing
  - India is a signatory since 1994
- **Biological Diversity Act, 2002**:
  - Enacted to implement CBD provisions in India
  - Recently amended through **Biological Diversity (Amendment) Act, 2023**
  - Supports ABS Regulations, 2025 for streamlined compliance

## Global Methane Super-Emitters Identified: High Risks in Oil and Gas Sector

### What's the News?

- New satellite data and environmental reports have identified thousands of **"super-emitter"** events globally, where massive amounts of methane (CH<sub>4</sub>) are leaked or vented from oil and gas infrastructure.
- The reports highlight that a small number of sites are responsible for a disproportionately large share of global methane emissions, posing a severe threat to international climate targets.
- **Turkmenistan** has been flagged as the leading nation for the most intense and frequent methane leak events, followed by other major fossil fuel producers.

### Global Methane Super-Emitters?

- **Definition**: Super-emitters are specific facilities or pieces of infrastructure—such as pipelines, wells, or storage tanks—that release methane at exceptionally high rates due to malfunctions, aging equipment, or intentional "venting."
- **Top Emitters**:
  - **Turkmenistan**: Identified as hosting the world's worst-performing oil and gas sites in terms of methane intensity.
  - **Other Major Contributors**: Significant leak events were also concentrated in the **United States, Russia, Algeria, and Iran**.
- **Detection Technology**: These events are primarily tracked using advanced satellite constellations and the **Methane Alert and Response System (MARS)**, which can pinpoint leaks in near real-time.

### Impact on Climate and Governance?

- **Global Warming Potential (GWP)**: Methane is over **80 times** more potent than carbon dioxide (CO<sub>2</sub>) at trapping heat in the atmosphere over a 20-year period.
- **Economic Loss**: Leaked methane represents a loss of natural gas that could otherwise be captured and sold; the **International Energy Agency (IEA)**

estimates that a significant portion of these leaks can be fixed at no net cost.

- **Regulatory Gaps:** The findings suggest that existing national regulations in many countries are failing to curb intentional venting and flaring, despite international commitments.

### Additional Info

- **International Frameworks & Initiatives:**
  - **Global Methane Pledge:** Launched at **COP26**, this initiative aims to reduce global methane emissions by at least **30%** from 2020 levels by 2030. India is currently not a signatory, citing concerns regarding agricultural impacts (methane from livestock/paddy).
  - **Oil and Gas Methane Partnership 2.0 (OGMP 2.0):** A **UNEP**-led reporting framework that encourages companies to provide gold-standard, verified data on their emissions.
- **Data Points:**
  - The energy sector is responsible for nearly **40%** of total methane emissions attributable to human activity.
  - Eliminating "non-emergency" flaring and venting could prevent millions of tons of CH<sub>4</sub> from entering the atmosphere annually.
- **Technological Tools:**
  - **MethaneSAT:** A high-resolution satellite specifically designed to track methane leaks from the oil and gas industry with unprecedented precision.
  - **IMEO (International Methane Emissions Observatory):** A **UNEP** initiative that integrates data from satellites and ground sensors to create a global public ledger of methane emissions.

## Delhi Launches Photocatalytic Coating Trials to Combat Air Pollution

### What's the News?

- The **Delhi Government** has partnered with **IIT Madras** to conduct a pilot study on **smog-eating photocatalytic coatings** for city infrastructure.
- A **Memorandum of Understanding (MoU)** was signed between the **Delhi Environment Department** and **IIT Madras** for this initiative.
- The **six-month study** will test coatings on **roads, pavements, buildings, and tiles** across selected locations in Delhi.
- This initiative aims to explore **innovative, low-cost solutions** to reduce air pollutants, particularly **nitrogen oxides (NOx)**.

### Photocatalytic Coating Technology

- **Working Mechanism:** The coating uses **Titanium Dioxide (TiO<sub>2</sub>)** as a photocatalyst that activates under sunlight.
- **Chemical Process:** When exposed to light, TiO<sub>2</sub> triggers a reaction that breaks down harmful pollutants into less toxic compounds.
- **Target Pollutants:**

- **Nitrogen Dioxide (NO<sub>2</sub>)** from vehicular emissions
- **Volatile Organic Compounds (VOCs)** from industrial sources
- **Hydrocarbons** from fuel combustion

| Aspect               | Details                                             |
|----------------------|-----------------------------------------------------|
| Active Material      | Titanium Dioxide (TiO <sub>2</sub> )                |
| Activation Source    | Sunlight/UV radiation                               |
| Reduction Efficiency | 14-21% NOx reduction (real-world conditions)        |
| Durability           | Weather-resistant, long-lasting                     |
| Cost                 | Low-cost compared to other air purification methods |

### Study Objectives & Implementation

- **Field Trials:** Real-world testing on Delhi's roads and infrastructure under actual traffic and pollution conditions.
- **Data Collection:** Analysis of traffic patterns, pollution levels, and coating performance.
- **Goals:**
  - Identify **durable and affordable** deployment methods.
  - Assess **long-term effectiveness** in Delhi's climate conditions.
  - Determine **scalability** for city-wide implementation.

### Significance for Urban Air Quality

- **Innovative Approach:** First major trial of smog-eating coatings in an **Indian metropolitan city**.
- **Complementary Measure:** Works alongside existing policies like **GRAP (Graded Response Action Plan)** and **odd-even schemes**.
- **Environmental Benefits:**
  - Reduces **ground-level ozone formation**
  - Lowers **respiratory health risks** for citizens
  - Contributes to **National Clean Air Programme (NCAP)** targets
- **Cost-Effective:** Lower maintenance compared to traditional air purification systems.

### Additional Information

- **Related Air Pollution Initiatives in Delhi:**
  - **Commission for Air Quality Management (CAQM):** Statutory body for NCR air quality oversight
  - **National Clean Air Programme (NCAP):** Targets 20-30% reduction in PM concentrations by 2024
  - **GRAP (Graded Response Action Plan):** Emergency measures based on AQI levels
  - **Electric Vehicle Policy:** Promotes EV adoption to reduce vehicular emissions
- **Global Precedents:**
  - **European Union:** Tested photocatalytic coatings in highway tunnels with 80% NOx reduction
  - **UK Department for Environment:** Studied paints and surfaces for NOx removal
  - **Denmark:** Conducted field trials showing 14-21% NOx reduction

## UNESCO Flags Concerns Over Aghanashini-Vedavathi River Linking Project

### What's the News?

- **UNESCO** has raised concerns over Karnataka's proposed **Aghanashini-Vedavathi River Linking Project**, advising India to adhere to **World Heritage Conservation frameworks**.
- A **memorandum** was submitted to the **UNESCO World Heritage Centre** on **February 17, 2026**, opposing the project due to ecological concerns.
- The project proposes diverting around **35 Thousand Million Cubic Feet (TMC ft)** of water from **Aghanashini River** to **Vedavathi River**.
- **Environmental activists** and **local communities** argue the project is **unscientific** and threatens the **ecologically sensitive Western Ghats**.

### Aghanashini-Vedavathi Project?

The project is a major water-diversion initiative designed to address regional water scarcity in central Karnataka.

- **Objective:** To divert approximately **35 TMC (Thousand Million Cubic feet)** of "surplus" monsoon water from the west-flowing **Aghanashini River** to the east-flowing **Vedavathi River** basin.
- **Infrastructure:** Involves constructing a dam at **Siddapur (Uttara Kannada)** and a **194 km long** network of canals and pipelines to lift water to the **Vani Vilas Sagara** reservoir.
- **Beneficiary Regions:** Aimed at providing drinking water and irrigation to drought-prone districts including **Chitradurga, Davangere, and Ballari**.
- **Estimated Cost:** Projected at approximately **₹23,000 crore**.

### About Aghanashini River

- **Origin:** Rises from **Gadihalli** in the **Western Ghats** of Karnataka.
- **Flow:** Flows through **Uttara Kannada district**, passing through dense forests.
- **Ecological Status:** One of the **few undammed rivers** in the Western Ghats.
- **Significance:** Supports rich **biodiversity** and **local livelihoods** in the region.
- **Conservation Status:** Part of the **UNESCO World Heritage Site (Western Ghats)**.

### UNESCO's Concerns

- **World Heritage Compliance:** Project must comply with **World Heritage Convention norms**.
- **Ecological Impact:** Potential damage to **Western Ghats biodiversity hotspot**.
- **Environmental Assessment:** Need for comprehensive **Environmental Impact Assessment (EIA)**.
- **Local Community Rights:** Concerns over impact on **forest-dwelling communities** and **traditional livelihoods**.
- **Precedent Setting:** Could set negative precedent for other **river linking projects** in ecologically sensitive zones.

### Western Ghats: UNESCO World Heritage Site

- **Inscription Year:** **39 areas** designated as World Heritage Sites in **2012**.
- **Global Recognition:** Internationally recognized for **biological diversity conservation**.
- **Geographical Spread:** Spans across **6 states** including Karnataka, Kerala, Tamil Nadu.
- **Biodiversity:** One of the world's **eight hottest biodiversity hotspots**.
- **River Systems:** Major watersheds feeding **40% of India's land area**.
- **Protection Framework:** Governed by **World Heritage Conservation frameworks** under UNESCO.

### Additional Info

- **Constitutional Provisions:**
  - **Article 48A** – State duty to protect and improve environment
  - **Article 51A(g)** – Fundamental duty of citizens to protect natural environment
  - **Article 21** – Right to clean environment (interpreted by Supreme Court)
- **Related Legal Frameworks:**
  - **Environment Protection Act, 1986** – Regulatory framework for environmental clearances
  - **Forest Rights Act, 2006** – Protects rights of forest-dwelling communities
  - **Wildlife Protection Act, 1972** – Conservation of wildlife habitats
  - **World Heritage Convention, 1972** – International treaty for heritage protection
- **National River Linking Project (NRLP):**
  - **Implementing Body:** **National Water Development Agency (NWDA)**
  - **Objective:** Transfer water from water-excess to water-deficit basins
  - **Components:** **Himalayan Component** and **Peninsular Component**
  - **Total Links:** Proposed **37 river links** across India
- **Key Organizations:**
  - **UNESCO World Heritage Centre** – International body for heritage conservation
  - **Ministry of Environment, Forest and Climate Change (MoEFCC)** – Environmental clearances
  - **Karnataka State Government** – Project proponent
  - **IUCN (International Union for Conservation of Nature)** – Advisory body for World Heritage Sites
- **Previous Similar Concerns:**
  - **Kasturirangan Report (2013)** – Recommended restrictions on development in Western Ghats
  - **Gadgil Committee Report (2011)** – Proposed ecologically sensitive zone classifications
  - **Hydropower Projects** – Approximately **50 major hydropower plants** already exist in Western Ghats

## India's Updated NDC Targets for 2031-2035 Approved

### What's the News?

- **Union Cabinet** approved India's updated **Nationally Determined Contribution (NDC)** for the period **2031-2035** to be communicated to **UNFCCC**.
- The new NDC outlines India's **climate action commitments** including emissions reduction, renewable energy expansion, and carbon sink enhancement.
- India reaffirms its commitment to **Panchamrit** (five-fold action plan) announced at **COP26 Glasgow**.
- The updated targets align with India's **Long-Term Low Carbon Development Strategy** submitted at **COP27**.
- This represents India's **third NDC submission** under the **Paris Agreement** framework.

### NDC Targets for 2031-2035

| Target Area                          | Commitment                                      |
|--------------------------------------|-------------------------------------------------|
| <b>Emissions Intensity Reduction</b> | 45% reduction from 2005 levels by 2030          |
| <b>Non-Fossil Energy Capacity</b>    | 500 GW by 2030                                  |
| <b>Renewable Energy Share</b>        | 50% of total energy mix                         |
| <b>Carbon Sink Creation</b>          | 2.5-3 billion tonnes CO <sub>2</sub> equivalent |
| <b>Net Zero Target</b>               | By 2070                                         |

### Panchamrit Five-Fold Action Plan

- **Reach 500 GW** non-fossil energy capacity by 2030
- **Meet 50% energy requirements** from renewable sources by 2030
- **Reduce carbon emissions** by 1 billion tonnes by 2030
- **Reduce carbon intensity** by 45% below 2005 levels by 2030
- **Achieve Net Zero** emissions by 2070

### Implementation Framework

- **Ministry of Environment, Forest and Climate Change (MoEFCC)**: Nodal agency for NDC implementation
- **NITI Aayog**: Coordinates cross-ministerial climate action planning
- **State Action Plans on Climate Change (SAPCC)**: All states have developed climate action plans
- **National Climate Fund**: Supports climate mitigation and adaptation projects
- **Monitoring & Verification**: Regular reporting to UNFCCC through Biennial Update Reports

### Additional Info

#### Related International Agreements

- **Paris Agreement (2015)**: Global framework for climate action under UNFCCC

- **UNFCCC**: United Nations Framework Convention on Climate Change
- **COP26 Glasgow (2021)**: India announced Panchamrit commitments
- **COP27 Sharm El-Sheikh (2022)**: India submitted Long-Term Strategy
- **COP28 Dubai (2023)**: Global stocktake and renewable energy commitments

#### Government Initiatives

- **National Solar Mission**: Target of 100 GW solar capacity
- **International Solar Alliance (ISA)**: India-led initiative for solar energy promotion
- **Coalition for Disaster Resilient Infrastructure (CDRI)**: Infrastructure resilience framework
- **LiFE Mission**: Lifestyle for Environment initiative announced at COP26
- **Green Hydrogen Mission**: ₹19,744 crore allocation for clean hydrogen production
- **PM-KUSUM**: Solar pumps for farmers
- **FAME India**: Electric vehicle promotion scheme

#### Constitutional & Legal Framework

- **Article 48A**: Directive Principle for environmental protection
- **Article 51A(g)**: Fundamental Duty to protect environment
- **Environment Protection Act, 1986**: Primary environmental legislation
- **Climate Change Act (Proposed)**: Under consideration for climate governance
- **SDG 13**: Climate Action under Sustainable Development Goals

#### Energy Transition Progress

- **Current Renewable Capacity**: ~180 GW (as of recent data)
- **Solar Capacity Growth**: From 2.6 GW (2014) to 80+ GW (current)
- **Wind Capacity**: ~45 GW installed
- **Electric Vehicle Sales**: Growing at 80%+ annually
- **Energy Efficiency**: UJALA scheme distributed 37 crore LED bulbs

#### Financial Mechanisms

- **Green Climate Fund**: International climate finance support
- **National Adaptation Fund**: Supports climate adaptation projects
- **Sovereign Green Bonds**: ₹16,000 crore issued for green projects
- **Climate Finance Taxonomy**: Framework for sustainable investments
- **Carbon Trading Mechanism**: Domestic carbon market under development

## CMS COP15: 40 Migratory Species Added to Protected List

### What's the News?

- The **15th Conference of Parties (COP15)** to the **Convention on Migratory Species (CMS)** concluded in **Campo Grande, Brazil**.

- **40 new migratory species** were added to **CMS Appendices I and II** for enhanced international protection.
- The conference ran from **March 22-29, 2026** with participation from multiple member countries.
- Notable species include **cheetah, striped hyena, snowy owl, giant otter, and various shark species.**
- **Brazil secured approval** for six of its seven proposals to protect species in Appendix I and II.

### About CMS (Convention on Migratory Species)

- **CMS** is an **international environmental treaty** under **UNEP** framework.
- Also known as the **Bonn Convention**, established in **1979**.
- Aims to conserve **terrestrial, aquatic, and avian migratory species** throughout their range.
- Currently protects **hundreds of migratory species** across multiple continents.
- **400 migratory species** still remain unprotected and need future listing efforts.

### CMS Appendices Structure

| Appendix           | Category                                  | Protection Level               |
|--------------------|-------------------------------------------|--------------------------------|
| <b>Appendix I</b>  | Endangered Migratory Species              | Strict protection required     |
| <b>Appendix II</b> | Species Needing International Cooperation | Conservation agreements needed |

- **Appendix I:** Includes species threatened with extinction requiring strict protection.
- **Appendix II:** Includes species needing international cooperation for conservation.
- **40 species** were added across both appendices during COP15.
- **16 of the 40 species** occur in Brazil, showing regional significance.

### Key Species Added at COP15

- **Mammals:** Cheetah, striped hyena, giant otter, Amazon river dolphin.
- **Birds:** Snowy owl, steppe eagle, various bustard species (26 species across 102 range states).
- **Marine Species:** Tope shark, basking shark, sand tiger shark.
- **Fish:** European eel (*Anguilla Anguilla*).
- **Reptiles:** Various marine turtle species received enhanced protection.

### Outcomes & Agreements

- **16 Cooperation Measures** approved for coordinated conservation action.
- **Binding Resolutions** adopted to boost global conservation efforts.
- **Blue Corridors** agreement for marine turtle migration routes.
- **Flyways Protection** for migratory bird conservation.
- **Seamount Ecosystems** recognized for protecting deep-sea migratory species.
- **Freshwater Fish:** 325 migratory freshwater fish species identified as candidates for future protection.

### Additional Info

- **CMS Governance Structure:**
  - **Conference of Parties (COP)** – Supreme decision-making body
  - **Scientific Council** – Provides technical advice
  - **Secretariat** – Based in Bonn, Germany
  - **COP Meetings** – Held every 3 years
- **Related International Conventions:**
  - **Convention on Biological Diversity (CBD)** – Broader biodiversity framework
  - **CITES** – Trade in endangered species
  - **Ramsar Convention** – Wetland conservation
  - **UN Biodiversity Conference (COP17)** – Scheduled for October 2026
- **India & CMS:**
  - India is an **active CMS member** since 1983
  - Hosted **CMS COP13 in 2020** at Gandhinagar, Gujarat
  - **Great Indian Bustard** listed under CMS Appendix I
  - **Amur Falcon** migration route protected under CMS

## Health & Pharma

### Janaushadhi Saptah 2026

#### What's the News?

- The nationwide celebration of **Janaushadhi Saptah 2026** has commenced to mark the success and impact of the **Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)**.
- The week-long event kicked off with **Jan Swasthya Shivirs** (health check-up camps) organized at over **250 locations** across the country.
- The initiative focuses on raising awareness about the quality and affordability of generic medicines, aiming to reduce healthcare costs for the common citizen.

#### Janaushadhi Saptah & Health Camps

- **Objective:** To educate the public on the benefits of generic drugs and encourage the usage of **Janaushadhi Kendras** for daily medical needs.
- **Health Initiatives:** The camps provide free medical consultations, blood pressure checks, and sugar level screenings to local communities.
- **Awareness Drive:** Beyond medical check-ups, the event involves distributing informative literature to dispel myths regarding the efficacy of generic medicines compared to branded ones.
- **Geographical Reach:** Activities are being conducted across various states and Union Territories, ensuring participation from both urban centers and rural pockets.

#### Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP)?

##### Background

- Launched by **Department of Pharmaceuticals**, Ministry of Chemicals and Fertilizers.
- Operates through **Jan Aushadhi Kendras (JAKs)** – dedicated outlets for generic medicines.
- Current network exceeds **18,000 Kendras** across India.

##### Objectives

- Provide **quality generic medicines** at significantly lower prices than branded equivalents.
- Reduce **out-of-pocket healthcare expenditure** for citizens.
- Promote **rational use of medicines** through awareness campaigns.
- Ensure **accessibility** in both urban and rural areas.

##### Pricing Advantage

- Generic medicines priced **50-90% lower** than branded counterparts.
- No compromise on **quality standards** – all medicines meet **Schedule M** requirements.
- Covers **2,000+ formulations** across various therapeutic categories.

##### Historical Context

- **2008:** PMBJP initially launched as **Jan Aushadhi Scheme**.
- **2016:** Rebranded as **Pradhan Mantri Bhartiya Janaushadhi Pariyojana**.
- **2019:** First **Janaushadhi Diwas** observed on March 7.
- **2026:** Over **18,000 Kendras** operational nationwide.

### World Obesity Atlas 2026: India Ranks Second Globally in Childhood Obesity

#### What's the News?

- The **World Obesity Atlas 2026**, released by the **World Obesity Federation (WOF)** on **World Obesity Day** (March 4), reveals that India has the second-highest number of children living with obesity and being overweight, trailing only **China**.
- The report highlights a "silent emergency," noting that India's childhood obesity rates are surging by an average of **5% annually**, one of the fastest growth patterns recorded globally.
- It warns that the world is set to miss the global target to halt the rise in childhood obesity, which was originally set for 2025 and has now been extended to **2030**.

#### World Obesity Atlas 2026?

- **Global Scope:** More than **one in five (20.7%)** children aged 5–19 worldwide are now living with obesity or are overweight, a significant increase from 14.6% in 2010.
- **Geographical Concentration:** Over **200 million** school-age children with high Body Mass Index (**BMI**) are concentrated in just 10 countries, with **China, India**, and the **United States** leading the list.
- **Economic Transition:** While once considered a problem of high-income nations, the fastest increases are now occurring in **low- and middle-income countries**.
- **2040 Projection:** The report predicts that by 2040, a total of **507 million** children worldwide will be living with obesity or being overweight.

#### India's Obesity Crisis?

- **Current Statistics (2025 Data):**
  - Total children (5–19 years) with high BMI: **41.32 million**.
  - Number of children living specifically with obesity: **14 million**.
  - Age breakdown: **14.92 million** children (5–9 years) and **26.40 million** adolescents (10–19 years) are affected.
- **Regional Standing:** India ranks **first** within the **WHO South-East Asia Region** in the number of young people aged 0–19 living with overweight or obesity.
- **Double Burden of Malnutrition:** India is facing a unique challenge where **undernutrition** persists in some segments while **overnutrition** (obesity) is rapidly rising in others.

#### Drivers and Health Impact?

- **Preventable Risk Factors in India:**
  - **Physical Inactivity:** **74%** of adolescents (11–17 years) fail to meet recommended physical activity levels.
  - **Dietary Gaps:** Only **35.5%** of school-age children receive regulated school meals; children aged 6–10 consume up to **50 ml** of sugary drinks daily.

- **Early Life Nutrition: 32.6%** of infants experience sub-optimal breastfeeding, which is a critical window for metabolic health.
- **Maternal Health: 13.4%** of women of reproductive age have a high BMI, predisposing offspring to similar risks.
- **Health "Time Bombs" (2040 Projections):**
  - **Hypertension:** Cases expected to rise from 2.99 million to **4.21 million**.
  - **Fatty Liver (MASLD):** Projected to surge from 8.39 million to **11.88 million** cases.
  - **High Triglycerides:** Expected to affect over **6 million** children, indicating early cardiovascular risk.
  - **Hyperglycaemia:** High blood sugar cases set to reach nearly **2 million**.

### Additional Info

- **World Obesity Federation (WOF):**
  - The only global organization focused exclusively on obesity, representing professional members from scientific, medical, and research communities in over 50 countries.
- **World Obesity Day:**
  - Observed annually on **March 4**.
  - Organized by **World Obesity Federation**.
  - Aims to raise awareness about obesity prevention and treatment.
- **Constitutional Context:**
  - **Article 47:** State shall raise level of nutrition and improve public health.
  - **Article 21:** Right to health as part of right to life.
  - Falls under **State List, Entry 6** (Public Health).
- **National Health Policy 2017:**
  - Targets reduction in **premature mortality from NCDs by 25% by 2025**.
  - Emphasizes **preventive and promotive healthcare**.
  - Includes obesity as a key **risk factor for NCDs**.
- **Related SDGs:**
  - **SDG 2:** Zero Hunger (nutrition security).
  - **SDG 3:** Good Health and Well-being (NCD reduction).
  - **SDG 4:** Quality Education (health education in schools).
- **WHO Definitions:**
  - **Overweight:** BMI at or above the 85th percentile for children of the same age and sex.
  - **Obesity:** BMI at or above the 95th percentile for children of the same age and sex.

**Disposal of Unused Medicines"** focusing on pharmaceutical waste management.

- The report emphasizes **waste prevention** as central to addressing environmental and public health risks from improper medicine disposal.
- It provides a **comprehensive, multisectoral framework** using a **One Health approach** to strengthen national systems for safe disposal.
- The report warns that improper disposal of medicines poses **serious risks to both environmental and public health**.

### Environmental and Health Risks

| Risk Type                             | Impact                                                     |
|---------------------------------------|------------------------------------------------------------|
| <b>Antimicrobial Resistance (AMR)</b> | Major driver due to pharmaceutical residues in environment |
| <b>Endocrine Disruption</b>           | Affects hormonal systems in organisms                      |
| <b>Ecosystem Toxicity</b>             | Direct and indirect effects on organisms and ecosystems    |
| <b>Water Contamination</b>            | 30-100% of oral medicine doses enter wastewater systems    |

### Report's Core Recommendations

- **Prevention at Source:**
  - Better prescribing practices to reduce unused medicines
  - Avoid over-prescription and polypharmacy
- **Take-Back Programs:**
  - Establish medicine collection points at pharmacies and healthcare facilities
  - Encourage citizens to return unused/expired medications
- **Waste Hierarchy Approach:**
  - Prioritize prevention over disposal
  - Implement proper treatment methods for pharmaceutical waste
- **Stronger National Systems:**
  - Develop regulatory frameworks for pharmaceutical waste management
  - Enhance monitoring and enforcement mechanisms

### India's Context and Challenges

- **Medical Waste Growth:**
  - India has seen an **82% increase** in medical waste output
  - Pharmaceutical waste from patients and industry is rising significantly
- **Current Framework:**
  - **Biomedical Waste Management Rules, 2016** governs healthcare waste disposal
  - **Central Pollution Control Board (CPCB)** oversees implementation

## UNEP Report on Safe Disposal of Unused Medicines

### What's the News?

- The **United Nations Environment Programme (UNEP)** has released a new report titled **"Safe**

- **National Action Plan on AMR** addresses antimicrobial resistance concerns

### Additional Info

- **One Health Approach:**
  - Recognizes interconnection between human, animal, and environmental health
  - Promotes multisectoral collaboration for holistic solutions
- **United Nations Environment Programme (UNEP):**
  - Leading global environmental authority
  - Headquartered in Nairobi, Kenya
  - India established specialized directorate on chemicals and waste management with UNEP support
- **Related International Frameworks:**
  - **Stockholm Convention** on Persistent Organic Pollutants (POPs)
  - **Basel Convention** on transboundary movement of hazardous wastes
  - **Global Action Plan on AMR** by WHO
- **Constitutional Provisions:**
  - **Article 48A:** Directive Principle for environmental protection
  - **Article 51A(g):** Fundamental Duty to protect natural environment
  - **Article 21:** Right to healthy environment (interpreted by Supreme Court)

## Generic Semaglutide Boom

### What's the News?

- **Semaglutide patents** held by **Novo Nordisk** have expired in India, enabling local pharmaceutical companies to launch generic versions of the popular weight-loss and diabetes drug **Ozempic**.
- Over **50 branded generic versions** are expected to enter the Indian market, with prices dropping by up to **88%** compared to the original brand.
- Generic semaglutide is now available at approximately **₹1,290–₹5,000 per month**, down from ₹15,000–₹20,000 for the branded version.
- The **Central Drugs Standard Control Organisation (CDSCO)** has tightened surveillance amid concerns over **misuse, unauthorized sales, and off-label consumption**.

### Patent Expiry & Market Impact

- **Patent Expiry Date:** Semaglutide composition and delivery patents expired in **March 2026** in India.
- **Price Reduction:** Generic versions are priced **50–90% lower** than Novo Nordisk's branded Ozempic.
- **Market Size:** The **GLP-1 drug segment** in India has crossed **₹1,000 crore**, reflecting growing demand.
- **Key Players:** Over **40 Indian pharmaceutical companies** including **Dr. Reddy's, Natco Pharma** are launching generic semaglutide.

### Healthcare System Response?

- **Expanded care infrastructure:** Major hospital chains like **Apollo Hospitals** and **Fortis Healthcare** are scaling up obesity management clinics with multidisciplinary teams (physicians, dietitians, fitness trainers).

- **Integrated service models:** Healthcare providers are bundling drugs with diagnostics, dietary counselling, and follow-up care.
  - Diagnostic platforms like **Tata 1MG** are rolling out discounted health check-up packages.
  - Digital health platforms and online pharmacies are facilitating home delivery after e-consultations.
- **Patient support programs:** Companies like **Dr. Reddy's** are collaborating with hospitals to launch support programs alongside their generic launches, while **Cipla** is working with clinics in smaller towns for distribution.

### Regulatory & Quality Concerns?

- **Misuse and oversight risks:** Experts warn that falling prices and multiple brands could lead to:
  - Direct pharmacy purchases without valid prescriptions.
  - Cosmetic or lifestyle use, especially in urban areas.
  - Improper dosing and unmanaged side effects.
- **Regulatory response:** India's drug regulator has banned advertising and promotional activities related to weight-loss programmes, including social media endorsements and corporate campaigns.
- **Manufacturing complexities:** Semaglutide is a complex **peptide** requiring:
  - Precise manufacturing processes with stringent quality controls.
  - Continuous **cold-chain storage** (2°C to 8°C) to maintain stability and efficacy.
  - High standards for delivery devices like pre-filled injection pens.

### Additional Info

- **What are GLP-1 Drugs?**
  - **Glucagon-Like Peptide-1 (GLP-1)** receptor agonists mimic growth hormones that regulate blood sugar and appetite.
  - Originally developed for **Type-2 Diabetes**, now widely used for **obesity management**.
  - Works by slowing gastric emptying and reducing hunger signals to the brain.
- **Relevant Regulatory Framework:**
  - **Drugs and Cosmetics Act, 1940:** Governs drug approval and prescription requirements in India.
  - **CDSCO:** Central authority for drug approval, quality control, and pharmacovigilance.
  - **Pharmacovigilance Programme of India (PvPI):** Monitors adverse drug reactions; currently lacks robust GLP-1 specific surveillance.
- **Obesity Burden in India:**
  - India has one of the fastest-growing **obesity rates** globally, with significant urban-rural divide.
  - Obesity linked to rising **diabetes, cardiovascular diseases, and metabolic syndrome**.

- Government initiatives like **Fit India Movement** and **National Programme for Prevention and Control of Cancer, Diabetes, CVD and Stroke (NPCDCS)** address lifestyle-related conditions.

## Shigellosis Outbreak in Kerala

### What's the News?

- A **localized outbreak of Shigellosis** has been reported in **Kozhikode district, Kerala**, affecting the **Peruvayal panchayat (Eranjikkal-Kuttikkattoor area)**.
- **One 3-year-old child has died** while at least **11-15 other children** have been infected across the state.
- The **Kerala Health Department** has issued alerts on **water-borne diseases** and urged residents to use **boiled water** and maintain hygiene.
- The outbreak highlights concerns about **sanitation infrastructure** and **public health surveillance** in the region.

### About Shigellosis

- **Causative Agent:** Caused by **Shigella bacteria**, a gram-negative enteroinvasive bacillus.
- **Disease Type:** Acute **diarrheal infection** affecting the intestinal tract.
- **Transmission:** Spreads through **fecal-oral route**, contaminated water, food, and person-to-person contact.
- **Incubation Period:** Symptoms typically appear within **1-7 days** after exposure.
- **Infectious Dose:** Very low – as few as **10-100 bacteria** can cause infection.

### Symptoms & Clinical Features

- **Primary Symptoms:**
  - **Diarrhea** (often watery, may become bloody with mucus).
  - **Fever** and chills.
  - **Abdominal pain** and stomach cramps.
  - **Nausea and vomiting**.
- **Severe Cases:**
  - **Dehydration** due to fluid loss.
  - **Tenesmus** (urge to pass stool even when bowels are empty).
  - Can be **fatal in young children** and immunocompromised individuals.

### Treatment & Management

- **Rehydration Therapy:**
  - **Oral Rehydration Solutions (ORS)** are cornerstone of treatment.
  - **Intravenous fluids** for severe dehydration cases.
- **Antibiotic Treatment:**
  - Indicated for patients with **positive stool culture**.

- Can reduce symptoms duration by approximately **2 days**.
- Antibiotic resistance is an emerging concern.

### Prevention & Control Measures

- **Water Safety:**
  - Use **boiled or treated water** for drinking.
  - Ensure proper **water storage** and handling.
- **Hygiene Practices:**
  - **Handwashing** with soap after toilet use and before eating.
  - Safe disposal of **human waste**.
- **Food Safety:**
  - Avoid contaminated food sources
  - Proper cooking and storage practices
- **Public Health Measures:**
  - **Surveillance** through IDSP (Integrated Disease Surveillance Programme).
  - **Contact tracing** and isolation of cases
  - **Health education** campaigns in affected areas.

### Additional Info

- **Epidemiology in India:**
  - Shigellosis is one of the **major causes of diarrhea** in India.
  - Accurate estimates of **morbidity and mortality** remain limited.
  - Higher prevalence among **children under 5 years**.
- **Shigella Species:**
  - **S. dysenteriae** – Most severe, causes epidemics
  - **S. flexneri** – Common in developing countries
  - **S. boydii** – Regional distribution
  - **S. sonnei** – Common in developed countries

## Education

### National Dental Commission Established to Reform Dental Education and Practice

#### What's the News?

- The Union Government has officially notified the establishment of the **National Dental Commission (NDC)**, marking a significant structural reform in India's healthcare regulatory framework.
- The **NDC** replaces the decades-old **Dental Council of India (DCI)** and repeals the **Dentists Act, 1948**.
- The primary objective of this transition is to modernize dental education, enhance the transparency of regulatory processes, and improve the overall quality of oral healthcare services in the country.

#### The National Dental Commission (NDC) Framework

- **Legislative Basis:** The commission is constituted under the **National Dental Commission Act, 2023**.
- **Composition:**
  - Headquartered in **New Delhi**, the commission consists of a Chairperson, 8 ex-officio members, and 24 part-time members.
  - Members include representatives from the **Ministry of Health and Family Welfare, AIIMS**, and various State Governments to ensure a collaborative approach.
- **Autonomous Boards:** The Act establishes three specialized boards to perform distinct functions:
  - **Undergraduate and Postgraduate Dental Education Board:** Responsible for setting curriculum standards and norms for dental education.
  - **Dental Assessment and Rating Board:** Tasked with inspecting dental institutions and providing ratings to ensure compliance with quality benchmarks.
  - **Ethics and Dental Registration Board:** Maintains the **National Dental Register** and regulates the professional conduct of dentists.

#### Reforms and Objectives

- **Unified Examination:** Introduction of a uniform **National Exit Test (Dental)** which will serve as the basis for granting licenses to practice and for admission to postgraduate dental courses.
- **Common Counseling:** Implementation of centralized counseling for admissions to all dental institutions across the country, aiming to eliminate discretionary quotas and enhance meritocracy.
- **Fee Regulation:** The **NDC** is empowered to frame guidelines for the determination of fees for up to **50% of seats** in private dental institutions and deemed universities.
- **Digital Registry:** Maintenance of a live electronic **National Dental Register**, ensuring public access to information regarding the credentials of all licensed dental practitioners in India.

#### Dental Council of India (DCI):

- Established under **Dentists Act, 1948**.
- Regulated dental education and profession for over 75 years.
- Faced criticism for opaque processes and inadequate quality oversight.

### Nasha Mukh Vidyalaya: 3-Year Action Plan to Combat Drug Abuse in Schools

#### What's the News?

- The **Ministry of Education** has issued a **3-Year Action Plan** for "**Nasha Mukh Vidyalaya**" under the **Nasha Mukh Bharat Abhiyan (NMBA)**.
- The initiative was announced in the **9th Apex Meeting of NCORD** (Narco Coordination Centre) and involves coordination between **Ministry of Education, Ministry of Home Affairs, and Ministry of Social Justice**.
- The action plan aims to create **drug-free zones** within a **500-metre radius of schools** across India.
- The roadmap spans from **2026 to 2029**, with a time-bound review mechanism for implementation.

#### Nasha Mukh Vidyalaya Action Plan

- **Duration:** 3 years (2026-2029) with structured quarterly reviews.
- **Target Group:** School students, teachers, parents, and surrounding communities.
- **Key Objectives:**
  - Create **safe and drug-free educational environments**.
  - Enable **early identification** of substance abuse among adolescents.
  - Use schools as platforms for **awareness and behavioural change**.
- **Implementation Strategy:**
  - **Whole-of-society approach** involving multiple stakeholders.
  - Integration with existing **school health programmes**.
  - **Peer education models** for student-led awareness campaigns.

#### Provisions & Measures

- **Drug-Free Zones:** Declaration of **500-metre radius around schools** as no-drug zones.
- **Curriculum Integration:** Proposal to incorporate **drug abuse prevention chapters** in school syllabus.
- **Capacity Building:** Training for **teachers and counsellors** to identify early warning signs.
- **Community Engagement:**
  - **Parent-Teacher Associations (PTAs)** involved in monitoring.
  - Collaboration with **local law enforcement** for zone enforcement.
- **Support Mechanisms:**
  - **Counselling services** for affected students.
  - **Rehabilitation referral pathways** to certified centres.

## Additional Info

- **Nasha Mukht Bharat Abhiyan (NMBA):**
  - Launched on **August 15, 2020** by **Department of Social Justice and Empowerment**.
  - Initially targeted **272 most affected districts** across India.
  - Focus areas: **Awareness generation, capacity building, treatment, and rehabilitation**
- **Institutional Framework:**
  - **NCORD (Narco Coordination Centre):** Apex body for drug abuse prevention coordination.
  - **Ministry of Social Justice:** Nodal ministry for NMBA implementation.
  - **Ministry of Education:** Responsible for school-level interventions.
  - **Ministry of Home Affairs:** Enforcement and border control measures.
- **Constitutional & Legal Provisions:**
  - **Article 47 (Directive Principles):** State duty to improve public health and prohibit intoxicating drinks and drugs.
  - **Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985:** Primary legislation for drug control.
  - **Juvenile Justice Act, 2015:** Provisions for children involved in substance abuse.

# Economy & Finance

## Micron Opens World's Largest Semiconductor Clean Room in Gujarat

### What's the News?

- **Micron Technology** inaugurated its **semiconductor assembly and test facility** in **Sanand, Gujarat**, featuring the **world's largest semiconductor clean room**.
- The facility was inaugurated by **Prime Minister Narendra Modi** on **February 28, 2026**, marking India's entry into commercial semiconductor production.
- The plant houses a **500,000 square foot raised-floor clean room** – the largest single clean room for semiconductor assembly globally.
- **First shipment** from the facility has been rolled out to **Dell**, signaling commencement of commercial operations.
- Total investment stands at **₹22,516 crore (\$2.75 billion)** through partnership between Micron and government partners.

### Micron Sanand Facility?

#### Overview

- India's **first commercial semiconductor assembly and test facility**.
- Located in **Sanand, Ahmedabad district, Gujarat**.
- Classified as an **ATMP unit** (Assembly, Testing, Marking, and Packaging).
- **ISO 9001:2015 certified** for quality management standards.

#### Key Specifications

| Feature               | Details                                    |
|-----------------------|--------------------------------------------|
| Clean Room Size       | 500,000 sq ft (largest globally)           |
| Total Investment      | ₹22,516 crore / \$2.75 billion             |
| Production Capacity   | ~14 million units per week (at full scale) |
| Employment Generation | 5,000+ direct jobs                         |
| Certification         | ISO 9001:2015                              |
| First Client          | Dell Technologies                          |

#### Production Focus

- **DRAM** (Dynamic Random-Access Memory) modules
- **NAND** flash memory products
- Memory solutions for **AI-driven applications**
- Consumer electronics and data center components

### Policy Framework?

#### Semicon India Programme

- Launched by **Ministry of Electronics and Information Technology (MeitY)**.
- Provides **fiscal incentives** for semiconductor manufacturing projects.
- Covers **fabrication plants, ATMP facilities, and compound semiconductors**.
- Aims to build **complete semiconductor ecosystem** in India.

#### Gujarat Semiconductor Policy

- **STI Policy 2026-31** (Science, Technology & Innovation) announced at **Gujarat SemiConnect Conference 2026**.
- Offers additional **state-level incentives** for semiconductor investments.
- Focuses on **skill development** for semiconductor workforce.
- Targets **₹1.24 lakh crore** worth of semiconductor projects in Gujarat.

#### Historical Context

- **2021:** India announced **Semicon India Programme** to boost domestic manufacturing.
- **2023:** Micron received **approval** for Gujarat facility under Semicon India Programme.
- **2025:** Construction completed; facility readiness achieved.
- **2026:** Commercial production commenced; first shipment dispatched.

## ₹13,000 Crore Bio-Pharma SHAKTI

### Mission and Chemical Parks Initiative

#### What's the News?

The Union Government has announced a **₹13,000 crore budgetary allocation** to boost India's pharmaceutical and chemical sectors. The initiative comprises two components: **₹10,000 crore for the Bio-Pharma SHAKTI Mission** (over five years) and **₹3,300 crore for developing three dedicated Chemical Parks**. Union Minister for Chemicals and Fertilisers **J. P. Nadda** announced this during a post-Budget webinar on "Sustaining and Strengthening Economic Growth," terming it a strategic investment in India's industrial future and a step toward **Viksit Bharat**.

#### Bio-Pharma SHAKTI Mission?

##### Overview:

The mission aims to transition India from being the "Pharmacy of the World" (known for generic medicines) to a global leader in **biologics and biosimilars**, capitalizing on the shifting global pharmaceutical landscape.

##### Key Details:

- **Budget:** ₹10,000 crore allocated for five years.
- **Global Context:** By 2035, **40% of global medicines** are projected to be biologics; patents worth **\$300 billion** expire by 2030, creating opportunities in biosimilars.
- **Economic Potential:** Even a **1% share** in the global biosimilars market could generate **₹2 lakh crore annually** for India.
- **Infrastructure:** Plans to establish **1,000 clinical trial sites** nationwide to enhance drug development and research capacity.
- **Institutional Support:** Strengthening **NIPER** (National Institute of Pharmaceutical Education and Research) through integration with skill development programs.
- **Regulatory Reforms:** Empowering **CDSCO** (Central Drugs Standard Control Organisation) for faster

approvals and support for biosimilars and fermentation-based drug production.

## Chemical Parks Development?

### Overview:

Three world-class chemical parks will be developed to address infrastructure gaps, reduce production costs, and enhance India's global competitiveness in the chemical sector.

### Key Details:

- **Budget:** ₹3,300 crore for three dedicated parks.
- **Current Status:** India's chemical sector output stands at **₹19.4 lakh crore** with only **3% global market share**.
- **Features:**
  - Plug-and-play utilities
  - Advanced effluent treatment systems
  - Integrated logistics infrastructure
  - Built-in safety mechanisms
- **Benefits:** Expected **20–40% cost reduction** through **industrial symbiosis** (resource sharing among co-located industries).
- **Sustainability:** Designed to promote **circular economy** principles.
- **Targets:**
  - Increase global market share to **5–6% by 2030**.
  - Achieve **\$1 trillion turnover by 2040**.

## India Ranks 4th Globally in Land Investment Destinations

### What's the News?

- India has emerged as the **fourth-largest global destination** for land investments, marking a significant rise in its appeal to international investors.
- The Asia-Pacific (**APAC**) region witnessed a substantial surge in real estate investment flows, totaling **\$71.9 billion** during the recent assessment period.
- The ranking underscores India's strengthening position as a preferred market for capital deployment in land and property development.

### APAC Real Estate Landscape?

- **Total Investment:** USD 71.9 billion across nine major APAC markets in H1 2025
- **Year-on-Year Change:** 6% decline attributed to global trade volatility and economic headwinds
- **Coverage:** Australia, Mainland China, Hong Kong, India, Japan, Singapore, South Korea, New Zealand, and Taiwan
- **Recovery Outlook:** Expected momentum in H2 2025 due to stabilizing interest rates and strengthening domestic capital
- **Regional Dominance:** Seven of the top ten global destinations for land investments are in APAC

### India's Investment Profile?

- **Global Ranking:** 4th in cross-border capital flows for land and development sites
- **Total Real Estate Investment:** USD 3 billion in H1 2025 (15% YoY decline)

- **Foreign Investment:** USD 1.6 billion (52% of institutional inflows)
  - **APAC investors** contributed over one-third of foreign inflows
- **Domestic Investment:** 53% YoY growth, contributing 48% of total capital
- **Key Segments:**
  - **Residential + Office:** Accounted for more than half of total investments
  - **Residential alone:** USD 0.8 billion
  - **Mixed-use + Retail:** Over 30% of investments (vs. 7% in H1 2024)

### Emerging Trends & Alternative Assets?

- **Integrated Developments:** Rising popularity of mixed-use projects combining residential, retail, and entertainment in urban areas
- **Alternative Segments** gaining traction:
  - **Data centres**
  - **Senior living**
  - **Life sciences facilities**
- **Policy Support:** GST simplification and favourable yield spreads boosting investor confidence
- **Future Outlook:** Strong finish expected for 2025, supported by festive season consumption demand

### Policy & Regulatory Framework

- **Real Estate (Regulation and Development) Act, 2016 (RERA):**
  - Ensures transparency in real estate transactions
  - Protects homebuyer interests through mandatory project registration
  - Establishes state-level regulatory authorities
- **Foreign Direct Investment (FDI) Policy:**
  - Allows **100% FDI** under automatic route in completed projects
  - Minimum capitalization norms apply for development projects
  - Lock-in period provisions ensure long-term commitment
- **Infrastructure Investment Trusts (InvITs):**
  - Enables institutional investment in income-generating real estate assets
  - Provides tax-efficient investment structure
  - Enhances liquidity in the real estate sector

## NITI Aayog Releases Fiscal Health Index 2026 for Indian States

### What's the News?

- **NITI Aayog** has released the **second edition of Fiscal Health Index (FHI) 2026** to assess fiscal performance of Indian states.
- The index was released by **Shri Suman Bery, Vice Chairman, NITI Aayog** on 11 March 2026 in New Delhi.
- **Odisha** retains the **top position** among Achiever category states, followed by **Goa** and **Jharkhand**.
- The index evaluates states across **five key pillars** of fiscal health using verified data.
- **North-East and Himalayan States** are assessed and ranked separately due to structural differences.

## Fiscal Health Index 2026

- **Objective:** Benchmark financial performance and identify structural fiscal challenges across Indian states.
- **Coverage:** Assesses **18 major states** along with separate ranking for **NE-Himalayan states**.
- **Five Key Pillars:**
  - **Quality of Expenditure:** Evaluates efficiency and effectiveness of public spending.
  - **Revenue Mobilisation:** Measures own-tax and non-tax revenue collection capacity.
  - **Fiscal Prudence:** Assesses deficit management and fiscal discipline.
  - **Debt Index:** Tracks debt levels and debt servicing capacity.
  - **Debt Sustainability:** Evaluates long-term debt repayment ability.
- **Data Source:** Utilizes **verified data** on revenues, expenditures, and debt management.

## Findings & Rankings

- **Top Performers (Achiever Category):**
  - **Odisha:** Retains No.1 position with controlled deficits and strong debt management.
  - **Goa:** Second position with improved fiscal score.
  - **Jharkhand:** Third position among achievers.
- **NE-Himalayan States:**
  - **Arunachal Pradesh:** Tops among North-East and Himalayan states.
- **Low Performers:**
  - **Manipur:** Scored -0.363 (lowest).
  - **Delhi:** Scored -0.289.
  - **Uttarakhand:** Scored -0.277.
- **Variation:** Report highlights **considerable variation** in fiscal performance across states.

## India-China Trade Deficit Crosses \$100 Billion Mark

### What's the News?

- India's **trade deficit with China** has exceeded **\$100 billion** for the fiscal year 2025-26.
- The deficit reached a **record high of \$116.12 billion** in 2025, crossing the \$100-billion threshold for the second time.
- **Bilateral trade** between India and China touched an all-time high of **\$155.6 billion** in 2025.
- Meanwhile, **India's exports to the US** declined by **13% in February 2026**, raising concerns about external trade performance.
- India's overall **merchandise trade deficit** widened to **\$27.1 billion in February 2026**, nearly double from the same month last year.

### India-China Trade Statistics

| Metric                        | Details                       |
|-------------------------------|-------------------------------|
| <b>Bilateral Trade (2025)</b> | \$155.6 billion (record high) |
| <b>Trade Deficit (2025)</b>   | \$116.12 billion              |

|                                 |                                                  |
|---------------------------------|--------------------------------------------------|
| <b>Year-on-Year Growth</b>      | Over 12% increase in bilateral trade             |
| <b>Deficit Threshold</b>        | Crossed \$100 billion for second time            |
| <b>India's Exports to China</b> | Rose in 2025 but insufficient to balance deficit |

## Factors Behind Rising Deficit

- **Import Dependency:**
  - India heavily relies on Chinese **electronics, machinery, and pharmaceutical ingredients**
  - **Active Pharmaceutical Ingredients (APIs)** constitute major import category
  - **Telecom equipment** and **consumer electronics** dominate import basket
- **Export Limitations:**
  - India's exports to China remain limited primarily to **raw materials and intermediate goods**
  - **Iron ore, cotton, and agricultural products** form major export items
  - Limited market access for Indian **manufactured goods** in China
- **Structural Imbalance:**
  - Trade deficit is a **persistent structural problem**, not a one-year issue
  - China's manufacturing capacity significantly exceeds India's
  - **Supply chain dependencies** difficult to reduce in short term

## India-US Trade Context

| Aspect                       | Details                                                    |
|------------------------------|------------------------------------------------------------|
| <b>February 2026 Exports</b> | Fell 13% compared to previous year                         |
| <b>US Market Importance</b>  | One of India's largest export destinations                 |
| <b>Trade Agreement</b>       | India-US Bilateral Trade Agreement announced February 2026 |
| <b>Tariff Reductions</b>     | Textile exports tariffs dropped from 50% to 18%            |

## Economic Stabilisation Fund Announced in Budget 2026

### What's the News?

- **Finance Minister Nirmala Sitharaman** has announced the creation of a new **Economic Stabilisation Fund** during the **Union Budget 2026** presentation.
- An initial allocation of **₹57,381 crore** has been proposed for the fund to help India navigate **global economic shocks**.
- The fund is designed to provide **fiscal headroom** for responding to external challenges like **supply chain disruptions** and **geopolitical conflicts**.
- FM Sitharaman emphasised this will strengthen India's **economic resilience** against unforeseen international headwinds.

### Economic Stabilisation Fund

- **Purpose:** Acts as a **financial shock absorber** to protect the Indian economy from global volatility.

- **Objective:** Enable swift government response to **external economic risks** without disrupting fiscal targets.
- **Scope:** Covers emergencies including **commodity price fluctuations, currency volatility, and trade disruptions**.
- **Management:** Fund will be managed by the **Ministry of Finance** with oversight mechanisms.

### Features & Allocation

- **Initial Corpus:** ₹57,381.84 crore allocated in Budget 2026.
- **Total Fund Size:** Proposed to build up to ₹1 lakh crore for adequate fiscal buffer.
- **Strategic Allocation:** Funds designated for **sectoral interventions** during economic stress.
- **Fiscal Flexibility:** Provides headroom without breaching **Fiscal Responsibility and Budget Management (FRBM)** targets.

### Additional Info

- **Fiscal Policy Framework:**
  - Unlike the **Contingency Fund of India** (established under **Article 267**), which is for "unforeseen" general expenditure, the **ESF** is a targeted economic tool for market stabilization.
  - It aligns with the government's commitment to a **Fiscal Deficit** glide path, aiming to keep it below **4.5%** of GDP by 2025-26.
- **Global Precedents:**
  - **Norway's Government Pension Fund Global:** Sovereign wealth fund for oil revenues
  - **Chile's Economic and Social Stabilisation Fund:** Copper revenue buffer
  - **UAE's Investment Corporation:** Diversification fund for oil-dependent economy
- **Constitutional Provisions:**
  - **Article 266:** Consolidated Fund of India
  - **Article 267:** Contingency Fund provisions
  - **FRBM Act, 2003:** Fiscal discipline framework

## Bharat Audyogik Vikas Yojana (BHAVYA): Cabinet Approves 100 Plug-and-Play Industrial Parks

### What's the News?

- The Union Cabinet has approved the **Bharat Audyogik Vikas Yojana (BHAVYA)** with an outlay of ₹33,660 crore to develop **100 plug-and-play industrial parks** across India.
- Implemented by the **National Industrial Corridor Development Corporation (NICDC)** under **DPIIT, Ministry of Commerce & Industry**, in partnership with States and the private sector.
- Aims to accelerate **manufacturing-led growth**, enhance **ease of doing business**, and strengthen domestic supply chains through ready-to-use industrial infrastructure.

### BHAVYA: Features & Financial Framework

- **Target & Scale:**

- Development of **100 industrial parks** ranging from **100–1000 acres** (minimum **25 acres** for North-East and hilly regions).
- Implementation period: **6 years** (FY 2026–27 to 2031–32).

#### Financial Support:

- Up to **₹1 crore per acre** for core, value-added, and social infrastructure.
- Additional **25% support** for external connectivity infrastructure (roads, rail links, utilities).

#### Selection Mechanism:

- **Challenge-based mode:** Prioritizes States with investor-friendly reforms, effective **single-window clearance**, and investment-ready proposals.

#### Infrastructure Components:

- **Core:** Internal roads, underground utilities, drainage, common effluent treatment, ICT systems.
- **Value-Added:** Ready-built factory sheds, testing labs, warehousing, built-to-suit units.
- **Social:** Worker housing, skill centres, and support amenities.

### Additional Info

- **Implementing Agency:** The scheme will be anchored by the **National Industrial Corridor Development Corporation (NICDC)** under the **Department for Promotion of Industry and Internal Trade (DPIIT)**.
- **National Industrial Corridor Development Programme (NICDP):**
  - BHAVYA builds upon the success of **Industrial Smart Cities** developed under the **NICDP** framework.
  - It transitions from regional corridor-based development to a pan-India park-based development model.
- **Target Beneficiaries:**
  - **Primary:** Manufacturing units, **MSMEs**, startups, and global investors seeking fast-track production setup.
  - **Secondary:** Local communities and workers through the creation of millions of direct and indirect jobs.

## Government Extends ALMM Framework to Solar Ingots and Wafers

### What's the News?

- The **Ministry of New and Renewable Energy (MNRE)** has expanded the **Approved List of Models and Manufacturers (ALMM)** framework to include solar ingots and wafers.
- This new mandate, classified as **ALMM List-III**, is scheduled to take effect from **June 1, 2028**.
- The move aims to achieve complete backward integration in India's solar supply chain, reducing heavy reliance on imports for critical upstream components.

### ALMM List-III & Backward Integration?

- **Mandatory Sourcing:** From the effective date, all solar projects—including utility-scale, **Open Access**, solar projects—including utility-scale, **Open Access**,

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and **Net-metering**—must source wafers from manufacturers listed in **ALMM List-III**.

- **Operational Threshold:** The first List-III will only be published once at least **three independent manufacturers** (not under common control) with a combined annual capacity of at least **15 GW** are operational in India.
- **Ingot-Wafer Linkage:** To promote deep manufacturing, any manufacturer seeking enlistment for wafers must also possess an equivalent **ingot manufacturing capacity**.
- **Traceability:** After the effective date, **ALMM List-I** (modules) will only include products manufactured using both **ALMM-listed cells** and **ALMM-listed wafers**.

### Significance for Solar Manufacturing?

- **Reducing Import Dependence:** Currently, India is nearly **100% dependent on imports** (primarily from China) for solar wafers and ingots.
- **Capacity Growth:** While India's module manufacturing capacity has surged to **172 GW** and cell capacity to **27 GW**, the upstream wafer/ingot segment remains at a nascent stage with only about **2 GW** of current capacity.
- **Quality Assurance:** The framework ensures that solar equipment meets domestic standards for reliability and performance, preventing the "dumping" of low-quality products.
- **Investment & Employment:** The policy is expected to catalyze investments of approximately **₹50,000 crore** and create thousands of high-tech manufacturing jobs over the next three years.

### Additional Info

- **ALMM Order, 2019:**
  - Originally introduced to ensure the quality of solar PV modules used in government-backed projects.
  - It applies to projects awarded through competitive bidding under **Section 63** of the **Electricity Act, 2003**.
- **Existing Frameworks:**
  - **List-I:** Covers Solar PV Modules.
  - **List-II:** Covers Solar PV Cells, with mandatory compliance set to begin from **June 1, 2026**.
- **Grandfathering Clause:**
  - Projects with bid submission deadlines within **seven days** of the issuance of the first wafer list are exempt from the new requirement to protect the existing pipeline.
- **Strategic Goals:**
  - Supports the **Aatmanirbhar Bharat** initiative.
  - Aligned with India's target of reaching **500 GW** of non-fossil fuel energy capacity by **2030**.

## Small Hydro Power (SHP) Development Scheme: Cabinet Approves ₹2,584 Crore to Add 1,500 MW Capacity

### What's the News?

- The **Union Cabinet** has approved the **Small Hydro Power (SHP) Development Scheme** for the period **FY 2026–27 to FY 2030–31**.
- With a total financial outlay of **₹2,584.60 crore**, the scheme aims to install approximately **1,500 MW** of small hydro capacity across India.
- The initiative marks a strategic revival of the small hydro sector, focusing on decentralized clean energy in remote, hilly, and border regions.

### Small Hydro Power (SHP) Development Scheme?

- **Objectives:**
  - To exploit untapped hydro potential in difficult terrains with minimal environmental impact.
  - To provide reliable, decentralized power to remote communities, reducing dependence on long transmission lines and minimizing transmission losses.
- **Financial Details & Metrics:**
  - **Project Range:** Supports projects with a capacity between **1 MW and 25 MW**.
  - **Central Financial Assistance (CFA):**
    - **North Eastern (NE) States & Border Districts:** Assistance of **₹3.6 crore per MW** or **30% of project cost**, capped at **₹30 crore per project**.
    - **Other States:** Assistance of **₹2.4 crore per MW** or **20% of project cost**, capped at **₹20 crore per project**.
  - **Investment Potential:** The scheme is expected to catalyze private and public investments worth approximately **₹15,000 crore**.
  - **Indigenous Sourcing:** Mandatory **100% domestic sourcing** of plant and machinery, aligning with the **Atmanirbhar Bharat** vision.
- **Implementation Features:**
  - **DPR Support:** An allocation of **₹30 crore** to assist state and central agencies in preparing **Detailed Project Reports (DPRs)** for nearly **200 future projects**.
  - **Employment Generation:** Projected to create **51 lakh person-days** of employment during the construction phase, besides long-term operational roles.

### Small Hydro vs. Large Hydro

- In India, hydroelectric projects with a station capacity up to **25 MW** are categorized as **Small Hydro Power** and fall under the **Ministry of New and Renewable Energy (MNRE)**.
- Projects above **25 MW** are classified as **Large Hydro** and are managed by the **Ministry of Power**.

## India's Bioeconomy Reaches \$195 Billion Milestone in 2025

### What's the News?

- The **India BioEconomy Report (IBER) 2026** was released, revealing India's bioeconomy has reached **\$195.3 billion in 2025**.
- The sector registered **18% annual growth**, adding \$29.6 billion in value during 2025.
- **Dr. Jitendra Singh**, Minister of State for Science and Technology, announced the report highlights India's biotechnology progress.
- India's bioeconomy now contributes approximately **4.8% to national GDP**, positioning biotechnology as central to **Viksit Bharat** vision.

### Bioeconomy Structure & Drivers

#### Four Core Segments:

- **BioIndustrial** — Nearly 50% contribution; includes bio-based manufacturing, bio-energy, and green materials
- **BioPharma** — Vaccines, therapeutics, and biologics
- **BioServices** — Research, clinical trials, and contract manufacturing
- **BioAgri** — Genetically modified crops, biopesticides, and sustainable agriculture

#### Growth Catalysts:

- **BioE3 Policy** (Biotechnology for Economy, Environment, and Employment) — Promotes precision biotherapeutics, smart proteins, climate-resilient agriculture, bio-based chemicals, and carbon capture technologies
- **Startup Ecosystem** — Over **11,800 biotech startups** operational nationwide, with increasing participation from tier-2 and tier-3 cities
- **BIRAC Funding** — Enabled more than **₹4,200 crore** in funding support across **1.5+ lakh startups, entrepreneurs, companies, and innovators**
- **Research, Development, and Innovation (RDI) Fund** — **₹1 lakh crore** outlay to support deep-tech biotechnology ventures ready for scale-up

### Investment & Infrastructure Landscape

| Metric                                 | Value           |
|----------------------------------------|-----------------|
| Total Bioeconomy Value (2025)          | \$195.3 billion |
| Year-on-Year Growth                    | 18%             |
| Annual Growth Rate (CAGR)              | 17–18%          |
| GDP Contribution                       | ~4.8%           |
| Biotech Startups                       | 11,800+         |
| BIRAC Funding Enabled                  | ₹4,200+ crore   |
| Beneficiaries (Startups/Entrepreneurs) | 1.5+ lakh       |
| 2025 Biotech Investments               | \$1.58 billion  |
| Total Biotech Deals                    | 208             |
| Cumulative Investment (Biotech)        | \$4.6 billion   |

### Emerging Infrastructure:

- **Biofoundries** — Shared facilities for biomanufacturing
- **Bio-AI Hubs** — Integration of artificial intelligence with biotechnology research
- **Advanced Biomanufacturing Platforms** — Supporting indigenous production of critical biotherapeutics

### Additional Info

- **Biotechnology Industry Research Assistance Council (BIRAC):**
  - A **not-for-profit Public Sector Enterprise** established by the **Department of Biotechnology (DBT)**.
  - It acts as an interface agency to support and fund emerging biotech enterprises and startups.
- **Department of Biotechnology (DBT):**
  - Functions under the **Ministry of Science and Technology**.
  - Nodal agency responsible for promoting the development and application of biotechnology in agriculture, healthcare, and industry.
- **National Biopharma Mission (NBM):**
  - An industry-academia collaborative mission for accelerating discovery research to early development for biopharmaceuticals.
- **Bio-Manufacturing:**
  - A type of manufacturing that uses biological systems (such as living cells or enzymes) to produce commercially important biomolecules and materials.

## Government Approves RELIEF Scheme to Support Exporters Amid West Asia Crisis

### What's the News?

- The **Union Government** approved **RELIEF (Resilience & Logistics Intervention for Export Facilitation)** under the **Export Promotion Mission (EPM)**.
- The scheme has an outlay of **₹497 crore** to support Indian exporters affected by **West Asia logistics disruptions**.
- **Ministry of Commerce and Industry** announced the intervention to address rising freight costs and insurance premiums.
- The scheme aims to ensure **export continuity** and protect exporter confidence amid geopolitical uncertainties.
- **Department of Commerce** will implement the scheme through **DGFT (Directorate General of Foreign Trade)**.

### Scheme Overview & Objectives

- **Full Name:** Resilience & Logistics Intervention for Export Facilitation.
- **Budget Outlay:** **₹497 crore** for the intervention period.
- **Primary Objectives:**

- Mitigate **logistics and financial risks** faced by exporters.
- Ensure **continuity of export flows** amid geopolitical disruptions.
- Protect **exporter confidence** and prevent order cancellations.
- Support exporters affected by **extraordinary freight escalation**.
- Address **heightened insurance premia** due to war-related risks.
- **Target Beneficiaries:** Indian exporters with consignments destined to **West Asia region**.

### Components of RELIEF

- **Three Complementary Components** structure the intervention :
  - **Freight Cost Support:** Reimbursement for escalated shipping costs due to route diversions.
  - **Insurance Premium Support:** Coverage for heightened war-risk insurance charges.
  - **Logistics Disruption Relief:** Compensation for delays and vessel diversions.
- **Coverage Period:** Shipments already dispatched during the **disruption period**.
- **Geographic Coverage:** Countries in **West Asia region** including **United Arab Emirates** and neighboring nations.
- **Implementation:** Time-bound intervention under **Export Promotion Mission framework**.

### Export Promotion Mission (EPM) Context

- **EPM Total Outlay:** ₹25,060 crore for FY 2025-26 to FY 2030-31.
- **Mission Duration:** Six years operational period.
- **Nodal Ministry:** **Ministry of Commerce and Industry**.
- **Implementing Agency:** **Directorate General of Foreign Trade (DGFT)**.
- **EPM Objectives:**
  - Enhance **export competitiveness** of Indian products.
  - Empower **MSMEs** for global export participation.
  - Provide **digital support** for export facilitation.
  - Offer **interest subvention** under Niryat Protsahan scheme.
- **RELIEF Position:** One of multiple interventions under the broader **EPM framework**.

## Government Restores Full RoDTEP Benefits to Boost Export Competitiveness

### What's the News?

- The **Ministry of Commerce and Industry** has restored the full rates and value caps under the **Remission of Duties and Taxes on Exported Products (RoDTEP)** scheme for all eligible export products.

- This decision effectively withdraws the earlier **50% restriction** on rebate rates that was implemented in late February.
- The move aims to provide immediate relief to Indian exporters struggling with surging freight costs and logistics hurdles triggered by the ongoing geopolitical crisis in **West Asia**.

### Full Benefit Restoration?

- **Withdrawal of Caps:** The **Directorate General of Foreign Trade (DGFT)** issued a notification (No. 66/2025-26) to reinstate the rates that were in force prior to the February reduction.
- **Objective:** To ensure that Indian exports remain price-competitive in the international market despite the risk-heavy maritime corridor in the **Gulf and Red Sea**.
- **Immediate Impact:** Exporters across labor-intensive sectors like **textiles, leather, and engineering goods** can once again claim 100% of the notified remission rates.

### Understanding the RoDTEP Scheme

- **Mechanism:** Launched in 2021, RoDTEP is a **WTO-compliant** flagship export promotion scheme that replaces the older **Merchandise Exports from India Scheme (MEIS)**.
- **Core Principle:** It operates on the philosophy that **"taxes should not be exported."** It refunds various embedded duties and taxes that were previously "un-refunded" during the production and distribution process.
- **Taxes Covered:** Includes levies not covered under GST or Duty Drawback, such as:
  - **VAT on fuel** used in transportation.
  - **Electricity Duty** on power consumed during manufacturing.
  - **Mandi Tax** and Stamp Duties on export documentation.
- **Digital Interface:** The rebate is issued in the form of **transferable electronic scrips (E-Scrips)**, maintained in an electronic ledger by Customs, ensuring a paperless and transparent process.

### Additional Info

- **Economic Performance & Metrics:**
  - **Growth:** Exports supported under RoDTEP recorded a **CAGR of over 20%** between FY 2023-24 and FY 2025-26.
  - **MSME Focus:** Support to the **MSME sector** under the scheme has risen from 68% in 2021-22 to approximately **75%** in 2025-26.
  - **Budgetary Allocation:** The allocation for FY 2025-26 was **₹18,232.5 crore**, supporting a total export value (FOB) of roughly **₹20.50 lakh crore**.
- **Policy Context:**
  - **WTO Compliance:** Unlike its predecessor (MEIS), RoDTEP is a strictly "remission" based scheme (refunding actual taxes paid), making it immune to challenges at the **World Trade Organization**.

- **Foreign Trade Policy (FTP) 2023:** The scheme is a critical pillar of India's target to reach **\$2 trillion** in total exports by 2030.
- **Operational Details:**
  - The scheme currently covers over **10,000 tariff lines** at the 8-digit ITC (HS) level.
  - Benefits are calculated as a percentage of the **Freight On Board (FOB)** value of the export.

## Graduate Unemployment Crisis: State of Working India 2026 Report

### What's the News?

- **Azim Premji University** released the **State of Working India (SWI) 2026** report focusing on "Youth in the Labour Market: Pathways from Learning to Earning".
- The report highlights a severe **graduate paradox** where nearly **40% of graduates aged 15–25** remain unemployed despite rising education levels.
- Less than **7% of male graduates** secure permanent salaried jobs within a year of completing education.
- Only **3.7% of graduates** land white-collar jobs, revealing a widening gap between education and job creation.
- India produces approximately **8–9 million graduates annually**, but employment generation has not kept pace.

### Findings of SWI 2026

| Indicator                                        | Data        |
|--------------------------------------------------|-------------|
| Youth Graduate Unemployment (15-25 yrs)          | ~40%        |
| Male Graduates in Permanent Jobs (within 1 year) | <7%         |
| Graduates in White-Collar Jobs                   | 3.7%        |
| Annual Graduate Output                           | 8-9 million |
| Engineering Graduates Unemployable               | >70%        |

### Rising Education, Persistent Gaps?

The report notes significant progress in educational access over the past four decades, but also reveals critical gaps in quality and equity.

- **Increased Attainment:** India's tertiary enrolment rate now stands at **28%**, comparable to nations with similar per capita incomes. Higher education has become more democratised, with the share of students from the poorest households rising from 8% (2007) to 15% (2017).
- **Concerning Drop in Male Enrolment:** The share of young men in education fell from **38% (2017) to 34% (2024)**, with a large proportion citing the need to support household incomes as the primary reason.
- **Financial Barriers in Professional Courses:** Despite overall democratisation, access to high-return fields like engineering and medicine remains skewed towards richer households, as the cost often exceeds the annual per capita expenditure of poorer families.

## The Employment Challenge: Graduate Unemployment and Stagnant Wages

The transition from education to employment remains fraught with difficulty, reflecting a deep-seated structural issue.

- **High Graduate Unemployment:** Unemployment is alarmingly high among educated youth, standing at **nearly 40% for the 15-25 age group** and **20% for the 25-29 age group**.
- **Stagnant Earnings:** While graduates earn roughly twice as much as non-graduates, entry-level salaries for **young male graduates have seen a slowdown in growth since 2011**.
- **The "Jobless Growth" Concern:** Only a small fraction of graduates secure stable salaried employment within a year of graduation, underscoring a mismatch between educational outcomes and labour market demands.

### Additional Info

- **Demographic Dividend:** India's working-age population share is expected to begin **declining after 2030**. The coming years represent a critical window to create productive employment.
- **Sectoral Shift:** Young workers are moving out of agriculture into manufacturing and services faster than older cohorts. Young women are increasingly finding employment in sectors like **IT, automobile manufacturing, and business services**.
- **Migration:** Youth migration acts as a crucial mechanism to balance regional disparities, with poorer, younger states serving as major sources of labour for richer states with ageing populations.
- **Key Policies and Organisations:**
  - **AICTE:** The **All India Council for Technical Education** sets norms for technical education, including student-teacher ratios.
  - **National Education Policy (NEP) 2020:** Aims to overhaul the education system to improve quality, increase gross enrolment ratio, and enhance employability.
  - **Skill India Mission:** A flagship initiative focused on skilling, reskilling, and upskilling the workforce to meet industry demands.

## Government Reduces Special Additional Excise Duty on Petrol and Diesel

### What's the News?

- The Union Government has announced a significant reduction in the **Special Additional Excise Duty (SAED)** on petroleum products.
- The move aims to provide relief to consumers and stabilize domestic retail prices amidst fluctuations in the global energy market.
- The **Central Board of Indirect Taxes and Customs (CBIC)** issued the notification to implement these changes, focusing on lowering the tax burden on essential transport fuels.

### Why the Cut Now?

- **Geopolitical Tensions:** The decision comes amid escalating **US-Israel-Iran** tensions, which have led to

a near-closure of the **Strait of Hormuz**, a critical chokepoint for global oil flows.

- **Supply Disruptions:** The disruption threatens global supply chains, making India—the world’s third-largest oil importer—vulnerable to price volatility.
- **Protecting Consumers & OMCs:** The move aims to cushion consumers from potential price spikes and offset the mounting losses of **Oil Marketing Companies (OMCs)**, which were absorbing high international crude prices to keep retail prices stable.

### Fuel Pricing & Tax Structure

The retail price of fuel is determined by a multi-stage process:

- **Components of Retail Price:**
  - **Crude Oil Cost:** The base cost of imported crude, influenced by global prices and the rupee-dollar exchange rate.
  - **Refining & Freight:** Costs incurred to convert crude into fuel and transport it.
  - **OMC Margin:** The marketing margin retained by oil companies.
  - **Central Excise Duty:** A union government levy, which now stands at approx. ₹3 per litre for both fuels post-cut.
  - **State VAT:** A value-added tax levied by state governments, which varies significantly and contributes 20-30% to the final price.
- **Tax Contribution:** Prior to the cut, central and state taxes together accounted for **40-55%** of the retail price paid by consumers.

### Will Petrol Prices Drop Immediately?

Not necessarily! Here's why:

- OMCs often absorb short-term volatility to avoid frequent price changes
- Excise cut may initially help offset losses for companies rather than immediately lowering pump prices
- Consumers are likely to see gradual relief rather than immediate reduction

### Additional Info

- **Special Additional Excise Duty (SAED):**
  - It is a type of **Windfall Tax** often imposed when global prices rise significantly, allowing the government to capture a portion of the "supernormal profits" earned by energy companies.
  - The rates are reviewed fortnightly based on the moving average of international oil prices.
- **Constitutional and Legal Framework:**
  - **Article 271:** This article allows the Union government to levy a surcharge on certain duties and taxes for the purpose of the Union. Unlike the basic excise duty, the revenue from such surcharges and cesses is not required to be shared with the States.
  - **The Finance Act:** The legal authority to modify excise duty rates is derived from the annual Finance Act and the **Central Excise Act, 1944**.

## RBI Unveils 'Payments Vision 2028' to Shape India's Payment Frontier

### What's the News?

- The **Reserve Bank of India (RBI)** has released its strategic roadmap, **"Payments Vision 2028,"** titled **"Shaping India's Payment Frontier."**
- The document outlines the policy direction for the country's payment systems through December 2028, aiming to consolidate India's position as a global leader in digital finance.
- The vision primarily focuses on five key goals: **User Empowerment, Fraud Prevention, Cross-Border Efficiency, Interoperability, and Ease of Doing Business.**

### Pillars & Initiatives

The vision document proposes a series of initiatives across several critical areas to strengthen the payments ecosystem.

- **MSME Financing & Interoperability**
  - **Interoperable TReDS:** Proposes a unified framework for **Trade Receivables Discounting Systems (TReDS)** to create an integrated and efficient receivables financing market.
  - **MSME Focus:** Aims to extend financing to **export-oriented MSMEs** and introduce factoring with recourse, unlocking liquidity for small businesses.
- **User Empowerment & Fraud Protection**
  - **Universal Transaction Controls:** Plans to introduce a **"switch on/off"** facility for all digital payment modes (like UPI, IMPS), similar to existing card controls, to give users greater control and mitigate fraud.
  - **Shared Liability Framework:** Proposes a new model where both the **issuing bank** (customer's bank) and the **beneficiary bank** share liability for unauthorized transactions, strengthening consumer protection.
  - **Payments Switching Service (PaSS):** A centralized service to allow customers to seamlessly migrate payment instructions when switching bank accounts (account portability).
- **Cyber Resilience & Systemic Stability:**
  - **Cyber Key Risk Indicators (KRI):** A new framework for **non-bank payment system operators** to provide early warning signals for potential security breaches.
  - **Expanded Regulatory Perimeter:** Entities playing a critical role in facilitating digital payments (e.g., e-commerce marketplaces) may be brought under direct regulation to ensure systemic stability.
- **Cross-Border Payments Overhaul**
  - **Single-Window Authorization:** Aims to streamline regulatory processes under the **PSS Act, 2007** and **FEMA, 1999** through a single-window mechanism.
  - **Benchmarking & Reports:** Will publish periodic reports tracking transaction costs,



speed, and performance against **15 global indicators** to identify areas for improvement.

### Additional Info

- **Reserve Bank of India (RBI):**
  - Established under **RBI Act, 1934**
  - Functions as India's **central banking institution** and **payments system regulator**
  - Operates under **Union List, Entry 45 (Banking)** of the Constitution
- **Legal Framework:**
  - **Payment and Settlement Systems Act, 2007:** Governs all payment systems in India
  - **Information Technology Act, 2000:** Provides legal framework for digital transactions and cyber security
  - **Prepaid Payment Instruments (PPI) Guidelines:** Regulates digital wallets and prepaid cards

## PLFS Annual Report 2025: Stable Labour Market with Persistent Structural Challenges

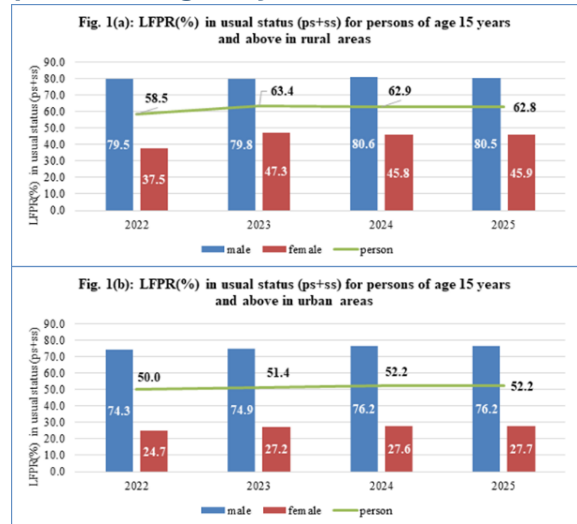
### What's the News?

- The **Ministry of Statistics and Programme Implementation (MoSPI)** has released the **Periodic Labour Force Survey (PLFS) Annual Report for 2025**, covering the period **January to December 2025**.
- This is the first annual report based on the revamped survey methodology, which shifted the reference period from the agricultural year (July–June) to the **calendar year** and introduced a significantly larger sample size.
- Key figures indicate a total estimated workforce of **61.6 crore** persons (aged 15+), comprising **41.6 crore** males and **20.0 crore** females.

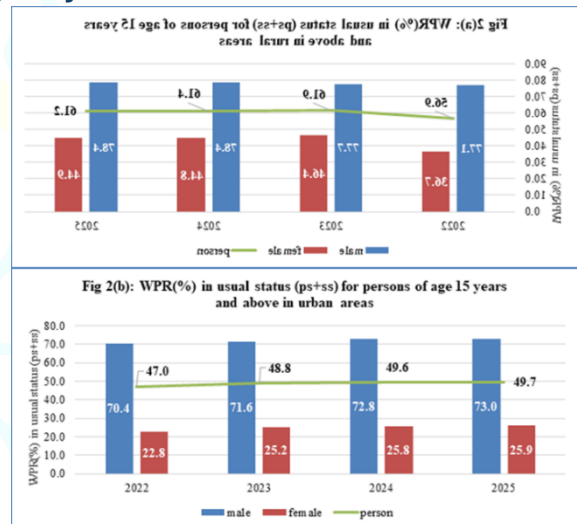
### Labour Market Indicators?

- **Unemployment Rate (UR):** The overall unemployment rate for persons aged 15 and above declined to **3.1%**, down from 3.2% in the previous year.
  - **Urban UR:** Stood at **4.8%**.
  - **Rural UR:** Recorded at **2.4%**.
  - **Youth UR (15–29 years):** Dropped to **9.9%** from 10.3%.
- **Labour Force Participation Rate (LFPR):** Remained stable at **59.3%**
  - **Male LFPR:** **79.1%**.
  - **Female LFPR:** **40.0%** (showing sustained integration of women into the workforce).
- **Worker Population Ratio (WPR):** The percentage of employed persons in the population stood at **57.4%**.

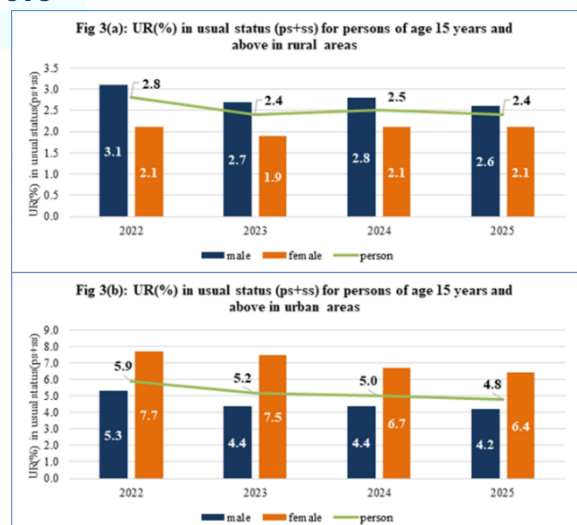
## Stable Labour Force Participation Rate (LFPR) for persons of age 15 years and above



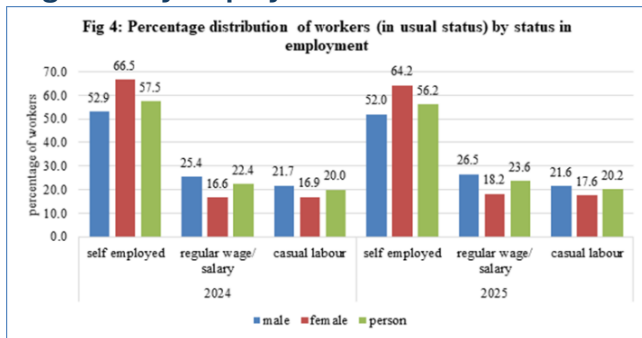
## Worker Population Ratio (WPR) for persons of age 15 years and above remains sustained



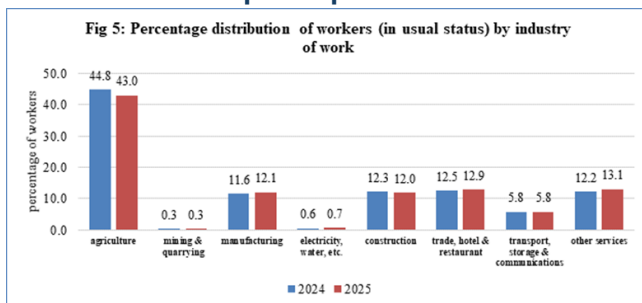
## Unemployment Rates (UR) reflect stability and improvement for persons of age 15 years and above



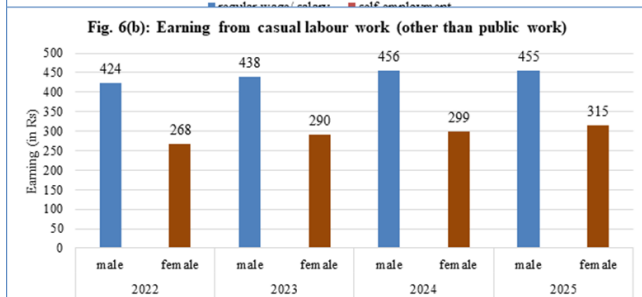
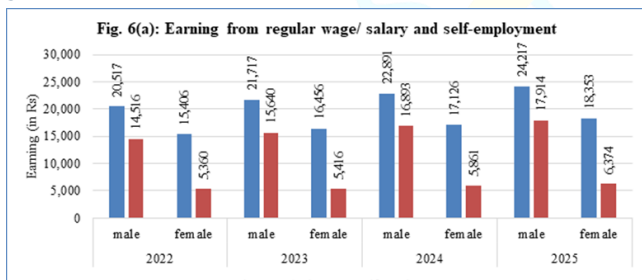
## Increase in proportion of workers with regular wage/ salary employment



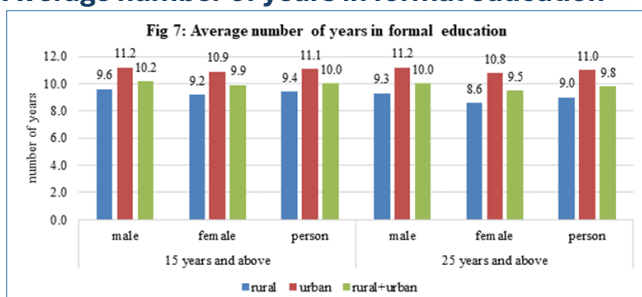
## Manufacturing and service sectors witnessed enhanced worker participation



## Earnings of female workers have seen a notable shift



## Average number of years in formal education



## Additional Info

- Terminology & Definitions:**
  - Labour Force Participation Rate (LFPR):** The percentage of persons in the labour force (working or seeking work) in the total population.

- Worker Population Ratio (WPR):** The percentage of employed persons in the total population.
- Unemployment Rate (UR):** The percentage of persons unemployed among the persons in the labour force.
- Usual Status (ps+ss):** Activity determined based on a reference period of the last 365 days.
- Current Weekly Status (CWS):** Activity determined based on a reference period of the last 7 days.

### Survey Methodology Changes (since Jan 2025):

- Revamped Sampling:** The district has been made the primary geographical unit (basic stratum) for selecting First Stage Units (FSUs).
- Sample Size:** Increased to **22,692 FSUs** (villages/urban blocks) from the previous 12,800.
- NIC 2025:** Introduced a new **6-digit coding structure** for classifying economic activities, replacing the older NIC 2008 5-digit system.

## Energy Statistics India 2026

### What's the News?

- The **Ministry of Statistics and Programme Implementation (MoSPI)** has released the **33rd Edition of Energy Statistics India 2026**.
- The report highlights a significant surge in **renewable energy capacity** while **coal continues to dominate** India's energy mix.
- Renewable energy potential** reached **47,04,043 Megawatt** as of March 2025, with solar accounting for nearly **71% share**.
- Installed renewable capacity grew from **90,134 MW (2016)** to **2,29,346 MW (2025)**, registering a **CAGR of 10.93%**.
- Despite renewable growth, **coal supply increased** from 3,87,761 KToe (FY 2015-16) to **5,52,315 KToe**.

### Renewable Energy: Rapid Expansion

- Total Renewable Potential:** India's total renewable energy (RE) potential reached **47,04,043 MW** as of March 2025.
  - Solar Energy** holds the highest share at approximately **71%**, with potential surging to **33,43,378 MW**.
  - Wind Energy** follows with **11,63,856 MW**.
- Geographical Concentration:** Over **70%** of RE potential is concentrated in six states: **Rajasthan, Maharashtra, Gujarat, Andhra Pradesh, Karnataka, and Madhya Pradesh**.
- Installed Capacity & Generation:**
  - Installed RE capacity grew from 90,134 MW (2016) to **2,29,346 MW (2025)**, registering a **CAGR of 10.93%**.
  - Gross electricity generation from renewables reached **4,16,823 GWh** in FY 2024-25, more than doubling from 1,89,314 GWh in FY 2015-16.

## Consumption & Efficiency Gains

- **Rising Consumption:** Per-capita energy consumption rose from 15,296 MJ in FY 2015-16 to **18,096 MJ** in FY 2024-25.
- **Improved Efficiency:** Transmission and Distribution (T&D) losses were reduced from 22% in FY 2015-16 to **17%** in FY 2024-25, indicating better grid management.

## Fossil Fuel Dominance

- Despite renewable growth, **coal remains the primary energy source**, with its supply increasing to **5,52,315 KTOE** in FY 2024-25.
- This persistent reliance on coal presents a significant challenge to India's long-term net-zero transition goals.

## Financial & Data Improvements

- **Increased Investment:** Credit flow to the energy sector increased over sixfold, rising from **₹1,688 crore in 2021 to ₹10,325 crore in 2025**, signaling high investor confidence.
  - **Enhanced Data Scope:** The 2026 edition includes new datasets such as credit flow analysis, industry-wise electricity consumption, and international marine bunkers data, enabling more accurate policy-making.
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# Science & Technology

## Sarvam AI Partners with SBI Life to Deploy Multilingual AI at National Scale

### What's the News?

- **SBI Life Insurance** has announced a strategic partnership with **Sarvam AI**, a homegrown artificial intelligence startup, to deploy advanced multilingual AI tools across its nationwide distribution network.
- The collaboration aims to enhance customer engagement and streamline sales processes by leveraging **Generative AI (GenAI)** specifically optimized for Indian languages.

### Partnership Overview?

#### Key Objectives

- **Customer Engagement:** AI-driven personalized communication in regional languages.
- **Agent Support:** Tools to assist insurance agents with queries, documentation, and sales pitches.
- **Sales Enablement:** Automated lead qualification and policy recommendation systems.
- **Operational Efficiency:** Reduced turnaround time for customer queries and claim processes.

#### Technology Deployment

| Feature             | Details                        |
|---------------------|--------------------------------|
| Languages Supported | 12+ Indian languages           |
| AI Model Type       | Large Language Models (LLMs)   |
| Deployment Scale    | National (pan-India)           |
| Target Users        | Insurance agents and customers |
| Developer           | Sarvam AI (Bengaluru-based)    |
| Partner             | SBI Life Insurance Co. Ltd.    |

### Sarvam AI Profile?

#### Company Background

- **Founded:** 2023, Bengaluru, Karnataka.
- **Founders:** Former researchers from **Google**, **Microsoft**, and **Indian Institute of Science (IISc)**.
- **Focus:** Building **large language models** for Indian languages.
- **Funding:** Backed by prominent **venture capital firms** and **angel investors**.

#### Products

- **OpenHathi:** Open-source Hindi language model.
- **Trinetra:** Multimodal AI model for Indian contexts.
- **Bharat Series:** Suite of models for various Indian languages.
- **Enterprise Solutions:** Custom AI tools for business applications.

#### Technical Capabilities

- **Native Indian Language Models:** Trained on Indian language datasets.
- **Cultural Context Understanding:** Better comprehension of Indian idioms and expressions.
- **Low-Resource Language Support:** Covers languages with limited digital content.
- **API Integration:** Easy deployment across existing business systems.

### SBI Life Insurance Profile?

#### Company Overview

- **Established:** 2001, Mumbai, Maharashtra.
- **Type:** Joint venture between **State Bank of India** and **BNP Paribas Cardif**.
- **Market Position:** One of India's **largest private life insurers**.
- **Distribution Network:** Extensive agent network across urban and rural India.

#### Business Metrics

| Indicator      | Figure                      |
|----------------|-----------------------------|
| Market Share   | Top 5 private life insurers |
| Branch Network | 1,000+ branches pan-India   |
| Agent Force    | 500,000+ insurance advisors |
| Customer Base  | 10+ million policyholders   |
| Premium Income | ₹30,000+ crore (FY25)       |

#### Digital Initiatives

- **SBI Life Digital Platform:** Online policy purchase and management.
- **Mobile App:** Customer self-service portal.
- **AI Integration:** Previous deployments in claims processing and underwriting.
- **Customer Portal:** 24/7 query resolution system.

## MeitY Launches Indigenous 30 kW WBG-Based Integrated Drive System for EVs

### What's the News?

The **Ministry of Electronics and Information Technology (MeitY)** launched an indigenously developed **30 kW Wide Band Gap (WBG)-based Integrated Drive System (IDS)** for electric vehicles at **IIT Madras, Chennai**. Unveiled by **S. Krishnan, Secretary, MeitY**, the system represents a significant advancement in India's domestic capabilities in **advanced power electronics** and **EV powertrain technology**.

### 30 kW Integrated Drive System?

- **Overview:** It is a high-efficiency power electronics unit that combines a motor controller and an electric motor into a single, compact assembly.
- **Core Technology:**
  - Utilizes **Silicon Carbide (SiC)** based **Wide Band Gap (WBG)** semiconductor technology.
  - Offers higher energy efficiency and thermal stability compared to traditional Silicon-based systems.
- **Objectives:**
  - To provide a domestic alternative to imported drive trains for light electric vehicles.
  - To improve the overall range and performance of EVs through weight reduction and better power density.
- **Technical Metrics:**
  - **Power Output:** 30 kW (kilowatts).
  - **Efficiency:** Significant reduction in energy loss during power conversion.

- **Size:** Reduced footprint, allowing for more flexible vehicle design and battery placement.

### Development Ecosystem

- **Lead Developer:** Centre for Development of Advanced Computing (C-DAC), Thiruvananthapuram.
- **Academic Partner:** Indian Institute of Technology (IIT) Madras.
- **Industry Partner:** Lucas TVS (validation and commercialization support).
- **Governing Mission:** National Mission on Power Electronics Technology (NaMPET).

### Additional Info

- **National Mission on Power Electronics Technology (NaMPET):**
  - MeitY initiative to develop indigenous capabilities in power electronics.
  - Focuses on strategic sectors including EVs, renewable energy, and industrial applications.
- **Production-Linked Incentive (PLI) Schemes:**
  - **Automobile and Auto Components:** Budget outlay of ₹25,938 crore.
  - **Advanced Chemistry Cell (ACC) Battery Storage:** ₹18,100 crore outlay.
  - Targets 50 GWh battery manufacturing capacity.
- **Wide Band Gap (WBG) Semiconductors:**
  - Materials like **Silicon Carbide (SiC)** and **Gallium Nitride (GaN)**.
  - Operate at higher temperatures, voltages, and frequencies than silicon.
  - Enable compact, efficient power conversion systems.

## Scientists Trace Earth's First Animals to 541 Million Years Ago

### What's the News?

- **MIT researchers** have discovered evidence of **Earth's earliest animals** in rocks over **541 million years old**.
- The study identifies **soft-bodied sea sponges** as among the **first animals to inhabit Earth's oceans**.
- Scientists found **chemical fossils** (molecular signatures) matching compounds produced by **modern demosponges**.
- The discovery pushes back the timeline of **animal evolution** to before the **Cambrian Explosion**.
- Some traits of these ancient creatures are found in **similar species alive today**.

### Research Findings

- **Research Institution:**
  - **Massachusetts Institute of Technology (MIT)** led the study
  - Published in **February 2026**
- **Evidence Type:**
  - **Chemical fossils** (molecular biomarkers) preserved in ancient rocks

- **30-carbon and 31-carbon steranes** matching modern demosponge compounds
- These molecular "fingerprints" indicate **biological presence** of sponges

### Geological Period:

- **Ediacaran Period** (approximately 635-541 million years ago)
- Predates the **Cambrian Explosion** (541-530 million years ago)
- Rocks sourced from **Precambrian geological formations**

### Additional Info

- **Geological Time Scale Context:**
  - **Precambrian Era:** 4.6 billion to 541 million years ago
  - **Ediacaran Period:** 635-541 million years ago
  - **Cambrian Period:** 541-485 million years ago
  - **Cambrian Explosion:** Rapid diversification of animal life beginning 541 million years ago
- **What are Steranes?**
  - **Molecular fossils** derived from steroids produced by living organisms
  - **30-carbon and 31-carbon steranes** specific to demosponge biology
  - Remain preserved in rocks for **hundreds of millions of years**
  - Serve as **biomarkers** for identifying ancient life forms
- **Ediacaran Biota:**
  - **Dickinsonia:** One of earliest known complex organisms (565 million years old)
  - **Mistaken Point, Newfoundland:** Key fossil discovery site
  - **Ediacara Hills, Australia:** Location of first Ediacaran fossil discovery (1946)
- **Related Scientific Concepts:**
  - **Multicellularity:** Evolution of organisms with multiple cells
  - **Metazoans:** Another term for animals (multicellular eukaryotes)
  - **Porifera:** Scientific classification for sponges

## Ancient Martian Shorelines Discovered Beneath the Surface

### What's the News?

- Radar data from China's **Zhurong rover** has revealed buried structures that resemble **ancient sandy beaches** in the northern plains of Mars.
- A study published in the journal **Proceedings of the National Academy of Sciences (PNAS)** in March 2026 confirms that these formations are hidden approximately **10 to 35 meters** beneath the surface.
- This discovery provides some of the most compelling "direct" evidence that Mars once hosted a vast, stable ocean, nicknamed the **Deuteronilus Ocean**, billions of years ago.

## The Discovery via Ground-Penetrating Radar (GPR)?

- **The Instrument:** Zhurong used its **Mars Rover Penetrating Radar (RoPeR)** to scan the subsurface of **Utopia Planitia**, a massive impact basin.
- **The Evidence:** The radar detected a series of **76 dipping reflectors**—sloping underground layers of sediment—that are tilted at an angle of roughly **15 degrees**.
- **The Comparison:** These angles and thicknesses are nearly identical to **coastal sediment deposits** found on Earth, where waves and tides gradually push sand and pebbles up against a shoreline.
- **Ruling Out Other Causes:** Scientists analyzed alternative theories, such as volcanic lava flows or wind-blown sand dunes. However, the specific orientation and parallel nature of these layers are unique to long-term **water-driven processes**.

## Significance of the "Deuteronilus Ocean"?

- **Timeline:** The shoreline dates back to the **Late Hesperian period**, roughly **3.5 to 4 billion years ago**.
- **Climate Implications:** For such beaches to form, Mars must have had an **ice-free ocean** for millions of years. This requires a much **thicker atmosphere** and a **warmer climate** than the frozen, thin-aired desert we see today.
- **Habitability:** Shorelines on Earth are often where life is thought to have originated, as they provide an interface between air, shallow water, and nutrient-rich land. Finding similar environments on Mars significantly boosts the search for **past microbial life**.

## The Role of Utopia Planitia?

- Utopia Planitia is the **largest known impact basin** in the solar system.
- By exploring this "northern lowland," Zhurong has shifted focus from the polar regions (where ice is obvious) to mid-latitude regions, which are more likely candidates for future **human habitation** and water resource extraction.
- The 10 meters of material covering these beaches (likely dust from asteroid impacts and storms) actually acted as a **preservative**, keeping the geological record of the waves intact for billions of years.

## China's Tianwen-1 Mission:

- Launched in July 2020, it consisted of an orbiter, a lander, and the Zhurong rover.
- Zhurong operated for nearly a year (2021–2022) before going into hibernation due to a massive dust storm.

## ESA's Proba-3 Mission Faces Setback After Losing Contact with Coronagraph

### What's the News?

- **European Space Agency (ESA)** has lost contact with the **Coronagraph spacecraft** of its **Proba-3 mission** after a **power failure** caused it to enter safe mode.

- The anomaly began in **mid-February 2026** when an onboard issue triggered a **progressive loss of attitude control** in the Coronagraph spacecraft.
- The spacecraft's **solar panel was no longer facing the Sun**, causing the **onboard battery to discharge quickly**.
- ESA teams are working to **restore contact** with the Coronagraph while the **Occulter spacecraft remains operational**.

### Details of Proba-3 Mission

- **Mission Type:** **Dual-probe technological demonstration mission** for **precision formation flying**
- **Launch:** Successfully launched in **2025** aboard **PSLV-C59** from India
- **Spacecraft Components:**
  - **Coronagraph Spacecraft (CSC):** Carries the solar coronagraph instrument.
  - **Occulter Spacecraft (OSC):** Carries a **1.4m diameter occulting disk** to block sunlight.
- **Orbit:** **Highly elliptical orbit** at more than **50,000 km** above Earth
- **Orbital Period:** Completes one orbit every **19.7 hours**.
- **Achievement:** Created over **50 artificial solar eclipses in orbit** since mission operations began.

### Mission Objectives & Significance

- **Primary Objective:** Demonstrate **high-precision formation flying technologies** for future ESA missions
- **Scientific Goal:** Observe the **Sun's inner corona** which is difficult to study from Earth
- **Technology Demonstration:**
  - **Formation Flying:** Two spacecraft maintain precise distance (up to **150 meters**) during observations
  - **Autonomous Operations:** Spacecraft operate with minimal ground intervention
  - **Solar Observation:** Fill the **solar observation gap** between existing instruments
- **Space Weather Prediction:** Data helps improve **space weather forecasting** and protect satellites.

### Additional Info

- **About European Space Agency (ESA):**
  - **Established:** 1975
  - **Headquarters:** Paris, France
  - **Member States:** 22 European countries
  - **Function:** Intergovernmental organization for space exploration and research
  - **Notable Missions:** Rosetta, Gaia, Mars Express, Juice
- **About Proba Series:**
  - **Full Form:** Project for On-Board Autonomy
  - **Proba-1:** Launched 2001, Earth observation mission
  - **Proba-2:** Launched 2009, Solar observation mission
  - **Proba-3:** First **precision formation flying mission** globally
- **Technical Specifications:**



- **ASPIICS Instrument: Advanced Solar Polarimeter and Coronagraph** for solar observations
- **Formation Accuracy:** Maintains position within **millimeter-level precision**
- **Shadow Creation:** Occulter creates artificial eclipse by blocking direct sunlight
- **Corona Observation:** Studies Sun's outer atmosphere at temperatures of **millions of degrees**
- **Related Solar Missions:**
  - **Aditya-L1:** India's first solar mission (ISRO), launched 2023
  - **Parker Solar Probe:** NASA mission studying Sun's corona
  - **Solar Orbiter:** ESA-NASA joint mission for solar polar observations
  - **SOHO:** Solar and Heliospheric Observatory (ESA-NASA)
- **India's Role in Proba-3:**
  - **Launch Vehicle:** **PSLV-C59** launched Proba-3 from Sriharikota
  - **ISRO-ESA Cooperation:** Demonstrates growing international space partnerships
  - **Commercial Launch:** Part of India's growing commercial satellite launch services

## Silverpit Crater Confirmed as Ancient Submarine Asteroid Impact Site

### What's the News?

- Scientists have officially confirmed that the **Silverpit Crater**, located beneath the **North Sea**, is an ancient asteroid impact site.
- The confirmation follows advanced 3D seismic imaging and geological modeling that ruled out alternative theories like salt-layer collapse.
- The findings settle a decades-long debate among geologists regarding the crater's origin and its role in Earth's geological history.

### The Silverpit Crater?

- **Location:** Situated under the seafloor of the **North Sea**, approximately **130 kilometers** off the East Yorkshire coast of the **United Kingdom**.
- **Physical Features:**
  - It measures roughly **20 kilometers** in diameter.
  - It is notable for its **multi-ring structure**, consisting of concentric rings of faults surrounding a central crater.
- **Formation:** It was created by the impact of a **bolide** (an asteroid or comet) traveling at high velocity into the marine environment.

### Geological Significance and Context

- **Chronology:** The impact is estimated to have occurred approximately **60 to 65 million years** ago.
- **Extinction Link:** This timeframe places it near the **Cretaceous-Paleogene (K-Pg) boundary**, coinciding with the **Chicxulub** impact in Mexico, which led to the mass extinction of dinosaurs.
- **Multiple Impact Theory:** Scientists suggest that Silverpit may have been part of a "multiple impact

event," where Earth was struck by several fragments of a broken-up comet or asteroid over a short period.

- **Structural Rarity:** While multi-ring craters are common on airless bodies like the **Moon** or **Europa**, they are rare on Earth due to erosion and tectonic activity, making Silverpit a unique geological laboratory.

## Hidden Universe of 17,000 Topological Patterns Discovered in Entangled Light

### What's the News?

- Researchers from the **University of the Witwatersrand** (South Africa) and **Huzhou University** (China) have uncovered a "hidden topological universe" within entangled photons.
- The discovery, published in the journal **Nature Communications**, identified more than **17,000 unique topological signatures** spanning **48 dimensions**.
- This represents the richest and highest-dimensional topological structure ever recorded in a physical system using standard laboratory equipment.

### Topological Patterns in Entangled Light?

- **Core Discovery:** The team found that when photons are entangled, they contain stable geometric patterns that belong to the field of **topology**.
- **Orbital Angular Momentum (OAM):** The breakthrough was achieved by studying the **OAM** of light—a property that describes the twisting, corkscrew-like motion of light waves.
- **Single Property Significance:** Previously, scientists believed at least two properties (such as OAM and polarization) were required to create topological states. This research demonstrates that **OAM alone** is sufficient to generate complex topology.
- **Generation Method:** The entangled photons were created using **Spontaneous Parametric Down-Conversion (SPDC)**, a common process where a single high-energy photon is split into two linked "daughter" photons.

### Significance for Quantum Technology?

- **Robustness to Noise:** Topological structures are valuable because they are "robust"—they remain unchanged even if the system is stretched or deformed. This protects quantum data from environmental "noise," which is the biggest hurdle in quantum computing.
- **Massive Information Capacity:** The **17,000+ patterns** act as a vast "quantum alphabet." This suggests that quantum systems can store and transmit far more information than previously thought possible.
- **Secure Communication:** These patterns could be used to create ultra-secure quantum networks that are virtually impossible to hack, as the information is "hidden" within complex high-dimensional structures.

### Key Definitions:

- **Topology:** A branch of mathematics that studies properties of an object that do not change when it is

continuously deformed (e.g., a doughnut and a coffee mug are "topologically equivalent" because both have exactly one hole).

- **Quantum Entanglement:** A phenomenon where two particles become so interconnected that the state of one instantly influences the other, regardless of the distance between them.
- **Photonics:**
  - Science of generating, detecting, and manipulating light
  - Critical for fiber optic communications and quantum technologies

## NAVIC Atomic Clock Failure: Impact on India's Regional Navigation System

### What's the News?

- ISRO reported that the **atomic clock** onboard the **IRNSS-1F satellite** has failed, affecting India's **NavIC (Navigation with Indian Constellation)** system.
- The malfunction reduces the number of **operational satellites** to three, below the **minimum four satellites** required to maintain accurate navigation services.
- ISRO plans to launch **three replacement satellites** by late 2026 to restore full operational capability.
- The satellite will continue to function in-orbit but cannot provide accurate **positioning and timing services** without a working atomic clock.

### NavIC System Overview

- **NavIC** is India's indigenous **regional satellite navigation system**, designed as an alternative to the US-owned **GPS**.
- The system consists of **11 satellites** in total, including **7 operational satellites** in the original constellation and additional backup satellites.
- NavIC provides two types of services:
  - **Standard Positioning Service (SPS):** For civilian users
  - **Restricted Service (RS):** For strategic and defense applications.
- Coverage extends to **India and 1,500 km beyond its borders**, serving the regional navigation needs.

### Atomic Clock: Core Component

- **Atomic clocks** are critical for satellite navigation as they provide **precise timing signals** required for accurate position calculation.
- Each NavIC satellite carries **multiple atomic clocks** as redundancy; failure of all clocks renders the satellite ineffective for navigation.
- The **IRNSS-1F** satellite had its **last functioning atomic clock** fail, marking the end of its navigation utility.
- **New indigenous atomic clocks** are being developed to reduce dependence on imported components.

### Impact and Concerns

- **Navigation Accuracy:** Reduced satellite count affects **positioning accuracy** for civilian and commercial applications.
- **Defense Implications:** Strategic services may face limitations during critical operations.

- **Sectoral Impact:**
  - **Transportation:** Terrestrial and maritime navigation systems rely on NavIC
  - **Shipping:** Port operations and vessel tracking affected
  - **Disaster Management:** Timing and location services crucial for emergency response.
- **Current Status:** Only **3 out of 11 satellites** are currently fully operational, raising concerns about system reliability.

### Historical Context:

- **IRNSS-1A** was launched in **2013**, followed by 8 more satellites in the first generation.
- **NVS-01**, the first second-generation NavIC satellite, was launched in **May 2023** with improved indigenous atomic clocks.

## India Successfully Tests Indigenous Floating LiDAR Buoy System

### What's the News?

- **National Institute of Ocean Technology (NIOT)** has successfully tested an **indigenous Floating LiDAR Buoy System** off the coast of **Muttom, Tamil Nadu**.
- The system was developed under the **Ministry of Earth Sciences (MoES)** to enhance **ocean observation and atmospheric data collection**.
- The buoy is capable of measuring **wind speed and direction profiles** up to **300 meters above sea level**.
- This marks a significant milestone in India's **ocean technology indigenisation** and **offshore wind energy assessment** capabilities.

### Floating LiDAR Buoy System

- **Technology:** Integrates **LiDAR (Light Detection and Ranging)** technology with a **buoyant platform** for marine deployment.
- **Function:** Measures **atmospheric and oceanic parameters** including wind profiles, wave height, and sea surface conditions.
- **Power Source:** Operates using **renewable surface wave energy** for sustainable operations.
- **Deployment:** Moored buoy system that remains stationary while collecting continuous data.

### Technical Specifications

- **Wind Measurement Range:** Profiles wind data up to **300 meters above sea level**.
- **Ocean Depth Profiling:** Capable of profiling up to **30 meters depth** during operation.
- **Movement Speed:** Descent speed of **0.037 m/s** and ascent speed of **0.26 m/s**.
- **Data Collection:** Provides continuous **real-time meteorological and oceanographic data**.

### Significance for India

- **Offshore Wind Energy:** Enables accurate **wind resource assessment** for offshore wind farm development.
- **Weather Forecasting:** Improves **cyclone prediction** and coastal weather monitoring capabilities.
- **Import Substitution:** Reduces dependency on **foreign LiDAR technology** and equipment.

- **Blue Economy:** Supports India's **ocean economy initiatives** under Sagarmala and Deep Ocean Mission.

### Additional Info

- **Developing Organization:**
  - **National Institute of Ocean Technology (NIOT)**
  - Autonomous institute under **Ministry of Earth Sciences (MoES)**
  - Headquartered in **Chennai, Tamil Nadu**
  - Focuses on development of **ocean engineering and technology**
- **LiDAR Technology Applications:**
  - **Renewable Energy:** Wind farm site selection and yield optimization
  - **Disaster Management:** Cyclone tracking and coastal hazard assessment
  - **Marine Research:** Ocean current and wave pattern studies
  - **Navigation Safety:** Shipping route optimization and port operations
- **Previous LiDAR Initiatives in India:**
  - **FOWIND Consortium:** Commissioned first offshore LiDAR in **Gulf of Khambhat, Gujarat** (2017)
  - **National Institute of Wind Energy (NIWE):** Conducted LiDAR-based wind measurements
  - **Centre for Wind Energy Technology (CWET):** Deployed dual-mode wind LiDAR in Chennai

## Kusunpur Becomes Odisha's First Smart Village Under CSIR Initiative

### What's the News?

- **Kusunpur village** in Kendrapada district, Odisha has been selected as the state's **first Smart Village** under the **CSIR Smart Village Initiative**.
- The project was officially **inaugurated on March 16, 2026** at Kusunpur under **Rajnagar Block**.
- The initiative is being hosted by **CSIR-Central Building Research Institute (CSIR-CBRI)**, Roorkee with collaboration from multiple CSIR laboratories.
- The program follows the **"Lab to Land"** approach to bring scientific innovations to rural communities.

### CSIR Smart Village Initiative

- **Objective:** Transform rural landscapes through **science-led, sustainable solutions**.
- **Theme:** **"Viksit Gaon: Viksit Bharat"** – linking village development to national progress.
- **Approach:** **Mission-mode project** integrating modern technologies into daily life and agriculture.
- **Selection:** Villages identified in **2025 across diverse climatic regions** as testing grounds.

### Key Focus Areas of the Initiative

- **Advanced Agriculture:** Introduction of **scientific farming techniques** and crop improvement.
- **Infrastructure Development:** Modern housing, roads, and **sustainable building technologies**.

- **Nutrition Security:** Programs to improve **dietary intake and health outcomes**.
- **Waste-to-Wealth:** Converting agricultural and household waste into **usable resources**.
- **Clean Energy:** Promotion of **renewable energy solutions** for sustainable living.

### Additional Info

- **Council of Scientific and Industrial Research (CSIR):**
  - **Established:** 1942
  - **Ministry:** Ministry of Science and Technology
  - **Network:** **37 national laboratories** across India
  - **Mandate:** Scientific and industrial research for national development
- **Participating CSIR Laboratories:**
  - **CSIR-CBRI Roorkee:** Lead institution for building and infrastructure
  - **CSIR-CMERI Durgapur:** Agricultural mechanisation and rural technology
  - **CSIR-CLRI Chennai:** Leather and waste management solutions
  - **CSIR-IHBT Palampur:** Himalayan bioresource technology , ,
- **Related Government Initiatives:**
  - **Sansad Adarsh Gram Yojana (SAGY):** Model village development through MPs
  - **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission (DAY-NRLM)**
  - **Pradhan Mantri Gram Sadak Yojana (PMGSY):** Rural connectivity
  - **Digital India:** Technology integration in rural areas
- **Previous CSIR Smart Village Launches:**
  - **Sawaipura Village, Pali District, Rajasthan:** Launched December 20, 2025
  - **Multiple villages:** Identified across diverse climatic zones in 2025
  - **Nationwide expansion:** Planned for 2026-27 fiscal year

## Citizen Scientists Help Explain Intense Solar Flares from Active Sun Regions

### What's the News?

- **NASA citizen science volunteers** discovered that some regions on the **Sun produce far more solar flares** than previously expected.
- The study explains why certain **active sun regions** generate more **intense solar flares** compared to others.
- Researchers found that regions with **longer periods of activity** produce significantly more solar flares than short-lived active regions.
- The discovery utilized data from **NASA's Solar Dynamics Observatory (SDO)** reviewed by citizen scientists.
- This research helps improve understanding of the **Sun's magnetic behavior** and space weather forecasting.

## Research Findings

- **Active Region Longevity:** Sun regions staying active for months produce more flares than expected.
- **Flare Rate Discovery:** Citizen scientists identified oddly high solar flare rates in specific active regions.
- **Magnetic Field Analysis:** Study examined how magnetic energy storage leads to flare eruptions.
- **Prediction Improvement:** Findings enable better space weather forecasting for Earth protection.
- **Solar Cycle Context:** Research conducted during Solar Cycle 25 activity phase.

## Solar Flare Classification & Impact

- **X-Class Flares:** Most intense explosions the Sun can produce.
- **Flare Intensity Scale:** Each step up represents ten times more energy.
- **Recent Activity:** X8.3-class flare recorded as strongest of 2026.
- **February 2026 Events:** Six solar flares erupted between February 1-4, 2026.
- **Earth Effects:** Strong flares can trigger auroras and affect satellite communications.

## Citizen Science Contribution

- **NASA Citizen Science Program:** Volunteers review solar observation data.
- **Public Participation:** Non-scientists contribute to solar physics research.
- **Data Analysis:** Volunteers examined Solar Dynamics Observatory images.
- **Discovery Impact:** Public involvement led to unexpected scientific findings.
- **Research Collaboration:** Professional scientists worked alongside citizen volunteers.

## Additional Info

- **NASA Missions & Instruments:**
  - **Solar Dynamics Observatory (SDO):** Primary satellite for solar observations
  - **Solar and Heliospheric Observatory (SOHO):** Joint NASA-ESA mission
  - **Parker Solar Probe:** Studies solar wind and corona
  - **Solar Terrestrial Relations Observatory (STEREO):** Multi-angle solar viewing
- **Solar Flare Categories:**
  - **A-Class:** Smallest flares, minimal Earth impact
  - **B-Class & C-Class:** Minor flares, limited effects
  - **M-Class:** Medium flares, can cause radio blackouts
  - **X-Class:** Major flares, significant space weather events
- **Space Weather Effects:**
  - **Satellite Disruption:** Communication and navigation systems affected
  - **Power Grid Risks:** Geomagnetic storms can impact electrical infrastructure
  - **Astronaut Safety:** Radiation exposure concerns for space missions

- **Aurora Displays:** Beautiful natural phenomenon from solar activity
- **Indian Space Research Context:**
  - **ISRO's Aditya-L1:** India's first solar observatory mission
  - **Solar Study Objectives:** Understand solar corona and space weather
- **Solar Cycle Information:**
  - **Solar Cycle 25:** Current active cycle began in 2019
  - **Cycle Duration:** Approximately 11 years per solar cycle
  - **Peak Activity:** Solar maximum expected around 2025-2026
  - **Declining Phase:** Activity may continue with occasional strong flares

## India Sets Up Nd-Fe-B Rare Earth Magnet Pilot Plant at ARCI Hyderabad

### What's the News?

- India has established a **pilot manufacturing plant** for **Nd-Fe-B (Neodymium-Iron-Boron) rare earth permanent magnets** at **ARCI, Hyderabad**.
- The facility enables **end-to-end production** from alloy to finished magnets, boosting India's self-reliance in critical materials.
- The plant was inaugurated under the **Department of Science and Technology (DST)**, Government of India.
- This initiative strengthens India's strategic capability in **defence, aerospace, and electric vehicle (EV)** sectors.

### ARCI Pilot Plant: Overview

- **Location:** International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI), Hyderabad.
- **Administrative Control:** Functions under **Department of Science and Technology (DST)**.
- **Technology:** Manufactures **Nd-Fe-B (Neodymium-Iron-Boron) rare earth permanent magnets**.
- **Production Capability:** Covers complete value chain from **alloy production to finished magnet manufacturing**.

### Objectives

- Reduce India's **import dependency** on rare earth magnets (currently 95% imported).
- Build **domestic manufacturing capability** for strategic and defence applications.
- Support **Make in India** initiative in critical materials sector.
- Enable **technology transfer** for commercial scale production.

### Strategic Significance

#### Defence & Aerospace Applications

- Rare earth magnets are critical for **missile circuitry, radar systems, and sonar equipment**.
- Used in **F-35 aircraft, flight control systems, and onboard power generation**.
- Essential for **stealth technology and military communications**.

## Civilian Applications

- **Electric Vehicles (EVs):** Critical for EV motors and powertrain systems.
- **Renewable Energy:** Used in wind turbine generators.
- **Electronics:** Essential for smartphones, computers, and hard drives.
- **Medical Equipment:** Used in MRI machines and diagnostic devices.

## Additional Info

### Global Context

- **China's Dominance:**
  - Controls **60-96%** of global rare earth magnet supply.
  - India heavily dependent on Chinese imports for strategic materials.
- **International Efforts:**
  - **USA:** Department of Defense investing **\$1.4 billion** in rare earth magnet supply chain.
  - **Canada:** Developing rare earth projects in Northern Quebec and Labrador.
  - **Global Race:** Nations competing for **mine-to-magnet** integrated supply chains.

### Technical Details

- **Nd-Fe-B Magnets:**
  - Strongest type of **permanent magnets** available commercially.
  - High **magnetic strength-to-weight ratio**.
  - Critical for **miniaturization** of electronic and defence systems.

### Statistics

- India's current rare earth magnet production: **Minimal** (pilot stage).
- Target capacity by 2032: **6,000 tons** annually.
- Import dependency reduction goal: From **95% to near zero**.
- Scheme allocation: **₹7,280 crore** for integrated manufacturing.

## Desert Moss Discovery Boosts Green Mars Prospects

### What's the News?

- Scientists have identified a resilient **desert moss, Syntrichia caninervis**, that could play a key role in future **Mars colonisation**.
- The research, conducted by **Chinese scientists**, tested the moss under **Mars-like extreme conditions** including drought, cold, and radiation.
- The study was published in the journal '**The Innovation**', marking the first time researchers tested **whole plants** for surviving space-like extremes.
- This discovery opens possibilities for creating **life-supporting soil** on Mars through **terraforming initiatives**.

### Syntrichia Caninervis: Key Characteristics

- **Common Name:** Also known as **steppe screw moss**.
- **Natural Habitat:** Found in **Antarctica, Mojave Desert**, and other extreme environments globally.
- **Classification:** An **extremophile** species capable of surviving harsh conditions lethal to most plants.

| Feature                | Details                                                  |
|------------------------|----------------------------------------------------------|
| Desiccation Tolerance  | Can survive after losing <b>&gt;98% of water content</b> |
| Temperature Resistance | Withstands <b>frigid temperatures</b> similar to Mars    |
| Radiation Tolerance    | Survives <b>high radiation levels</b>                    |
| Drought Resistance     | Thrives in <b>extreme drought conditions</b>             |
| Recovery Ability       | Regenerates after prolonged dry periods                  |

### Research Findings & Significance

- **Experimental Conditions:** Moss was tested under **Mars-like environments** including low temperatures, high radiation, and drought.
- **Survival Rate:** Demonstrated **extraordinary environmental resilience** in simulated extraterrestrial conditions.
- **Pioneer Plant Potential:** Could serve as a **pioneer species** for establishing ecosystems on Mars.
- **Soil Formation:** May help create **life-supporting soil** for future agricultural activities.

### Additional Information

- **Extremophiles on Earth:**
  - **Tardigrades:** Microscopic animals surviving space vacuum
  - **Deinococcus radiodurans:** Bacteria resistant to extreme radiation
  - **Antarctic Microbes:** Survive sub-zero temperatures
  - **Deep-Sea Vent Organisms:** Thrive in high-pressure, high-temperature conditions
- **Challenges for Mars Colonisation:**
  - **Atmospheric Conditions:** Mars has thin CO<sub>2</sub>-rich atmosphere (95% carbon dioxide)
  - **Temperature Extremes:** Average temperature around -63°C
  - **Radiation Exposure:** No magnetic field protection like Earth
  - **Water Availability:** Limited water ice at poles and subsurface

## Akasha300 3D Printer

### What's the News?

- **Kerala-based startup Spacetime 4D Printing** has delivered the **Akasha300 3D Printer** to **ISRO's Liquid Propulsion Systems Centre (LPSC)**.
- The **high-temperature, multi-material extrusion 3D printer** is specifically engineered for **advanced aerospace applications**.
- This indigenous technology strengthens India's **space manufacturing capabilities** and supports **rapid prototyping** for rocket components.
- The development marks a significant milestone in India's **additive manufacturing** journey for space missions.

### Akasha300: Technical Capabilities

- **Printing Technology:** Dual-extrusion system enabling multi-material printing, including high-performance polymers and composites.

- **Temperature Range:**
  - Nozzle temperature: **up to 350°C** (upgradeable to **500°C**).
  - Heated bed: **up to 110°C** (upgradeable to **150°C**).
  - Enclosed chamber: maintains stable temperature up to **80°C**.
- **Features:**
  - **Modular extruder architecture** for future upgrades and hybrid manufacturing.
  - Integrated **air filtration** and robust motion system for industrial-grade precision.
  - Designed for engineering-grade thermoplastics such as **PEEK, PEKK, and carbon-fiber-reinforced composites**.

### ISRO's 3D Printing Journey

- **Previous Achievements:**
  - ISRO successfully tested a **3D-printed liquid rocket engine** for 665 seconds in 2024.
  - First **3D-printed satellite part** (radio antenna) was sent to outer orbit in earlier missions.
  - **PSLV 4th stage engine** manufactured using 3D printing technology.
- **Future Plans:**
  - Expansion of **additive manufacturing** across multiple ISRO centres.
  - Collaboration with **Indian space-tech startups** for component development.
  - Integration with **Gaganyaan mission** and future launch vehicles.

## Indian Researchers Decode Formation of Titanium-Rich Rocks on Moon

### What's the News?

A team of scientists from **IIT Kharagpur** and the **Physical Research Laboratory (PRL)**, Ahmedabad, has successfully explained the formation of **titanium-rich basalts** on the Moon. Published in the journal *Geochimica et Cosmochimica Acta*, the study resolves a long-standing puzzle in planetary science regarding how lunar volcanic rocks attained titanium dioxide (TiO<sub>2</sub>) concentrations as high as **18%**, compared to less than **2%** in Earth's volcanic rocks. The findings are expected to aid site selection for **ISRO's Chandrayaan-4 mission**, scheduled for 2028.

### The Scientific Puzzle

- **Lunar Basalts:** Common volcanic rocks covering the Moon's surface, formed from ancient lava flows billions of years ago.
- **Composition Anomaly:** While Earth's basalts rarely exceed 2% TiO<sub>2</sub>, some lunar samples contain up to **18%**, a feature unexplained for decades.

### Experimental Approach

- Researchers used a **piston-cylinder apparatus** at IIT Kharagpur to simulate conditions deep inside the Moon.

- The experiments recreated **pressures up to 3 gigapascals (GPa)**—equivalent to depths of **~700 km**—and **temperatures up to 1,500°C**.
- They replicated the interaction between the dense **ilmenite-bearing cumulate (IBC)** layer and the Moon's magnesium-rich mantle.

### Findings: Two-Stage Formation Process

- **Stage 1:** The dense **IBC layer**—formed during the Moon's early cooling from a global magma ocean—sank into the mantle (a process called **cumulate overturn**), partially melted, and generated titanium-rich magma.
- **Stage 2:** Some of this magma remained trapped deep within the Moon. Later, fresh magma rising from below mixed with these trapped pockets. The combined molten mass then erupted on the surface as titanium-rich lava flows.
- This two-stage model successfully reproduced the observed magnesium, titanium, silicon, and iron contents of lunar high-titanium basalts, explaining their varied compositions.

### Role of the Ilmenite-Bearing Cumulate (IBC) Layer

- **Ilmenite** is a titanium-bearing mineral.
- The IBC layer was the last to crystallize from the Moon's initial magma ocean. Its high density caused it to sink into the mantle, initiating the melting and mixing processes that produced titanium-rich magmas.

# Agriculture

## First Export of Assam's GI-Tagged Joha Rice to UK and Italy

### What's the News?

- The **Agricultural and Processed Food Products Export Development Authority (APEDA)** has facilitated the first-ever export consignment of **Geographical Indication (GI)** tagged **Joha rice** from **Assam** to the **United Kingdom** and **Italy**.
- A total of **25 metric tonnes (MT)** of this aromatic indigenous rice was dispatched in a collaboration between **APEDA** and the **Department of Agriculture, Government of Assam**.
- The shipment was officially flagged off by the **Assam Agriculture Minister**, marking a significant milestone in expanding the global footprint of North Eastern agricultural products.
- This move follows smaller previous exports to **Vietnam** and several **Middle Eastern** countries, reflecting growing international demand for specialty grains.

### Unique Characteristics of Joha Rice?

- **Aromatic Profile:** Known for its unique, delicate fragrance (distinct from **Basmati**), which is attributed to the presence of the aroma compound **2-acetyl-1-pyrroline**.
- **Grain Quality:** It is a **short-grain** variety, prized for its fine texture, sweet taste, and excellent cooking qualities.
- **GI Recognition:** The variety was granted the **Geographical Indication (GI)** tag in **2017**, certifying its unique link to the agro-climatic conditions of the **Brahmaputra Valley**.
- **Cultivation:** It is a traditional **Sali (winter) rice** variety, primarily grown in districts such as **Nagaon, Baksa, Goalpara, and Sivasagar**.

### Nutraceutical and Health Benefits?

- **Diabetes Management:** Scientific studies have identified **Joha rice** as an effective **nutraceutical** for managing **Type-2 Diabetes** due to its ability to lower blood glucose levels.
- **Essential Fatty Acids:** It contains significant amounts of **Omega-3 (linolenic acid)** and **Omega-6 (linoleic acid)** fatty acids, which are essential for cardiovascular health and cannot be produced by the human body.
- **Antioxidant Rich:** The rice is rich in **phenolics, flavonoids, and antioxidants**, which help combat oxidative stress and inflammation.
- **Low Glycemic Index:** Compared to widely consumed non-scented varieties, it has a more balanced nutritional profile, making it a "functional food" choice.

### Additional Info

- **APEDA (Agricultural and Processed Food Products Export Development Authority):**

- Established under the **APEDA Act, 1985**, it functions under the **Ministry of Commerce and Industry**.
- It is responsible for the promotion and development of export of scheduled products, including fruits, vegetables, and specialized rice varieties.
- **Geographical Indication (GI) Tag:**
  - A sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin.
  - In India, GI registration is governed by the **Geographical Indications of Goods (Registration and Protection) Act, 1999**.
- **Economic Impact:**
  - **Cultivation Area:** Covers approximately **21,662 hectares** in Assam.
  - **Production:** Estimated at roughly **43,298 metric tonnes** for the current fiscal year.
  - **Export Strategy:** Part of the government's focus on the **North Eastern Region (NER)** to enhance farmers' income through direct market linkages with international buyers.

## Important Days

### World Wildlife Day 2026: India Highlights Conservation Milestones

#### What's the News?

- **World Wildlife Day** is observed annually on **March 3** to celebrate and raise awareness about the world's wild animals and plants.
- **Prime Minister Narendra Modi** highlighted India's wildlife conservation achievements on this occasion.
- The **2026 theme** focuses on **Medicinal and Aromatic Plants: Conserving Health, Heritage and Livelihoods**.
- India has reported significant progress in **tiger population, elephant conservation, and protected area network** expansion.
- The **Ministry of Environment, Forest and Climate Change (MoEFCC)** announced new initiatives for wildlife protection.

#### World Wildlife Day 2026 Theme

- **Official Theme: "Medicinal and Aromatic Plants: Conserving Health, Heritage and Livelihoods".**
- **Focus Areas:**
  - Conservation of **medicinal plant species**.
  - Protection of **traditional ecological knowledge**.
  - Sustainable **harvesting practices**.
  - Supporting **community livelihoods** dependent on medicinal plants.
- **UN Designation:**
  - Established by **UN General Assembly** in **2013**.
  - Celebrates **CITES (Convention on International Trade in Endangered Species)** adoption date (March 3, 1973).
  - Observed globally to raise awareness about **biodiversity conservation**.

#### India's Medicinal Plants Heritage

- **Diversity:**
  - India has over **8,000 species** of medicinal plants.
  - Approximately **3,000 species** are officially recognized for medicinal properties.
  - **25,000+ plant-based formulations** used in traditional medicine systems.
- **Traditional Medicine Systems:**
  - **Ayurveda:** Ancient Indian system using plant-based remedies.
  - **Siddha:** Traditional Tamil medicine system.
  - **Unani:** Greco-Arabic medicine practiced in India.
  - **Homeopathy:** Plant-based treatments widely used.
- **Economic Importance:**
  - **Herbal medicine market** in India valued at approximately **₹60,000 crore**.
  - Expected to grow to **₹1.5 lakh crore by 2030**.
  - Provides livelihoods to **millions of rural households**.

### Government Initiatives and Programs

- **National Medicinal Plants Board (NMPB):**
  - Established under **Ministry of AYUSH**.
  - Promotes **cultivation and conservation** of medicinal plants.
  - Supports **research and development** in herbal medicine.
- **Ayush Van Yojana:**
  - Promotes **medicinal plant cultivation** in forest areas.
  - Involves **local communities** in conservation efforts.
  - Provides **financial assistance** for plantation.
- **Traditional Knowledge Digital Library (TKDL):**
  - Documents **Indian traditional medicine knowledge**.
  - Prevents **biopiracy** and patent misuse.
  - Contains over **3 crore formulations** from traditional texts.
- **CAMPA Fund:**
  - **Compensatory Afforestation Fund Management and Planning Authority**.
  - Supports **medicinal plant restoration** in forest areas.
  - Funds **community-based conservation** projects.

#### Additional Info

- **Constitutional Provisions:**
  - **Article 48A:** State shall protect and improve environment and safeguard forests and wildlife.
  - **Article 51A(g):** Fundamental duty of citizens to protect and improve natural environment including wildlife.
  - **Schedule 7:** Forests and wildlife are in **Concurrent List** (both Centre and States can legislate).
- **Legal Framework:**
  - **Wildlife Protection Act, 1972:** Primary legislation for wildlife conservation.
  - **Forest Conservation Act, 1980:** Regulates forest land use.
  - **Environment Protection Act, 1986:** Umbrella legislation for environmental protection.
  - **Biological Diversity Act, 2002:** Conservation of biological diversity.
- **Key Organizations:**
  - **Ministry of Environment, Forest and Climate Change (MoEFCC):** Nodal ministry.
  - **Ministry of AYUSH:** Promotes traditional medicine systems.
  - **National Medicinal Plants Board (NMPB):** Medicinal plants coordination.
  - **Botanical Survey of India (BSI):** Plant documentation and research.
  - **Forest Research Institute (FRI):** Forestry and medicinal plant research.

- **International Conventions:**
  - **CITES:** Convention on International Trade in Endangered Species (India ratified 1976).
  - **Convention on Biological Diversity (CBD):** Biodiversity conservation framework.
  - **Ramsar Convention:** Wetland conservation (India has **80+ Ramsar sites**).
  - **Convention on Migratory Species (CMS):** Protects migratory wildlife.
- **Recent Conservation Success Stories:**
  - **Panna Tiger Reserve:** Tigers reintroduced successfully.
  - **Kuno National Park:** Cheetah reintroduction project.
  - **Dibru-Saikhowa:** Wild horse population recovery.
  - **Kaziranga:** Rhinoceros population stabilization.

## International Women's Day 2026: Focus on Justice and Equality

### What's the News?

- **International Women's Day (IWD)** was observed globally on **March 8, 2026**, to celebrate women's achievements and advocate for gender parity.
- The **United Nations (UN)** established the official 2026 theme as **"Rights. Justice. Action. For ALL Women and Girls."**
- Parallel to the UN theme, the global campaign theme **"Give to Gain"** was promoted to emphasize the power of reciprocity, mentorship, and collective support in empowering women.
- The observance highlighted the persistent **"justice gap,"** noting that women globally still hold only **64%** of the legal rights enjoyed by men.

### Theme and Strategic Focus?

- **Legal Justice:** The 2026 theme specifically targets the dismantling of **structural barriers** such as discriminatory laws and weak legal protections.
- **Accountability:** It calls on governments to move beyond symbolic celebrations toward **measurable actions** and enforcement of existing rights.
- **Economic Empowerment:** The **"Give to Gain"** campaign highlights that investing in women's leadership and entrepreneurship leads to **shared prosperity** for entire communities.
- **Urgency:** UN reports warned that at the current rate of progress, it could take **286 years** to achieve full legal equality and close the gender gap in bodily autonomy.

### Historical Context?

- **Labor Roots:** The movement began in the early 20th century, notably with a **1908 march** of 15,000 women in New York City demanding shorter hours, better pay, and voting rights.
- **International Proposal:** In **1910**, activist **Clara Zetkin** proposed an annual International Women's Day during the International Conference of Working Women in Copenhagen.

- **The March 8 Connection:** The date is linked to the **1917 "Bread and Peace" strike** by Russian women, which began on February 23 (Julian calendar), corresponding to March 8 in the Gregorian calendar.
- **UN Recognition:** The United Nations officially celebrated IWD for the first time in **1975** and formally adopted the resolution in **1977**.

### India's Developmental Shift?

- **Women-Led Development:** India showcased its transition from "Development for Women" to **"Women-Led Development,"** focusing on women as drivers of socio-economic progress.
- **Legislative Milestones:** The **Nari Shakti Vandan Adhiniyam** (Women's Reservation Act) was highlighted as a transformative step for political representation.
- **Education & Skill Stats:**
  - **Female GER:** India's Female Gross Enrolment Ratio in higher education rose to **30.2** (2022-23).
  - **Aviation:** India leads globally with over **15%** women pilots, significantly higher than the **5%** global average.
- **Flagship Schemes:** Continued impact of programs like **Beti Bachao Beti Padhao**, **Mission Shakti**, and the **Ujjwala Yojana** in improving health, safety, and financial inclusion.

### Additional Info

- **Sustainable Development Goals (SDGs):** IWD 2026 is a key milestone for **SDG 5**, which aims for gender equality by 2030.
- **Beijing+30:** The 2026 discussions also served as a precursor to the **30th anniversary** of the **Beijing Declaration and Platform for Action** (1995).
- **CSW70:** The IWD commemorations were closely aligned with the opening of the **70th Session of the Commission on the Status of Women** in New York.

## International Mathematics Day 2026 Observed Globally with Theme 'Mathematics and Hope'

### What's the News?

- **International Mathematics Day** was celebrated worldwide on **March 14, 2026**, to highlight the role of mathematical sciences in solving global challenges.
- The **United Nations Educational, Scientific and Cultural Organization (UNESCO)** announced the theme for 2026 as **"Mathematics and Hope."**
- The observance aimed to promote mathematical literacy, international cooperation, and evidence-based decision-making in fields ranging from **climate change** to **artificial intelligence**.

### International Mathematics Day?

- **Inception:** The day was officially proclaimed by **UNESCO** during its 40th General Conference in **November 2019**, following a proposal by the **International Mathematical Union (IMU)**.
- **First Celebration:** It was first observed globally on **March 14, 2020**, under the theme "Mathematics is Everywhere."

- **Selection of Date:** March 14 was chosen because it was already widely celebrated as **Pi Day**, as the date (3/14) represents the first three digits of the mathematical constant  $\pi$  (**3.14**).
- **Goal:** To demonstrate the relevance of mathematics beyond the classroom and its critical impact on sustainable development and societal well-being.

### Additional Info

- **Historical Context & Pi Day:**
  - **Pi Day** was first observed in **1988** by physicist **Larry Shaw** at the San Francisco Exploratorium.
  - The date also coincides with the birth anniversary of the legendary physicist **Albert Einstein**.
- **Indian Perspective: National Mathematics Day:**
  - While India participates in the global event, it observes its own **National Mathematics Day** on **December 22**.
  - This day commemorates the birth anniversary of the self-taught mathematical genius **Srinivasa Ramanujan** (born 1887).
  - **Ramanujan's Legacy:** He made extraordinary contributions to **number theory**, **infinite series**, and **continued fractions**. His "**Mock Theta Functions**" are now used in modern physics to calculate **black hole entropy**.

## World Water Day 2026: Theme 'Water and Gender' Highlights Equality Link

### What's the News?

- **World Water Day 2026** is observed on **March 22** with the theme "**Water and Gender**".
- The campaign tagline for 2026 is "**Where Water Flows, Equality Grows**".
- The day focuses on **safe water and sanitation** as human rights and critical enablers of **gender equality**.
- The **UN World Water Development Report 2026** titled "**Water for all people: Equal rights and opportunities**" will be launched on this occasion.
- A **high-level celebration event** will be held at **United Nations Headquarters in New York**.

### World Water Day: Overview

- **Establishment:** Declared by the **United Nations General Assembly** in **December 1992**.
- **First Observance:** Celebrated annually on **March 22** since **1993**.
- **Purpose:** Raises global awareness about **freshwater conservation** and **sustainable water management**.
- **Coordinating Body:** **UN-Water** coordinates the global observance.

| Aspect          | Details                           |
|-----------------|-----------------------------------|
| Date            | March 22 (annually)               |
| First Observed  | 1993                              |
| 2026 Theme      | Water and Gender                  |
| Campaign Slogan | Where Water Flows, Equality Grows |

## Global Water Crisis

- **Access Gap:** Approximately **2 billion people** lack safely managed drinking water services globally.
- **Women's Role:** Women are primarily responsible for **water management** in 80% of households without water on premises.
- **Time Burden:** Women and girls spend an estimated **200 million hours daily** collecting water worldwide.
- **Health Impact:** Contaminated water causes **485,000 diarrhoeal deaths** annually.
- **SDG Target:** Sustainable Development Goal 6 aims for clean water and sanitation for all by **2030**.

## India's Water Conservation Initiatives

- **Jal Jeevan Mission (JJM):**
  - Launched in **2019** to provide **Functional Household Tap Connections (FHTC)** to all rural households.
  - Target: **55 litres per capita per day (LPCD)** of prescribed quality water.
  - Achievement: Over **81% of rural households** now have tap water access.
  - Goal: "**Har Ghar Nal Se Jal**" by 2024.
- **Other Key Programs:**
  - **Jal Shakti Abhiyan:** Water conservation campaign during monsoon season
  - **Atal Bhujal Yojana:** Community-led groundwater management
  - **Namami Gange Programme:** Ganga river rejuvenation
  - **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** Irrigation and water efficiency
  - **National Water Mission:** Part of National Action Plan on Climate Change

## World Tuberculosis Day 2026

### What's the News?

- The global community observed **World Tuberculosis Day** to raise awareness about the devastating health, social, and economic consequences of tuberculosis (TB) and to step up efforts to end the global epidemic.
- The event highlights the urgent need for increased investment, adoption of new **WHO** recommendations, and multi-sectoral action to combat the disease.
- **Theme:** The theme for 2026 is "**Yes! We Can End TB: Led by countries. Powered by people.**", conveying a message of hope that getting back on track to turn the tide against the TB epidemic is possible through high-level leadership and increased investments.

## India's TB Elimination Strategy

- **National Target:** India has set an ambitious goal to eliminate TB by **2025**, five years ahead of the global **Sustainable Development Goal (SDG) 3.3** target of 2030.
- **National Strategic Plan (NSP) 2017-2025:** Focuses on four pillars: **Detect, Treat, Prevent, and Build**.
- **Ni-kshay Portal:** A web-based surveillance system that acts as a unified tool for TB monitoring and provides real-time data on patient treatment and notification.
- **Pradhan Mantri TB Mukh Bharat Abhiyaan:**

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- A community-led initiative to provide additional patient support and improve treatment outcomes.
- **Ni-kshay Mitras:** Individuals, NGOs, or corporate entities can adopt TB patients to provide nutritional, diagnostic, and vocational support.
- **Nikshay Poshan Yojana:** A **Direct Benefit Transfer (DBT)** scheme providing ₹500 monthly to TB patients for nutritional support throughout their treatment.

#### Additional Info

- **Historical Background:**
  - **1882:** Dr. Robert Koch discovered TB bacillus.
  - **1982:** WHO and International Union Against Tuberculosis and Lung Disease first designated March 24 as World TB Day.
  - **1995:** World TB Day officially recognized globally.
- **Global TB Statistics:**
  - TB remains one of the **top infectious disease killers** worldwide
  - **Developing countries** bear the highest burden
  - **India** accounts for significant proportion of global TB cases

## International Year of the Woman Farmer 2026

### What's the News?

- The **United Nations** has declared **2026** as the **International Year of the Woman Farmer (IYWF)** to highlight the indispensable role of women in global food security and the rural economy.
- The initiative focuses on dismantling systemic barriers—such as limited land ownership and lack of credit access—that prevent women from achieving their full potential in the agricultural sector.
- It emphasizes that empowering women farmers is essential for achieving multiple **Sustainable Development Goals (SDGs)**, particularly **SDG 1** (No Poverty), **SDG 2** (Zero Hunger), and **SDG 5** (Gender Equality).

### The International Year of the Woman Farmer (IYWF)

- **Objective:** To catalyze policy changes and investments that ensure women have equal access to land, technology, markets, and financial services.
- **Global Significance:** According to the **FAO**, if women had the same access to productive resources as men, they could increase yields on their farms by **20% to 30%**, potentially reducing the number of hungry people in the world by up to **150 million**.
- **Focus Areas:**
  - Increasing visibility of "invisible" female labor in agriculture.

- Enhancing women's leadership in rural institutions and producer organizations.
- Promoting gender-responsive climate adaptation strategies.

### Feminization of Indian Agriculture

- **The Trend:** With increasing male migration to urban areas, the management of family farms is increasingly falling to women, a phenomenon termed the "**Feminization of Agriculture**."
- **Workforce Participation:** In India, nearly **80%** of economically active women are employed in agriculture, yet they own less than **13%** of operational landholdings.
- **Government Initiatives:**
  - **Mahila Kisan Sashaktikaran Pariyojana (MKSP):** A sub-component of **DAY-NRLM** that aims to improve the status of women in agriculture by enhancing their skills and providing social and economic empowerment.
  - **Namo Drone Didi Scheme:** Equips **Women Self-Help Groups (SHGs)** with drones for agricultural services (pesticide/fertilizer spraying), integrating high-end technology into female-led farming.
  - **Agriculture Infrastructure Fund (AIF):** Provides interest subvention and credit guarantee for post-harvest management projects, with a specific focus on encouraging women entrepreneurs.

## State Affairs

### Odisha Issues Heatwave SOP for Educational Institutions

#### What's the News?

- The **Odisha Department of Higher Education (DHE)** has issued a comprehensive **Standard Operating Procedure (SOP)** to manage the impact of rising temperatures and heatwaves.
- The guidelines are directed at all state-run universities and degree colleges to ensure the safety and well-being of students, faculty, and staff during the summer season.
- The move comes as a proactive measure following the early onset of summer and forecasts of above-normal temperatures in the region.

#### Heatwave Preparedness Guidelines?

- **Academic Rescheduling:**
  - Educational institutions are advised to shift to a **morning session** schedule (typically 6:30 AM to 11:00 AM) to avoid peak heat hours.
  - All examinations are to be conducted in rooms with proper ventilation and cooling facilities.
- **Infrastructure and Amenities:**
  - Mandatory provision of safe and chilled **drinking water** through functional tube wells, water tanks, or coolers.
  - Establishment of "**Jala Seva Shibirs**" (water kiosks) at prominent locations within campuses.
  - Ensuring continuous power supply and functional fans/coolers in classrooms and hostels.
- **Health and Safety Measures:**
  - Stocking of **Oral Rehydration Salts (ORS)** and essential medicines at designated first-aid centers.
  - Restriction on outdoor activities, physical training, and sports between **11:00 AM and 4:00 PM**.
  - Coordination with local health centers for emergency medical assistance in case of heatstroke.

#### Additional Info

- **Heatwave Context in Odisha:**
  - State experiences severe heatwave conditions annually, particularly in western districts (**Titlagarh, Bolangir, Sambalpur, Jharsuguda**).
  - **2024 Heatwave:** Recorded maximum temperatures exceeding **45°C** in multiple locations.
  - **School timings** historically adjusted during summer months (April-June).
- **National Heatwave Framework:**
  - **National Disaster Management Authority (NDMA)** Heatwave Guidelines.

- **India Meteorological Department (IMD)** heatwave alerts (Yellow/Orange/Red).
- **National Action Plan on Heat-Related Illnesses** by Ministry of Health.
- **Heatwave Definition (IMD):**
  - **Heatwave:** Temperature departure of **4.5-6.4°C** from normal
  - **Severe Heatwave:** Temperature departure **>6.4°C** from normal
  - **Criteria:** Maximum temperature **≥40°C** for plains, **≥30°C** for hilly regions
- **Health Impacts:**
  - Heat cramps, heat exhaustion, heat stroke.
  - Vulnerable groups: Elderly, children, outdoor workers, students in non-AC environments.
- **Odisha's Vulnerability:**
  - **High heat index** due to humidity from coastal proximity.
  - **Urban heat island effect** in Bhubaneswar, Cuttack, Rourkela.
  - **Climate change projections** indicate increasing frequency and intensity of heatwaves.

### Chhattisgarh Cabinet Approves Draft Freedom of Religion Bill 2026

#### What's the News?

- The **Chhattisgarh Cabinet**, chaired by Chief Minister **Vishnu Deo Sai**, has officially cleared the draft of the **Chhattisgarh Freedom of Religion Bill 2026**.
- The proposed legislation aims to curb forced, fraudulent, or induced religious conversions across the state.
- It seeks to replace the existing **Chhattisgarh Dharma Swatantraya Adhiniyam, 1968**, which the government deems insufficient to tackle contemporary challenges related to illegal proselytization.

#### Provisions of the Bill?

- **Mandatory Declaration:** Any person intending to convert must submit a formal declaration to the **District Magistrate (DM)** at least **60 days** in advance.
- **Religious Priest's Responsibility:** The person performing the conversion ceremony (priest or institution) must provide a **one-month notice** to the **DM**.
- **District Inquiry:** Upon receiving a declaration, the **DM** will order a police inquiry to verify the "real intent" and ensure the conversion is not being done through "force, allurement, or fraudulent means."
- **Mass Conversion:** The bill defines "mass conversion" as the simultaneous conversion of **two or more persons**. Such acts carry significantly higher penalties than individual cases.
- **Burden of Proof:** In a departure from standard criminal law, the **burden of proof** lies on the person who performed the conversion or the person who facilitated it, rather than the prosecution.

## Penalties and Legal Consequences?

- **General Violations:** Illegal conversions can lead to imprisonment ranging from **1 to 5 years** and a minimum fine of **₹25,000**.
- **Aggravated Cases:** If the victim is a **minor**, a **woman**, or belongs to the **Scheduled Castes (SC)** or **Scheduled Tribes (ST)**, the punishment increases to a minimum of **2 years** and a maximum of **10 years** in prison, with a fine of at least **₹50,000**.
- **Mass Conversion Penalties:** Conviction for mass conversion attracts imprisonment for **3 to 10 years** and a minimum fine of **₹1 lakh**.
- **Marriage for Conversion:** The draft stipulates that any marriage performed for the sole purpose of religious conversion can be declared **null and void** by a competent court.

## Additional Info

- **Constitutional Context:**
  - **Article 25:** Guarantees the freedom of conscience and the right to profess, practice, and propagate religion, but does not grant a fundamental right to convert others.
  - **Article 26:** Protects the freedom to manage religious affairs.
  - **Article 27:** Freedom from taxation for religious purposes
  - **Article 28:** Freedom from religious instruction in educational institutions.
- **State vs Central Authority:**
  - Religion falls under **Concurrent List (Entry 28)** of Seventh Schedule
  - Both Parliament and State Legislatures can enact laws
  - State laws subject to constitutional validity and judicial review
- **Judicial Precedents:**
  - **Rev. Stainislaus vs. State of Madhya Pradesh (1977):** The **Supreme Court** upheld earlier anti-conversion laws, stating that "propagation" only means the transmission or spread of one's religion by an exposition of its tenets and does not include the right to convert another person.
- **Historical Background:**
  - **Chhattisgarh** originally inherited its anti-conversion law from **Madhya Pradesh** (the 1968 Act) after the state's formation.
  - This new draft aligns Chhattisgarh with other states like **Uttar Pradesh**, **Gujarat**, and **Karnataka**, which have recently updated their laws to include "marriage for conversion" (often referred to as 'Love Jihad' in political discourse) and higher jail terms.
- **States with Similar Laws:**
  - Odisha (1967) - First state with freedom of religion law
  - Madhya Pradesh, Arunachal Pradesh, Gujarat, Himachal Pradesh
  - Uttar Pradesh, Uttarakhand, Karnataka, Jharkhand

- Approximately **12 states** have enacted such legislation.

## Gujarat Passes Uniform Civil Code Bill 2026: Second State After Uttarakhand

### What's the News?

- **Gujarat Assembly** has passed the **Uniform Civil Code (UCC) Bill 2026**, becoming the **second state in India** to implement UCC after **Uttarakhand**.
- The bill establishes **uniform norms** for **marriage, divorce, inheritance, and live-in relationships** across all religions.
- **Opposition parties**, including **Congress**, have criticized the bill as **discriminatory and anti-minority**.
- The legislation aims to ensure **gender justice** and **equality before law** regardless of religious affiliation.

### Gujarat UCC Bill Provisions?

The bill introduces several standardized legal requirements and prohibitions to ensure gender equality and legal uniformity:

- **Marriage and Divorce:**
  - **Prohibited Relationships:** Marriage between certain close relatives is banned, except where established "custom and usage" allow it.
  - **Polygamy:** The bill effectively bans bigamy or polygamy across all communities.
  - **Minimum Age:** The legal age for marriage is strictly set at **18 years for women** and **21 years for men**.
  - **Registration:** Compulsory registration of all marriages within a specified timeframe.
- **Live-in Relationships:**
  - **Mandatory Registration:** Partners in a live-in relationship must submit a "statement of registration" to the Registrar.
  - **Termination:** Any termination of such a relationship also requires a formal statement.
  - **Penalties:** Failure to register a live-in relationship for more than a month can lead to imprisonment for up to **3 months** or a fine.
- **Succession and Inheritance:**
  - **Equal Rights:** Provides equal property inheritance rights to sons and daughters.
  - **Common Law:** Establishes a uniform scheme for the distribution of assets for all residents of the state.

### Additional Info:

- **Constitutional Basis:**
  - **Article 44:** Part of the **Directive Principles of State Policy (DPSP)**, it mandates that the State shall endeavor to secure a Uniform Civil Code for citizens throughout the territory of India.
- **Exemptions:**
  - **Scheduled Tribes:** Similar to the Uttarakhand model, the Gujarat UCC bill exempts members of Scheduled Tribes (STs) to protect their unique customary rights.

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- **National Context:**
  - **Uttarakhand:** The first state to pass a UCC bill (February 2024).
  - **Goa:** Maintains the **Portuguese Civil Code of 1867**, which has functioned as a common civil code since its liberation.
- **Implementation:** The bill will now be sent for **Presidential Assent** under **Article 254(2)** of the Constitution, as it deals with subjects in the **Concurrent List** that may conflict with existing central personal laws.

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## Kerala Launches MLATrack.com: India's First Platform to Track MLA Interventions

### What's the News?

- **MLATrack.com**, a digital platform to track the legislative interventions of Members of the Legislative Assembly (MLAs), has been launched in **Kerala**.
- Developed by **Atyeti Research** in collaboration with **Sahya Digital Conservation Foundation**, the portal covers the entire tenure of the 15th Kerala Legislative Assembly (2021–2026).
- It is billed as **India's first database** dedicated to aggregating and presenting data on the performance and legislative activities of MLAs.

### MLATrack.com Portal?

- **Aim:** To enhance **transparency, accountability**, and public engagement in legislative functioning by enabling citizens, researchers, and the media to track MLA performance objectively.
- **Data Sources:** Built using publicly available documents from the **Kerala Legislative Assembly website** and the **Legislative Assembly Constituency Asset Development Scheme (LAC ADS) Portal**.
- **Features:**
  - **Comprehensive MLA Profiles:** Includes biodata, attendance records, constituency maps, and participation details for all **140 MLAs**.
  - **Legislative Activity Tracking:** Provides date-wise details of interventions such as submissions, calling attention motions, adjournment motions, and debates.
  - **Question Database:** Tracks over **68,000 questions** (both starred and unstarred) raised across **16 Assembly sessions**, with hyperlinks to official answers.
  - **Data Visualization:** Uses visual dashboards for easy analysis of attendance, questions raised, and other metrics.
  - **No Subjective Ranking:** The portal does not rank, rate, or evaluate MLAs, ensuring a non-partisan, evidence-based resource.

## Defence

### BEL and Bellatrix Aerospace Collaborate for Indigenous VLEO Satellite Systems

#### What's the News?

- **Bharat Electronics Limited (BEL)** and the space-tech startup **Bellatrix Aerospace** have signed a **Memorandum of Understanding (MoU)** to jointly develop and manufacture **Very Low Earth Orbit (VLEO)** satellite systems.
- The partnership aims to build next-generation satellite platforms and payloads for both **strategic defence** and **civilian space missions**.
- This collaboration focuses on creating indigenous capabilities to operate in a largely untapped orbital regime, providing an alternative to the increasingly congested **Low Earth Orbit (LEO)**.

#### Very Low Earth Orbit (VLEO)?

- **Altitude:** VLEO refers to orbits typically ranging from **100 km to 450 km** above the Earth's surface.

#### Advantages:

- **Higher Resolution:** Proximity to Earth allows satellites to capture much sharper images compared to those in higher orbits.
- **Lower Latency:** Reduced distance results in faster signal transmission, which is critical for real-time communication.
- **Debris Mitigation:** VLEO is considered a "self-cleaning" orbit because the high atmospheric drag causes defunct satellites or debris to de-orbit and burn up naturally within weeks or months.
- **Cost-Efficiency:** Smaller payloads can achieve the same performance as larger ones in higher orbits, reducing launch and manufacturing costs.

#### Partnership Roles?

- **Bharat Electronics Limited (BEL):**
  - Contributes expertise in **defence electronics**, radar systems, and mission-critical payloads.
  - Provides large-scale manufacturing infrastructure and experience in strategic applications.
- **Bellatrix Aerospace:**
  - Specializes in innovative **satellite propulsion systems** (like **Hall Effect Thrusters**) and satellite subsystems.
  - Focuses on technologies that compensate for **atmospheric drag**, which is the primary challenge for maintaining stability in VLEO.

#### Additional Info

- **Technical Challenges:**
  - **Atmospheric Drag:** The denser atmosphere at lower altitudes constantly pulls satellites downward, requiring **continuous propulsion** for orbit maintenance.
  - **Atomic Oxygen:** Highly reactive oxygen species in VLEO can cause rapid erosion of satellite surfaces and sensors, demanding specialized materials and coatings.
- **Indigenous Propulsion Systems:**

- **Arka Series:** A line of **electric propulsion** systems developed by Bellatrix for small satellites, offering high efficiency for long-term missions.
- **Rudra Series:** Focused on **green chemical propulsion**, utilizing eco-friendly propellants to replace traditional toxic fuels.

### India Remains World's Second-Largest Arms Importer: SIPRI Report

#### What's the News?

- **Stockholm International Peace Research Institute (SIPRI)** released its latest report on trends in international arms transfers covering the period **2021-2025**.
- **India** continues to be the **world's second-largest arms importer**, accounting for approximately **8.2-8.3% of global arms imports**.
- Despite the **Make in India** initiative and push for **defence self-reliance (Atmanirbhar Bharat)**, India's dependence on foreign military hardware remains significant.
- **Russia** remains India's primary supplier, though procurement is gradually shifting towards **Western nations** including **France** and **Israel**.

#### Findings of SIPRI Report

- **Global Arms Trade Growth:** International arms transfers increased by **9.2%** between 2021-25 compared to the 2016-20 period.
- **India's Share:** India's **8.2-8.3% share** of global arms imports places it second worldwide, behind **Ukraine** which emerged as the largest importer.
- **Supplier Breakdown for India:**
  - **Russia:** Remains the largest supplier despite reduced share
  - **France:** Now second-largest supplier at **29%** of India's imports
  - **Israel:** Third-largest supplier at **15%**
- **Regional Context:** **Pakistan** continues to rely heavily on **China** for its arms procurement.

#### Defence Self-Reliance vs. Import Dependency

- **Make in India in Defence:** Launched to boost domestic manufacturing and reduce import dependency.
- **Atmanirbhar Bharat in Defence:** Aims to achieve self-sufficiency in defence production by promoting indigenous development.
- **Current Reality:** Despite policy push, India still imports major weapons systems including:
  - Fighter aircraft
  - Submarines
  - Missile defence systems
  - Armoured vehicles
- **Reasons for Continued Imports:**
  - Limited domestic production capacity for advanced systems
  - Urgent operational requirements of armed forces

- Technology gaps in critical defence segments

### About SIPRI:

- **Full Form:** Stockholm International Peace Research Institute
- **Established:** 1966
- **Headquarters:** Solna, Sweden
- **Function:** Independent international institute researching peace, conflict, and arms control
- **Data Tracking:** SIPRI has tracked international arms transfers since 1950

## India-Seychelles Joint Military Exercise Lamitiye 2026

### What's the News?

- **Indian Armed Forces contingent** has departed for **Seychelles** to participate in the **12th edition of Exercise Lamitiye 2026**, a bilateral joint military exercise.
- The exercise is being conducted between **India and Seychelles Defence Forces** to strengthen **bilateral defence cooperation** and enhance **interoperability**.
- **Exercise Lamitiye** means "**Friendship**" in the local Seychellois Creole language, symbolizing the strong ties between both nations.
- The drill focuses on **counter-terrorism, disaster relief, and humanitarian assistance operations** in the Indian Ocean Region.

### Details of Exercise Lamitiye 2026

- **Edition:** 12th edition of the annual bilateral exercise
- **Location:** **Seychelles Defence Academy** and surrounding areas
- **Duration:** Typically conducted over **10-14 days**
- **Participants:**
  - **Indian Army** contingent with specialized units
  - **Seychelles People's Defence Force (SPDF)** personnel
  - Focus on **special forces and infantry units**
- **Exercise Objectives:**
  - Enhance **tactical interoperability** between forces
  - Share best practices in **counter-insurgency operations**
  - Strengthen **maritime security cooperation**
  - Build capacity for **HADR (Humanitarian Assistance and Disaster Relief)** missions

### Additional Info

- **About Seychelles:**
  - **Capital:** Victoria
  - **Location:** Archipelago of **115 islands** in the western Indian Ocean
  - **Independence:** 1976 (from United Kingdom)
  - **Population:** Approximately **1,00,000**
  - **Strategic Importance:** Lies on key **shipping lanes** between Africa, Asia, and Middle East
- **India-Seychelles Defence Cooperation:**
  - **Exercise Lamitiye:** Started in **2001**, conducted biennially until 2018, now **annual**

- **Coastal Surveillance System:** India installed **radar stations** in Seychelles for maritime domain awareness
- **INS Rajput:** First Indian naval vessel to visit Seychelles (1980s)
- **Training Programs:** Seychellois personnel regularly train at **Indian defence institutions**
- **Previous Joint Exercises with Seychelles:**
  - **Exercise Lamitiye 2024:** 11th edition held in Seychelles
  - **Exercise Konkan:** Naval exercises with UK (similar maritime focus)
  - **Exercise Malabar:** Multilateral naval exercise (US, Japan, Australia, India)

## Sheshnaag-150: Strengthening India's Long-Range Unmanned Warfare and Swarm Drone Capabilities

### What's the News?

- India has advanced its unmanned warfare capabilities with the introduction of the **Sheshnaag-150**, an indigenous long-range loitering munition (also known as a **Kamikaze** or **Suicide Drone**).
- Developed by the Indian private sector under the **iDEX (Innovations for Defence Excellence)** framework, the drone provides a cost-effective solution for deep-strike missions.
- The system is designed for **asymmetric warfare**, allowing the Indian Armed Forces to strike high-value targets with precision while minimizing risk to personnel.

### Sheshnaag-150 Loitering Munition?

- **Operational Range:** It boasts a strike range of **150 km**, placing it in the category of long-range tactical loitering munitions.
- **Functionality:** Unlike traditional drones that return to base, this "one-way" drone is equipped with an explosive warhead and acts as a guided missile that can "loiter" over a target area before crashing into it.
- **Swarm Capability:**
  - The system is designed to operate in **Swarms**, where multiple drones communicate and coordinate to overwhelm enemy **Air Defence (AD)** systems.
  - It utilizes Artificial Intelligence (AI) for autonomous target recognition and path planning.
- **Technical Metrics:**
  - **Endurance:** Capable of staying airborne for over **2 hours**.
  - **Deployment:** Portable and can be launched from canisters or truck-mounted platforms, making it highly mobile in rugged terrains like the **LAC (Line of Actual Control)** or **LOC (Line of Control)**.

### Additional Info

- **iDEX (Innovations for Defence Excellence):**
  - Launched in April 2018, it is the flagship scheme of the **Ministry of Defence**.

- **Objective:** To cultivate an ecosystem of innovation by engaging startups, MSMEs, and individual innovators to achieve self-reliance (**Aatmanirbharta**) in defense.
- **Loitering Munition vs. Cruise Missile:**
  - **Cost:** Loitering munitions like Sheshnaag-150 are significantly cheaper than traditional cruise missiles.
  - **Flexibility:** They allow the operator to search for a target after launch, whereas missiles usually require coordinates before firing.

## Exercise Sea Dragon 2026: Indian Navy Joins US-Led Anti-Submarine Warfare Drill

### What's the News?

- The **Indian Navy** has participated in **Exercise Sea Dragon 2026**, a multinational **Anti-Submarine Warfare (ASW)** exercise held in **Guam**.
- The exercise is led by the **United States** and includes participation from **Australia, Japan, New Zealand, and South Korea** alongside India.
- The drill focuses on enhancing **aircrew proficiency** in detecting and tracking both **simulated and live submarine targets**.
- India deployed its **P-8I maritime patrol aircraft** for the exercise, equipped with advanced ASW capabilities.

### Exercise Sea Dragon Overview

| Aspect                       | Details                                               |
|------------------------------|-------------------------------------------------------|
| <b>Host Nation</b>           | United States (Guam)                                  |
| <b>Primary Focus</b>         | Anti-Submarine Warfare (ASW) training                 |
| <b>Participating Nations</b> | India, US, Australia, Japan, New Zealand, South Korea |
| <b>Duration</b>              | Month-long exercise held throughout March             |
| <b>Key Assets</b>            | P-8I, P-8A, and P-1 maritime patrol aircraft          |

### Objectives and Training Components

- **ASW Proficiency Enhancement:**
  - Progresses from track-simulated targets to detecting live submarines
  - Includes over **250 hours of ground and classroom training**
  - Approximately **125 hours of in-flight training** for aircrews
- **Interoperability Building:**
  - Real-time information sharing between participating nations
  - Coordinated ASW maneuvers and tactical discussions
  - Tests coordination among multinational maritime patrol aircraft crews
- **Strategic Significance:**
  - Counters rising **undersea tensions in the Indo-Pacific region**
  - Strengthens partnerships among **QUAD allies and partner nations**

- Enhances collective maritime security capabilities

### India's ASW Capabilities and Context

- **Maritime Patrol Aircraft:**
  - **P-8I Poseidon:** Long-range ASW aircraft with advanced sensors
  - Operated by **Indian Navy** for maritime surveillance and submarine hunting
- **Recent Developments:**
  - Indian Navy planning to add **15 new warships** to sharpen ASW capabilities
  - Includes **Nilgiri class guided missile frigates** and shallow water ASW craft
  - Commissioning of **Anjadip**, a high-speed 'Dolphin Hunter' anti-submarine warship
- **Strategic Importance:**
  - Growing Chinese submarine presence in **Indian Ocean Region**
  - Need for enhanced underwater domain awareness
  - Critical for protecting **sea lanes of communication** and maritime trade routes

### Additional Info

- **QUAD Cooperation:**
  - Exercise strengthens ties among **Quadrilateral Security Dialogue** members
  - US, India, Japan, and Australia are core QUAD partners
  - Supports **Free and Open Indo-Pacific** vision
- **Related Multinational Exercises:**
  - **Malabar Exercise:** Naval exercise among QUAD nations
  - **RIMPAC:** Rim of the Pacific Exercise (largest international maritime warfare exercise)
  - **AUSINDEX:** Bilateral ASW exercise between India and Australia
- **Indian Navy's ASW Assets:**
  - **P-8I Poseidon:** Primary maritime patrol aircraft
  - **MH-60R Seahawk:** Multi-role helicopters with ASW capabilities
  - **Kamorta Class Corvettes:** Indigenous ASW warships
  - **Kalvari Class Submarines:** Diesel-electric attack submarines

## INS Taragiri: Indian Navy's Latest Stealth Frigate to be Commissioned

### What's the News?

- The **Indian Navy** is set to commission **INS Taragiri (F41)**, a stealth guided-missile frigate, on **April 3, 2026** at **Visakhapatnam**.
- The ceremony will mark the induction of the **fourth vessel** under the **Project 17A** programme.
- The frigate is built by **Mazagon Dock Shipbuilders Limited (MDL)**, Mumbai, showcasing India's indigenous warship construction capabilities.
- This commissioning is part of the Navy's ambitious **2026 induction plan**, which aims to commission a record **19 warships** this year.

## Project 17A Frigates

- **Project 17A** is an advanced follow-on programme to the earlier **Project 17 Shivalik-class** frigates, initiated in **2019**.
- The project aims to build **seven multi-mission stealth frigates** for the Indian Navy.
- **Four frigates** are being constructed at **MDL, Mumbai**, while **three** are built at **Garden Reach Shipbuilders and Engineers (GRSE), Kolkata**.

| Specification | Details                |
|---------------|------------------------|
| Type          | Guided Missile Frigate |
| Displacement  | 6,670 tonnes           |
| Length        | 149 metres             |
| Beam          | 17.8 metres            |
| Class         | Nilgiri-class          |

## Features & Capabilities

- **Stealth Technology:** Incorporates enhanced stealth features with reduced radar cross-section and signature suppression.
- **Weapon Systems:** Equipped with **supersonic surface-to-surface missiles**, medium-range surface-to-air missiles, and anti-submarine warfare systems.
- **Multi-Role Operations:** Designed for **surface, air, and sub-surface warfare** capabilities.
- **Indigenous Content:** Over **75% indigenous content** by value, aligning with the **Make in India** initiative.
- **MSME Participation:** Significant involvement of **Micro, Small and Medium Enterprises** in the supply chain.

## Additional Information

- **Naming Convention:**
  - INS Taragiri is named after a **hill range in the Andaman and Nicobar Islands**.
  - Previous ships with this name served in the **Leander-class** frigates.
- **Project 17A Fleet Status:**
  - **INS Nilgiri:** Commissioned January 2025 (first of the class).
  - **INS Udaygiri:** Delivered July 2025, commissioned August 2025.
  - **INS Himgiri:** Commissioned August 2025 alongside Udaygiri.
  - **INS Taragiri:** Fourth vessel, commissioning April 2026.
  - **Remaining three:** Under construction at MDL and GRSE.

## Operation Urja Suraksha: Indian Navy Secures Energy Lifelines

### What's the News?

- **Indian Navy** launched **Operation Urja Suraksha** (Energy Security) in March 2026 to safeguard **India-bound energy tankers** transiting through the **Strait of Hormuz**.
- The operation was initiated amid escalating **West Asia tensions** threatening global energy supply chains.

- **Naval warships** have been deployed to escort **Indian-flagged crude oil and LPG vessels** through the volatile maritime corridor.
- The mission marks a **proactive shift in India's maritime doctrine** towards protecting critical energy infrastructure.
- **LPG carriers** including **Nanda Devi** and **Shivalik** have been successfully escorted to **Gujarat ports** under this operation.

### About the Operation?

Operation Urja Suraksha is a strategic maritime security mission designed to mitigate risks to India's energy imports.

- **Aim:** To ensure uninterrupted energy supply by providing secure passage for vessels carrying **crude oil, liquefied natural gas (LNG), and liquefied petroleum gas (LPG)**.
- **Naval Deployment:** The Navy has deployed multiple frontline warships, including destroyers and frigates, in the Gulf of Oman and the Arabian Sea.
- **Escort Mechanism:** Warships escort merchant vessels after they exit the Strait of Hormuz, providing layered security and guidance through designated safe routes to avoid threats like sea mines.
- **Coordination:** The Navy maintains constant communication with vessels, providing real-time navigation support and coordinating with regional authorities and stakeholders through backchannels.

### Significance: Energy Security and Strategic Presence

The operation underscores India's proactive approach to protecting its economic and strategic interests.

- **Energy Security:** A significant portion of India's hydrocarbon imports—critical for its energy security—pass through the Strait of Hormuz. The operation aims to prevent supply shocks and fuel price volatility.
- **Strategic Maritime Role:** The mission enhances India's stature as a **net security provider** in the Indian Ocean Region (IOR), showcasing its capability to protect global trade routes and its own nationals abroad.
- **Safeguarding Indian Assets:** It ensures the safety of Indian-flagged vessels and their crews, with several ships, including LPG carriers **Pine Gas, Jag Vasant, Shivalik, Nanda Devi**, and crude oil tanker **Jag Laadki**, already successfully escorted.

### Additional Info

- **Strait of Hormuz:** A narrow waterway between Oman and Iran, it is one of the world's most critical energy chokepoints. Nearly a fifth of the world's oil and seaborne liquefied gas passes through it. Any disruption has immediate global economic implications.
- **Geopolitical Context:** The operation was launched following a sharp decline in maritime traffic through the strait, which Iran has stated remains open for "friendly" countries like India.
- **Precedent:** Operation Urja Suraksha builds on previous Indian naval missions in the region, such as **Operation Sankalp**, which was launched during

earlier Gulf tensions to safeguard commercial shipping.

## Ministry of Defence Signs ₹858 Crore Contracts for Tunguska System and P-8I Maintenance

### What's the News?

- The **Ministry of Defence (MoD)** has signed two significant contracts worth a combined total of **₹858 crore** to bolster India's aerial defense and maritime surveillance capabilities.
- The first contract involves the procurement of components and support for the **Tunguska-M1** air defence system from Russia's **Rosoboronexport**.
- The second contract focuses on the scheduled maintenance and inspection of the Indian Navy's **P-8I** long-range maritime patrol aircraft, involving domestic private sector participation.

### The Tunguska-M1 (2K22M) System

- **Hybrid Capability:** It is a unique **Self-Propelled Anti-Aircraft Gun and Missile (SPAAGM)** system designed to provide day-and-night protection for infantry and tank regiments.
- **Armament:**
  - **Guns:** Equipped with two **30mm 2A38M** automatic cannons capable of firing up to 5,000 rounds per minute.
  - **Missiles:** Carries eight **9M311-M1** surface-to-air missiles.
- **Operational Range:**
  - **Missiles:** Can intercept targets at a range of **1.5 km to 10 km** and altitudes up to **3.5 km**.
  - **Guns:** Effective against low-flying targets within a range of **0.2 km to 4 km**.
- **Target Profile:** It is specifically engineered to engage low-flying aircraft, helicopters, cruise missiles, and even lightly armored ground targets while on the move.

### P-8I Maintenance

- **The Contract:** The MoD has partnered with **M/s Air Works** for the Phase-II maintenance and inspection of the **P-8I** fleet.
- **Maritime Surveillance:** The **P-8I** (Neptune) is the Indian Navy's primary platform for **Anti-Submarine Warfare (ASW)**, **Anti-Surface Warfare (ASuW)**, and Intelligence, Surveillance, and Reconnaissance (ISR) in the Indian Ocean Region.

### Additional Info

- **Tunguska System Context:**
  - **Soviet Heritage:** Originally developed by the Soviet Union in the 1970s to replace the **ZSU-23-4 Shilka**.
  - **Mobility:** The system is mounted on a tracked armored chassis, allowing it to provide continuous cover to mobile mechanized columns.
- **P-8I Aircraft Specifications:**
  - **Manufacturer:** Developed by **Boeing** (USA), customized for Indian requirements.

- **Payload:** Equipped with **Harpoon Block II** missiles and **Mk-54** lightweight torpedoes.

## IONS Maritime Exercise (IMEX) TTX 2026

### What's the News?

- The **Indian Navy** hosted the **IONS Maritime Exercise (IMEX) TTX 2026** at the **Maritime Warfare Centre, Southern Naval Command, Kochi**.
- The exercise was conducted on **27 March 2026** as a **Table-Top Exercise (TTX)** in a simulation environment.
- **Delegates from 15+ nations** participated in the exercise, strengthening regional maritime cooperation.
- This marks a key milestone as **India assumes the IONS chairmanship for the 2026–2028 cycle** after a gap of 16 years.
- The exercise aimed to enhance **interoperability, coordination, and decision-making** among IONS member navies.

### About IONS (Indian Ocean Naval Symposium)

- **IONS** is a **regional naval forum** launched in **2008** to promote maritime cooperation among Indian Ocean littoral states.
- The forum brings together **navies of Indian Ocean Rim countries** to discuss maritime security challenges.
- **India previously held IONS chairmanship** before the current 2026–2028 cycle.
- The symposium has grown significantly since inception with **expanded membership and participation**.
- **IONS member navies** collaborate on issues like **piracy, terrorism, disaster relief, and maritime safety**.

### Exercise Objectives & Significance

- **Primary Aim:** Strengthen **interoperability and coordination** among IONS member navies.
- **Focus Areas:**
  - **Maritime contingency handling** through simulation-based scenarios
  - **Decision-making processes** in multi-national naval operations
  - **Information sharing** and communication protocols
- **Strategic Significance:**
  - Reinforces **India's leadership role** in Indian Ocean Region (IOR)
  - Enhances **regional maritime security architecture**
  - Supports **SAGAR (Security and Growth for All in the Region)** vision

### Participating Nations

- **Confirmed Participants** included:
  - **Bangladesh, France, Indonesia, Kenya**
  - **Maldives, Mauritius, Myanmar, Seychelles**
  - **Singapore, Sri Lanka, Thailand** and other IONS members
- **Total Participation:** **15+ nations** represented through naval delegates

- The exercise demonstrated **broad regional consensus** on maritime security cooperation

### Additional Info

- **IONS Structure:**
  - **Chairmanship rotates** among member nations every 2 years
  - **Working Groups** focus on specific maritime security themes
  - **Biennial Conclaves** review progress and set priorities
- **Related Maritime Initiatives:**
  - **MILAN Exercise** – Multi-national naval exercise hosted by India
  - **International Fleet Review (IFR) 2026** – Held with 74 participating nations
  - **SAGAR Doctrine** – India's maritime security framework for IOR
  - **Indo-Pacific Maritime Domain Awareness (IPMDA)** – Regional surveillance initiative

## Exercise Dweep Shakti 2026

### What's the News?

- The **Indian Armed Forces** successfully conducted **Exercise Dweep Shakti 2026** from **March 24-28, 2026**.
- This **high-intensity Tri-Service exercise** was conducted by the **Andaman and Nicobar Command (ANC)**.
- The exercise involved **Indian Army, Navy, Air Force, and Coast Guard** in coordinated operations.
- Key operations included **amphibious assaults, beach landings, and maritime dominance operations**.
- The drill validated **integrated rapid-response capabilities** for coastal and island defence.

### Exercise Dweep Shakti?

- **Tri-Service Synergy:** The exercise was a localized display of "jointness," where the three branches of the military operated under a single tactical framework to achieve mission objectives.
- **Operational Maneuvers:** It featured complex ship-to-shore movements, where infantry units and armored vehicles were landed on "hostile" beaches using **Landing Craft Utility (LCU)** and **Landing Ships, Tanks (LST)**.
- **Specialized Drills:** The drills included **para-drops** by special forces, combat search and rescue (CSAR) operations, and simulated electronic warfare to disrupt enemy communications.
- **Security of SLOCs:** A key objective was to ensure the protection of **Sea Lines of Communication (SLOCs)** and critical chokepoints that are vital for global trade and national energy security.

### Operations Conducted

- **Amphibious Assaults:** Coordinated beach landing operations by Army-Navy teams.
- **Maritime Dominance Ops:** Naval-air coordination for sea control missions.

- **Complex Beach Landings:** Multi-phase landing operations with heavy equipment.
- **Rapid Response Drills:** Quick deployment scenarios for island defence.
- **Integrated Command Operations:** ANC-led coordination across all services.

### Additional Info

- **Andaman and Nicobar Command (ANC):**
  - India's **only Tri-Service Command** established in 2001
  - Headquartered at **Port Blair**, Andaman Islands
  - Responsible for **defence of Andaman & Nicobar Islands**
  - Plays crucial role in **Indian Ocean Region security**

# International Relations

## India and Canada Launch CEPA Negotiations to Target \$50 Billion Trade

### What's the News?

- India and Canada have formally launched negotiations for a **Comprehensive Economic Partnership Agreement (CEPA)** during a high-level bilateral meeting in New Delhi.
- The **Terms of Reference (ToR)** for the negotiations were signed by Union Commerce and Industry Minister **Piyush Goyal** and Canada's Minister of International Trade **Maninder Sidhu**.
- The ceremony took place in the presence of Prime Minister **Narendra Modi** and Canadian Prime Minister **Mark Carney**, marking a strategic reset in bilateral relations.
- Both nations have set a target to scale bilateral trade to **\$50 billion by 2030**.

### Comprehensive Economic Partnership Agreement (CEPA)?

- Overview:** CEPA is a broad-based free trade agreement covering trade in goods, services, and investment, alongside intellectual property and economic cooperation.
- Objectives:**
  - To unlock the full potential of economic cooperation by reducing tariff and non-tariff barriers.
  - To provide a predictable framework for **Canadian pension funds**, which have already invested over **\$100 billion** in India.
  - To enhance the mobility of professionals and students between the two democracies.
- Negotiation Framework:**
  - The **ToR** establishes the format, frequency, and roadmap for rounds, with an aim to finalize the pact by the end of **2026**.
  - Negotiations will encompass goods, services, and other mutually agreed policy areas.
- Current Trade Snapshot (FY 2024-25):**
  - Total Bilateral Trade: \$8.66 billion.**
  - India's Exports: \$4.22 billion** (Key items: Pharmaceuticals, iron and steel, seafood, cotton garments).
  - India's Imports: \$4.44 billion** (Key items: Pulses, coal, fertilizers, and crude petroleum).

### Trade Profile

- Current Bilateral Trade: \$8.66 billion** (FY 2024-25)
  - Indian exports: **\$4.22 billion**
  - Indian imports: **\$4.44 billion**
- Key Indian Exports:** Pharmaceuticals, iron and steel, seafood, cotton garments, electronic goods, chemicals.
- Key Indian Imports:** Pulses, coal, fertilizer, paper, crude petroleum, pearls and semi-precious stones.
- Services Trade:** Telecommunications, computer and information services, business services.

### Additional Info

- What is CEPA?**
  - Comprehensive Economic Partnership Agreement** is a type of **free trade agreement**.
  - Covers **goods, services, investment, intellectual property, and competition policy**
  - More comprehensive than traditional **FTA (Free Trade Agreement)**.
- India's Existing CEPAs/FTAs:**
  - UAE-India CEPA** (2022).
  - Australia-India ECTA** (Economic Cooperation and Trade Agreement, 2022).
  - ASEAN-India FTA**.
  - SAFTA** (South Asian Free Trade Area).

## Raisina Dialogue 2026: Global Leaders Gather in New Delhi

### What's the News?

- 11th Raisina Dialogue** commenced in **New Delhi** with participation from global leaders, policymakers, and strategic thinkers.
- Finland President Alexander Stubb** attended as **Chief Guest** on official visit to India from March 4-7, 2026.
- The 2026 theme is **"Saṃskāra: Assertion, Accommodation, Advancement"**, focusing on civilisational identity and global progress.
- Key discussion areas include **AI governance, global security, trade alliances, and semiconductor supply chains**.
- Around **2,700 participants from 110 countries** are joining the three-day conference.

### Raisina Dialogue 2026: Theme & Pillars

#### Theme Overview

| Aspect              | Details                                         |
|---------------------|-------------------------------------------------|
| <b>Theme</b>        | Saṃskāra: Assertion, Accommodation, Advancement |
| <b>Edition</b>      | 11th Raisina Dialogue                           |
| <b>Venue</b>        | New Delhi, India                                |
| <b>Duration</b>     | March 5-7, 2026                                 |
| <b>Participants</b> | 2,700 delegates from 110 countries              |

### Six Thematic Pillars (2026)

- Contested Frontiers:** Power dynamics, polarity, and periphery issues.
- Repairing the Commons:** New groups, guardians, and avenues for global cooperation.
- Global Security:** Strategic competition, maritime security, and defense collaborations.
- Technology & AI:** Digital governance, semiconductor supply chains, and ethical AI practices.

- **Trade & Alliances:** Economic partnerships and supply chain resilience.
- **Civilisational Identity:** Cultural assertion and accommodation in global order.

## Focus Areas

### Artificial Intelligence & Security

- **Global AI Frameworks:** Discussions on responsible AI development and deployment.
- **Ethical AI Practices:** Establishing international standards for AI governance.
- **Security Considerations:** Ensuring AI systems are built with security in mind.
- **Semiconductor Supply Chains:** Addressing vulnerabilities in critical technology infrastructure.

### Global Security & Geopolitics

- **Strategic Competition:** Navigating power dynamics among major nations.
- **Maritime Security:** Indian Ocean Region stability and partnerships.
- **Defense Collaborations:** Strengthening bilateral and multilateral security ties.
- **Polarity Issues:** Managing multipolar world order challenges.

### Trade & Economic Alliances

- **Supply Chain Resilience:** Building robust economic partnerships.
- **Trade Agreements:** Exploring new bilateral and regional trade frameworks.
- **Economic Cooperation:** Finland-India business opportunities discussed.

## About Raisina Dialogue

### Background

- **Launched:** 2016 as India's premier foreign policy conference.
- **Organizers:** Observer Research Foundation (ORF) in collaboration with Ministry of External Affairs (MEA).
- **Frequency:** Annual conference held in New Delhi.
- **Significance:** India's flagship conference on geopolitics and geo-economics.

### Evolution Over Years

| Edition | Year | Key Focus                                       |
|---------|------|-------------------------------------------------|
| 1st     | 2016 | Inaugural dialogue on global governance         |
| 5th     | 2020 | Navigating Asian Century challenges             |
| 10th    | 2025 | Decade milestone showcasing India's global role |
| 11th    | 2026 | Samskara theme with AI and security focus       |

### Strategic Significance

- **Global Public Square:** Platform for international policy discourse from India.
- **India's Leadership:** Showcases India's confidence in evolving world order.
- **Indian Ocean Region:** Emphasizes India's critical position in regional stability.
- **Multi-stakeholder Engagement:** Brings together governments, businesses, and think tanks.

## India-Finland Relations

### Presidential Visit Details

- **President Alexander Stubb:** Official visit March 4-7, 2026.
- **Invitation:** Extended by Prime Minister Narendra Modi.
- **Key Discussions:** Bilateral cooperation on technology, trade, and security.

### Cooperation Areas

- **Technology & Innovation:** Semiconductor and AI collaboration opportunities.
- **Trade & Investment:** Enhancing bilateral economic ties.
- **Climate Action:** Shared commitment to sustainable development.
- **Defense:** Potential security and defense partnerships.

## India Co-sponsors UNSC Resolution Condemning Iran's Attacks on GCC and Jordan

### What's the News?

- **India** has officially co-sponsored a **United Nations Security Council (UNSC)** resolution condemning recent missile and drone strikes conducted by **Iran**.
- The resolution specifically addresses "egregious" attacks targeting members of the **Gulf Cooperation Council (GCC)** and **Jordan**.
- The move signals a firm stance by India against regional instability and highlights its deepening strategic ties with the **Arab world**.
- Key figures at the **UN** emphasized that such actions pose a direct threat to international peace, maritime safety, and global energy security.

### UNSC Resolution 2817 (2026)

- **Objective:** Condemn Iran's attacks on GCC member states and Jordan in the strongest terms.
- **Key Demands:**
  - Immediate cessation of all attacks by Iran against GCC countries and Jordan
  - Iran must refrain from any actions threatening international navigation in the region
  - Respect for territorial integrity and sovereignty of affected nations.
- **Voting Outcome:**
  - 13 votes in favour
  - 0 votes against
  - 2 abstentions (China, Russian Federation).

### India's Foreign Policy Position

- **Strategic Balancing:** India maintains diplomatic relations with both Iran and GCC countries, making this co-sponsorship a calibrated diplomatic move.
- **Regional Security Concerns:**
  - Gulf region is crucial for India's **energy security** (major oil imports)
  - Home to over **9 million Indian expatriates** working in GCC countries
  - Critical maritime trade routes pass through the Persian Gulf and Strait of Hormuz.

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- **Diplomatic Significance:**
  - Demonstrates India's commitment to **multilateralism** through UN mechanisms
  - Aligns with India's principle of respecting sovereignty and territorial integrity of nations
  - Reflects growing India-GCC strategic partnership in recent years.

#### Additional Info

- **Gulf Cooperation Council (GCC):**
  - Members: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, United Arab Emirates
  - Established: 1981
  - Headquarters: Riyadh, Saudi Arabia
- **UN Security Council Structure:**
  - 15 members total (5 permanent + 10 non-permanent)
  - Permanent members: USA, UK, France, Russia, China
  - Resolution adoption requires 9 affirmative votes with no veto from permanent members
- **India-Iran Relations:**
  - Historical civilizational ties dating back centuries
  - Key cooperation areas: Energy, Chabahar Port connectivity, regional stability
  - India has previously balanced UN votes on Iran while protecting national interests.

## US Section 301 Investigation: Forced Labor Probe Against India and 60 Nations

### What's the News?

- **United States Trade Representative (USTR)** launched **Section 301 investigations** against **India and 59 other countries** over alleged **forced labor practices**.
- The probe examines whether nations have failed to **prohibit imports of goods produced with forced labor**, affecting US commerce.
- **India's bilateral trade surplus** with the US stands at approximately **\$58 billion**, making it a significant target for investigation.
- If violations are found, the US could impose **new tariffs or trade restrictions** on Indian exports by mid-2026.
- This investigation runs parallel to another **Section 301 probe** targeting **excess industrial capacity** across **16 economies** including India.

### Section 301 of Trade Act 1974: Overview

- **Legal Framework:** Section 301 is a **US trade enforcement tool** established under the **Trade Act of 1974**.
- **Purpose:** Designed to address **unfair foreign trade practices** affecting US commerce and businesses.
- **Authority:** Empowers the **US Trade Representative** to investigate and respond to unreasonable foreign trade policies.
- **Potential Actions:** May result in:
  - **Tariff impositions** on targeted countries
  - **Import restrictions** on specific goods
  - **Trade agreement modifications**

- **Other remedial measures.**

- **Scope:** Can be used against any country engaging in practices deemed **unreasonable or discriminatory**.

### Investigation Details

- **Countries Covered:** **60 economies** including major US trading partners.
- **Key Targets Include:**
  - **India**
  - **China**
  - **European Union**
  - **Japan**
  - **South Korea**
  - **Mexico**
  - **Canada.**
- **Focus Areas:**
  - **Forced labor compliance** in supply chains
  - **Import prohibition enforcement** on forced labor goods
  - **Labor standards implementation.**
- **Timeline:** Public comments accepted until **April 15, 2026**; findings expected by **summer 2026**.
- **Parallel Probe:** Separate investigation into **excess industrial capacity** affecting **16 economies**.

### Additional Info

- **International Labor Standards:**
  - The investigation aligns with **International Labour Organization (ILO)** conventions regarding the abolition of forced labor.
  - Forced labor is defined as work performed involuntarily and under the threat of any penalty.
- **Special 301 vs. Section 301:**
  - While **Section 301** covers general unfair trade practices, **Special 301** specifically addresses foreign countries' adequacy and effectiveness of **Intellectual Property** protection.

## USCIRF Report 2026: India Rejects Recommendations on Religious Freedom

### What's the News?

- The **United States Commission on International Religious Freedom (USCIRF)** has released its **Annual Report 2026** on international religious freedom.
- The report recommended that the **US State Department** designate India as a **"Country of Particular Concern (CPC)"** for religious freedom violations.
- USCIRF suggested sanctions including **freezing assets of RSS** and **stopping arms sales to India**.
- **India's Ministry of External Affairs (MEA)** strongly rejected the report, calling it **"distorted and selective"**.
- MEA spokesperson **Randhir Jaiswal** stated that USCIRF has **persisted in presenting a biased picture** of India's religious freedom situation.

## USCIRF Report Key Recommendations

| Recommendation         | Details                                                        |
|------------------------|----------------------------------------------------------------|
| <b>CPC Designation</b> | Recommend India be listed as Country of Particular Concern     |
| <b>Asset Freezing</b>  | Suggested freezing assets of Rashtriya Swayamsevak Sangh (RSS) |
| <b>Arms Sales</b>      | Recommended halting US arms sales to India                     |
| <b>Sanctions</b>       | Proposed targeted sanctions over minority violations           |
| <b>Previous Status</b> | India placed on USCIRF watch list since 2020                   |

## India's Official Response

- **MEA Statement:**
  - Report presents "**distorted and selective picture**" of India
  - Claims are "**biased and motivated**" without factual basis
  - India is a **secular democracy** with constitutional protections for all religions
- **Key Arguments:**
  - India has **strong legal framework** protecting religious freedom
  - **Constitutional guarantees** under Articles 25-28 ensure freedom of religion
  - Government takes **strict action** against any violations regardless of community
- **Diplomatic Context:**
  - This marks **continued divergence** in India-US perspectives on religious freedom
  - India maintains **strategic partnership** with US despite disagreements
  - MEA emphasized **sovereign right** to address internal matters

## About USCIRF

| Aspect               | Details                                                                   |
|----------------------|---------------------------------------------------------------------------|
| <b>Full Form</b>     | United States Commission on International Religious Freedom               |
| <b>Establishment</b> | Created under <b>International Religious Freedom Act, 1998</b>            |
| <b>Nature</b>        | <b>Independent, bipartisan</b> federal government commission              |
| <b>Headquarters</b>  | Washington D.C., United States                                            |
| <b>Function</b>      | Monitors religious freedom conditions globally                            |
| <b>Authority</b>     | Makes recommendations to <b>President, State Department, and Congress</b> |
| <b>Status</b>        | <b>Advisory body</b> - recommendations not binding on US government       |

## Additional Info

- **Constitutional Provisions in India:**
  - **Article 25:** Freedom of conscience and free profession, practice, and propagation of religion
  - **Article 26:** Freedom to manage religious affairs
  - **Article 27:** Freedom from taxation for promotion of religion
  - **Article 28:** Freedom from religious instruction in educational institutions

- **Article 14:** Equality before law (applies to all religious communities)
- **Article 15:** Prohibition of discrimination on grounds of religion
- **Legal Framework:**
  - **Indian Penal Code (IPC):** Sections on promoting enmity between groups
  - **Protection of Civil Rights Act, 1955:** Against religious discrimination
  - **Religious Institutions (Prevention of Misuse) Act, 1988**
  - **National Commission for Minorities Act, 1992**
- **USCIRF Country Categories:**
  - **Countries of Particular Concern (CPC):** Most severe violations
  - **Special Watch List:** Serious violations but below CPC threshold
  - **Entities of Particular Concern:** Non-state actors
- **Other Countries in CPC List (2026):**
  - China, North Korea, Iran, Pakistan, Saudi Arabia, Vietnam, Myanmar
  - India's potential inclusion would be **significant diplomatic development**

## India Implements Stricter Certification Rules, Effectively Banning Chinese CCTV Cameras

### What's the News?

- The Union Government is enforcing a comprehensive restriction on the procurement and installation of **CCTV** cameras and surveillance hardware from specific Chinese manufacturers for government projects and critical infrastructure.
- The directive aims to address significant national security concerns regarding data leakage and unauthorized remote access by foreign entities.
- All government departments and public sector undertakings are mandated to transition to "**Trusted Sources**" for their surveillance needs starting from the upcoming fiscal year.

### New Surveillance Security Framework?

- **Mandatory Certification:**
  - All surveillance products must now obtain a security clearance from the **Standardisation Testing and Quality Certification (STQC)** directorate.
  - Equipment must undergo rigorous testing for "backdoors" or "malicious code" that could facilitate espionage.
- **Trusted Sources and Components:**
  - Procurement is strictly restricted to vendors listed under the **National Security Directive**, ensuring that the supply chain is free from influence by adversarial nations.
  - Emphasis is placed on the "**Country of Origin**" for critical components like microchips and sensors.
- **Data Localisation:**

- The new rules mandate that all video footage and metadata generated by surveillance systems must be stored on servers located within **Indian territory**.
- Cloud-based storage solutions used by these devices must comply with **Ministry of Electronics and Information Technology (MeitY)** security protocols.

### Rationale: National Security Concerns?

The policy shift is driven by the classification of surveillance networks as **critical infrastructure** and a broader push for **data sovereignty** and reducing dependence on foreign technology.

- **Security Risks Addressed:**

- **Unauthorised Data Outflow:** Preventing sensitive video data from being transmitted to foreign servers.
- **External Control:** Eliminating potential for foreign entities to hijack or disable vital surveillance feeds monitoring airports, government buildings, and transport hubs.

- **Strategic Context:** This aligns with India's "trusted vendor" approach for critical digital infrastructure, following similar restrictions on Chinese telecom equipment (e.g., Huawei, ZTE) and mobile apps (e.g., TikTok).

### Market Impact & Shift to Domestic Players?

The regulatory intervention has triggered a significant realignment in India's surveillance market, estimated to be worth **\$5-7.5 billion**.

- **Market Share Transformation (as of Feb 2026):**

- **Indian Brands:** Now control over **80%** of the market (e.g., CP Plus, Qubo, Prama, Matrix, Sparsh), leveraging Taiwanese chipsets and local firmware.
- **Chinese Decline:** Held roughly **33%** of the market in 2024; now effectively exited the internet-connected segment.
- **Premium Segment:** Global brands like **Bosch** and **Honeywell** continue to lead the high-end market.

- **Cost Implications:**

- The shift to non-Chinese components (from Taiwan, US) has increased manufacturing costs by **15-20%**, potentially raising prices for mid- and high-end systems.

## International

### Mojtaba Khamenei Emerges as Frontrunner for Iran's Supreme Leader

#### What's the News?

- **Mojtaba Khamenei**, the second son of late Supreme Leader **Ali Khamenei**, has emerged as the leading contender to succeed his father as the highest authority in Iran.
- This development follows the death of **Ali Khamenei** in late February 2026.
- Reports indicate that the **Assembly of Experts**, Iran's powerful clerical body, is under significant pressure from the **Islamic Revolutionary Guard Corps (IRGC)** to formalize his appointment.
- The transition is historically significant as it potentially marks the first instance of **hereditary succession** in the Islamic Republic since the 1979 Revolution.

#### Who is Mojtaba Khamenei?

- **Background:** Born in 1969 in Mashhad, he is a mid-ranking cleric and a veteran of the **Iran-Iraq War**, where he served in the **Habib Battalion**.
- **Shadow Power:** For decades, he has operated as a "shadow operator" within the **Office of the Supreme Leader**, serving as a gatekeeper and influential advisor on security and political affairs.
- **Security Ties:** He maintains deep, long-standing relationships with the leadership of the **IRGC** and its intelligence branches.
- **International Standing:** He was sanctioned by the **U.S. Treasury Department** in 2019 for exercising delegated authority on behalf of his father without holding an official government post.

#### Additional Info

- **Supreme Leader (Vali-e Faqih):**
  - The highest political and religious authority in Iran.
  - Commander-in-Chief of the armed forces and head of the judiciary.
  - Appoints the heads of state broadcasting and the **Guardian Council**.
- **Islamic Revolutionary Guard Corps (IRGC):**
  - A paramilitary force separate from the regular military, tasked with "protecting the Islamic system."
  - Controls a vast portion of Iran's economy and spearheads regional proxy operations via the **Quds Force**.
- **Guardian Council:**
  - A 12-member body that vets all candidates for the Presidency, Parliament, and the Assembly of Experts.
  - It ensures all legislation passed by Parliament aligns with Islamic law and the Constitution.

### Yellowstone's Rare Echinus Geyser Erupts After Six-Year Dormancy

#### What's the News?

- The **Echinus Geyser**, recognized as the world's largest acidic geyser, has resumed activity in **Yellowstone National Park** after being dormant since late 2020.
- Located in the **Norris Geyser Basin**, the geyser began showing signs of unrest in early February 2026, leading to a series of frequent and powerful eruptions.
- The **U.S. Geological Survey (USGS)** and the **Yellowstone Volcano Observatory** confirmed that the geyser is currently in an active phase, with multiple eruptions recorded daily.

#### Echinus Geyser Profile?

- **Location:** Situated in the **Norris Geyser Basin**, which is the hottest and most chemically dynamic thermal area in the park.
- **Dimensions:** The geyser features a broad pool approximately **66 feet (20 meters)** in diameter, distinguished by its lack of a traditional cone structure.
- **Acidity:** The water is highly acidic, with a pH level ranging between **3.3 and 3.6** (comparable to the acidity of vinegar or orange juice).
- **Eruption Metrics:**
  - **Height:** Recent blasts have reached **20 to 30 feet** into the air.
  - **Duration:** Each eruption event typically lasts between **2 and 3 minutes**.
  - **Frequency:** During peak activity in mid-February, eruptions occurred every **2 to 5 hours**.

#### Norris Geyser Basin

- **Key Features:**
  - **Hottest** geyser basin in Yellowstone.
  - **Oldest** and most **dynamic** thermal area in the park.
  - Divided into **Porcelain Basin** and **Back Basin** sections.
- **Geothermal Characteristics:**
  - Highest recorded temperature in any Yellowstone geothermal area: **459°F (237°C)** at depth.
  - High **silica concentration** creates milky blue features.
  - Home to **Steamboat Geyser** (world's tallest active geyser).
- **Scientific Importance:**
  - Monitored by **Yellowstone Volcano Observatory (YVO)**.
  - Provides data on **hydrothermal activity** and **volcanic systems**.
  - Helps understand **geothermal energy** potential.

## Science of Acidic Eruptions?

- **Chemical Rarity:** Acidic geysers are extremely rare worldwide because high-acidity water typically dissolves the underground **silica (SiO<sub>2</sub>)** structures that form the "plumbing" system required to build steam pressure.
- **Mechanism:** Echinus maintains its structure through a delicate balance where **acidic gases** from deep underground mix with **neutral groundwater** near the surface, allowing pressure to build without eroding the conduits.
- **Visual Indicators:**
  - **Echinus Name:** Derived from the Latin word for "sea urchin," referring to the spiky, jagged silica formations surrounding the pool.
  - **Coloration:** The vibrant **red, orange, and yellow** hues around the rim are caused by heavy deposits of **iron, aluminum, and arsenic**.

## Additional Info

- **Yellowstone National Park:**
  - Established: **1872** (first national park in the world).
  - Location: Primarily **Wyoming**, extends to Montana and Idaho.
  - Area: Approximately **3,471 square miles** (8,991 sq km).
  - **UNESCO World Heritage Site** since 1978.
- **Yellowstone Volcano:**
  - Type: **Supervolcano** with large caldera.
  - Last major eruption: Approximately **640,000 years ago**.
  - Current status: **Not expected to erupt** imminently.
  - Monitored for **earthquake swarms** and **ground deformation**.
- **Geothermal Features in Yellowstone:**
  - Over **10,000 hydrothermal features** in the park.
  - Approximately **500 geysers** (half of world's total).
  - Includes **hot springs, mud pots, and fumaroles**.
- **Famous Geysers in Yellowstone:**
  - **Old Faithful:** Most predictable, erupts every 60-110 minutes.
  - **Steamboat Geyser:** World's tallest (up to 400 feet).
  - **Grand Geyser:** Largest predictable fountain geyser.
  - **Castle Geyser:** Largest cone geyser.

## US Supreme Court Strikes Down 2025 Universal Tariffs

### What's the News?

- The **US Supreme Court (SCOTUS)** has declared the 10–20% universal baseline tariffs imposed by the US administration in 2025 as unconstitutional.
- The ruling asserts that the executive branch overstepped its authority by bypassing **Congress**,

which holds the primary power to regulate international commerce and levy taxes.

- This decision is seen as a significant judicial assertion of the **Rule of Law**, curbing the use of "national security" justifications for broad economic protectionism.

### Why Were the Tariffs Ruled Illegal?

- **Separation of Powers:** The Court ruled that under **Article I** of the US Constitution, the power to impose duties and regulate foreign trade belongs to **Congress**, not the President.
- **Executive Overreach:** The administration had invoked **Section 232** of the **Trade Expansion Act of 1962**, claiming national security interests. The Court found the "national security" link too tenuous for a universal, across-the-board tariff.
- **Administrative Procedure:** The ruling highlighted that the administration failed to follow the mandatory consultative processes and economic impact assessments required for such significant policy shifts.

### Impact on India and Global Trade?

- **Trade Relief for India:** The ruling provides immediate relief to Indian exporters, particularly in sectors like **Steel, Aluminum, Information Technology (IT), and Pharmaceuticals**, which were facing high entry barriers.
- **Bilateral Trade Surplus:** India, which maintains a trade surplus with the US (over **\$30 billion** annually), was a primary target of these tariffs. The removal of these duties is expected to stabilize Indian export growth.
- **Global Market Sentiment:** The decision is expected to reduce volatility in global supply chains and prevent a retaliatory "trade war" cycle that threatened to disrupt the **World Trade Organization (WTO)** framework.

### Additional Info

- **Legal and Trade Frameworks:**
  - **Section 232 of the Trade Expansion Act (1962):**
    - Allows the US President to impose tariffs if an import is deemed a threat to national security.
    - Historically used for specific commodities (e.g., uranium, steel); the 2025 attempt was the first to apply it universally.
  - **Article I, Section 8 (US Constitution):**
    - Grants Congress the power to "lay and collect Taxes, Duties, Imposts and Excises" and to "regulate Commerce with foreign Nations."
- **Indo-US Trade Metrics:**
  - The US is India's largest trading partner.
  - Key Indian exports to the US include engineering goods, gems and jewelry, and organic chemicals.

## IRIS Dena Incident: Iranian Warship Sunk in Indian Ocean Region

### What's the News?

- **Iranian Navy frigate IRIS Dena** was torpedoed and sunk by a **US Navy submarine** in the **Indian Ocean** near **Sri Lanka**.
- The incident occurred on **March 4, 2026**, while the ship was returning from **India's MILAN 2026 naval exercises**.
- **US Defense Secretary Pete Hegseth** confirmed the submarine strike on the Iranian warship.
- At least **87 Iranian sailors were killed** in the attack, with survivors rescued by **Sri Lankan Navy**.
- The incident has raised significant **geopolitical concerns** for India given its proximity to Indian maritime sphere.

### Incident Overview

- **Location:** International waters off **Galle, Sri Lanka** (approximately 74 km from coast).
- **Vessel Type:** Iranian **Moudge-class frigate**.
- **Attack Method:** **Mark-48 torpedo** fired from **US Los Angeles-class nuclear submarine USS Charlotte**.
- **Casualties:** Approximately **87 killed**, survivors rescued by **Sri Lankan naval crews**.
- **Context:** Ship was returning from **Indian Naval Exercise MILAN 2026**.

### MILAN 2026 Naval Exercise Context

- **Organizer:** **Indian Navy**
- **Purpose:** Multilateral naval exercise promoting **maritime cooperation**.
- **Participants:** Multiple nations including **Iran**.
- **Significance:** Demonstrates India's role as **net security provider** in IOR.
- **Timing:** IRIS Dena departed Indian waters days before being sunk.

### Geopolitical Context

- **US-Iran Relations:**
  - Ongoing **2026 Iran War** tensions.
  - US conducting **maritime operations** in Middle East and Indian Ocean.
  - Iran retaliating against **non-Iranian merchant vessels**.
- **Indian Ocean Region Security:**
  - Critical for **global energy trade**
  - India's **SAGAR (Security and Growth for All in the Region)** doctrine relevant
  - **Quad nations** monitoring regional developments

## NATO Launches Large-Scale Arctic Military Exercise 'Cold Response 2026'

### What's the News?

- **NATO** has officially commenced its biennial military exercise, **Cold Response 2026**, in the **Arctic** region.
- Led by **Norway**, the exercise is one of the alliance's largest training events in the High North, focused on defending NATO's northern territory.
- The 2026 edition is notable for its integration of the **"Total Defence"** concept, which bridges the gap

between military operations and civilian preparedness.

- The drills take place amidst heightened regional tensions and represent a significant display of unity following the recent accession of **Finland** and **Sweden** to the alliance.

### Exercise Cold Response 2026?

- **Participants:** Approximately **25,000 personnel** from **14 nations**, including the **USA, UK, France, Germany, Netherlands**, and Nordic allies.
- **Operational Scope:** The exercise is a multi-domain operation spanning **land, maritime, air, cyber, and space**.
- **Geographic Focus:** Activities are primarily concentrated in northern **Norway, Finland, and Sweden**, as well as the maritime zones off the Norwegian coast.
- **Objective:** To enhance interoperability among allied forces and test their ability to operate effectively in extreme **Arctic** conditions.

### Total Defence and Civilian Role?

- **Total Defence Year 2026:** Norway has designated this year to emphasize society-wide resilience, integrating civilian infrastructure into national security.
- **Civilian Support:** Public institutions, private businesses, and hospitals are participating to support military logistics, water supply, and communication services.
- **Health Preparedness:** A major component involves an **Arctic health preparedness exercise** simulating the reception and treatment of mass casualties transported from a simulated frontline.
- **Infrastructure Resilience:** The exercise tests how civilian ports and roads can be utilized for the rapid movement of heavy military equipment and thousands of international troops.

### Strategic Significance?

- **Deterrence:** The exercise serves as a deterrent against potential aggression in the **High North**, a region of growing strategic importance due to melting ice and new maritime routes.
- **Article 5 Scenario:** Training is based on a collective defense scenario under **Article 5** of the North Atlantic Treaty, simulating a response to an attack on a member state.
- **Arctic Sentry:** The drills are part of **Arctic Sentry**, a broader NATO mission to strengthen the alliance's permanent presence and stability in the polar region.

### Additional Info

- **North Atlantic Treaty Organization (NATO):**
  - An intergovernmental military alliance established by the **North Atlantic Treaty** (also known as the **Washington Treaty**) in **1949**.
  - **Article 5:** The principle of collective defense, stating that an armed attack against one or more members shall be considered an attack against them all.
- **Nordic Defense Integration:**

- The inclusion of **Finland** and **Sweden** as full members allows for a unified "Nordic bastion," enabling seamless cross-border military movements that were previously restricted by neutrality policies.

## Human Rights Watch Accuses Israel of Using White Phosphorus in Lebanon

### What's the News?

- **Human Rights Watch (HRW)** has released a report accusing the Israeli military of using air-burst **white phosphorus** munitions in populated residential areas of southern Lebanon.
- The report highlights that the use of such incendiary weapons in densely populated areas poses a significant risk to civilians, causing severe and permanent injuries.
- The findings are based on verified videos and interviews, raising concerns over violations of **International Humanitarian Law (IHL)**.

### What is White Phosphorus?

- **Chemical Properties:**
  - **Ignition Temperature:** Catches fire spontaneously at approximately **30°C** when exposed to oxygen.
  - **Burn Temperature:** Burns at temperatures exceeding **800°C**.
  - **Persistence:** Continues burning until completely consumed or deprived of oxygen.
- **Military Applications:**
  - **Smoke Screens:** Primarily used for **obscuring troop movements** and creating visual cover.
  - **Illumination:** Provides battlefield lighting during night operations.
  - **Incendiary Weapon:** Can be used to destroy equipment and supplies.
- **Health Impact:**
  - **Severe Burns:** Causes deep tissue burns that can reach **bone level**.
  - **Toxic Effects:** Releases toxic fumes causing **respiratory damage**.
  - **Long-term Consequences:** Survivors face **permanent scarring**, organ damage, and psychological trauma.

### Legal Framework and Controversy

- **Convention on Certain Conventional Weapons (CCW):**
  - **Protocol III:** Restricts use of **incendiary weapons** against civilians.
  - **Limitation:** Does not completely ban white phosphorus when used for **non-incendiary purposes**.
  - **Loophole:** Military can claim usage for **smoke screening** rather than direct attacks.
- **International Humanitarian Law:**
  - **Geneva Conventions:** Prohibit attacks causing **unnecessary suffering** to civilians.
  - **Principle of Distinction:** Requires distinguishing between **combatants and civilians**.

- **Principle of Proportionality:** Attacks must not cause **excessive civilian harm** relative to military advantage.

### Previous Allegations:

- **Gaza Conflict:** Similar accusations during Israel-Palestine operations.
- **Syria:** Reports of white phosphorus usage in Syrian civil war.
- **Iraq:** US forces faced allegations during Iraq War.

## Human Rights Watch (HRW)

### What is it?

- **Human Rights Watch (HRW)** is an **International Non-Governmental Organization (NGO)** dedicated to investigating, documenting, and reporting human rights abuses worldwide.
- It operates as a non-profit, non-partisan organization and is one of the world's leading independent organizations defending human rights.

### Details

- **Headquarters:** New York City, USA.
- **Founded:** **1978** (originally established as **Helsinki Watch** to monitor the Soviet Union's compliance with the Helsinki Accords).
- **Motto:** "Investigate, Expose, Change."
- **Funding:** It is primarily funded by private individuals and foundations; it **does not accept government funding** to maintain its independence and neutrality.

### Core Functions & Methodology

- **Fact-finding:** Conducts extensive on-the-ground research, interviews with victims, and satellite imagery analysis to document abuses.
- **Advocacy:** Uses its findings to pressure governments, armed groups, and businesses to change laws and policies.
- **Media Outreach:** Publishes reports in multiple languages to generate global awareness and mobilize public opinion.
- **Legal Standards:** Evaluates situations based on **International Human Rights Law** and **International Humanitarian Law (IHL)**.

### Reports & Recognition

- **World Report:** Its flagship annual publication that reviews human rights practices and trends in more than **100 countries**.
- **Nobel Peace Prize:** HRW was a founding member of the **International Campaign to Ban Landmines**, which received the Nobel Peace Prize in **1997**.
- **Thematic Focus:** Key areas include the protection of civilians in war, rights of refugees, women's rights, children's rights, and freedom of expression.

## Toxic "Black Rain" Phenomenon Observed in Tehran Following Infrastructure Strikes

### What's the News?

- The city of **Tehran** and surrounding provinces in **Iran** have experienced a rare atmospheric phenomenon known as **"Black Rain"** following military strikes on oil and energy infrastructure.

- Explosions at multiple oil storage facilities and refineries released massive plumes of thick, black smoke and soot into the atmosphere.
- The **World Health Organization (WHO)** and the **Iranian Red Crescent** have issued health alerts, warning that the precipitation is highly toxic and poses immediate risks to the population.

### What is Black Rain?

- **Scientific Mechanism:** Known as **atmospheric scavenging**, the process occurs when raindrops fall through air saturated with high concentrations of pollutants like soot, ash, and oily particulates.
- **Formation:**
  - Large-scale fires from oil depots release unburnt hydrocarbons and carbon particles into the sky.
  - When these particles meet a weather system (such as the low-pressure storm currently over northern Iran), they act as condensation nuclei or get trapped by falling rain.
- **Composition:** The rain contains a "toxic cocktail" of chemicals, including **Benzene** (a known carcinogen), **Sulfur Oxides (SOx)**, **Nitrogen Oxides (NOx)**, and heavy metals.

### Environmental and Health Impact

- **Health Risks:**
  - **Respiratory Distress:** Inhaling toxic fumes and particulates can cause severe lung irritation, asthma exacerbation, and cardiovascular stress.
  - **Chemical Burns:** The acidic and oily nature of the rain can cause skin rashes, eye irritation, and potential chemical burns upon direct contact.
  - **Vulnerable Groups:** The **WHO** highlighted that children, the elderly, and those with pre-existing conditions are at the highest risk.
- **Topographic Trap:** Tehran's geography, surrounded by mountains, creates a **temperature inversion** effect that traps pollutants near the ground, preventing them from dispersing.
- **Ecological Damage:**
  - **Soil and Water:** The oily residue can contaminate groundwater and agricultural land, persisting for decades.
  - **Forever Chemicals:** Firefighting foams used to combat the oil fires may release **PFAS (Per- and Polyfluoroalkyl Substances)** into the ecosystem, which do not degrade naturally.

### Additional Information

- **Historical Precedents:**
  - **Hiroshima-Nagasaki (1945):** Black rain reported after atomic bombings
  - **Kuwait Oil Fires (1991):** Toxic rainfall during Gulf War
- **Related Concepts:**
  - **Acid Rain:** Rainfall with acidic components from industrial emissions
  - **Toxic Fallout:** Radioactive or chemical contamination from explosions

- **PM2.5:** Particulate matter 2.5 micrometers or smaller (air quality indicator)

## China Passes Ethnic Unity Law Promoting Mandarin and Han Identity

### What's the News?

- **China's National People's Congress (NPC)** passed the **Law on Promoting Ethnic Unity and Progress** on March 12, 2026.
- The law mandates promotion of **Mandarin (Putonghua)** as the "national common language" across all regions including ethnic minority areas.
- The legislation is scheduled to come into effect on **July 1, 2026**.
- The law formalizes policies to reinforce a **shared Chinese national identity** while integrating ethnic minorities into mainstream Han-centric culture.
- **55 officially recognized ethnic minorities** in China will be affected by this legislation.

### Provisions of the Law

- **Language Requirements:**
  - Mandarin to be prioritized in **education, government, and public services**
  - Ethnic minority languages to be secondary in official contexts
  - Schools required to use Mandarin as primary medium of instruction.
- **Identity Integration:**
  - Promotion of **common Chinese national identity** over distinct ethnic identities
  - Emphasis on shared history, culture, and values
  - All citizens responsible for upholding national unity and ethnic solidarity.
- **Implementation Framework:**
  - Local governments accountable for enforcing unity measures
  - Violations can result in administrative penalties
  - Monitoring mechanisms for compliance in minority regions.

### Affected Ethnic Regions

- **Major Minority Autonomous Regions:**
  - **Xinjiang Uyghur Autonomous Region** (primarily Uyghur population)
  - **Tibet Autonomous Region** (Tibetan population)
  - **Inner Mongolia Autonomous Region** (Mongolian population)
  - **Ningxia Hui Autonomous Region** (Hui Muslim population)
  - **Guangxi Zhuang Autonomous Region** (Zhuang population).
- **Demographic Context:**
  - **Han Chinese:** Approximately 91% of China's 1.4 billion population
  - **Ethnic Minorities:** Approximately 9% (around 125 million people)
  - **55 recognized ethnic groups** with distinct languages and cultures.

## Pakistan Tops Global Terrorism Index 2026 Amid Rising Violence

### What's the News?

- **Pakistan** has ranked **first** in the **Global Terrorism Index (GTI) 2026**, marking the highest terrorism impact globally.
- The report recorded **1,139 terror-related deaths** in Pakistan, the highest since 2013.
- The GTI 2026 was released by the **Institute for Economics and Peace (IEP)** on **March 19, 2026**.
- **India** improved its ranking to **13th position**, dropping from 11th place with a **43% decrease** in terrorist incidents.
- Just under **70% of terrorism deaths** occurred in only **five countries**: Pakistan, Burkina Faso, Nigeria, Niger, and Democratic Republic of Congo.

### Global Terrorism Index 2026: Overview

#### About GTI

- **Publisher:** Institute for Economics and Peace (IEP), Sydney-based think tank.
- **Frequency:** Published **annually** since 2012.
- **Coverage:** Ranks **163 countries** based on terrorism impact.
- **Methodology:** Uses **four indicators** weighted over **five years**.

#### Indicators

- **Total Incidents:** Number of terrorist attacks recorded.
- **Fatalities:** Total deaths from terrorism.
- **Injuries:** Number of people injured in attacks.
- **Hostage Events:** Kidnappings and hostage situations linked to terrorism.

### Findings of GTI 2026

#### Top 5 Most Affected Countries

- **Pakistan:** Rank 1 (1,139 deaths).
- **Burkina Faso:** Rank 2.
- **Niger:** Rank 3.
- **Nigeria:** Rank 4.
- **Mali:** Rank 5.

#### Global Trends

- **Global terrorism deaths** fell to a **decade low** in 2025.
- **Western fatalities** surged despite overall global decline.
- **Five countries** accounted for **70% of all terrorism fatalities**.
- **Collective deaths** in top 5 nations: **3,869** (70% of global total).

#### Regional Concerns

- **Sahel Region:** Burkina Faso, Niger, Nigeria, Mali showing rising violence.
- **Middle East:** Iran flagged as potential terror breeding ground.
- **South Asia:** Pakistan's deterioration driven by **Tehrik-e-Taliban Pakistan (TTP)** activity.

### India's Position & Progress

#### Ranking Improvement

- **Current Rank:** **13th position** in GTI 2026.
- **Previous Rank:** 11th position (dropped two places).

- **Incident Reduction:** **43% decrease** in terrorist incidents over recent years.
- **Score Improvement:** Moved from **7.151 to 5.908** on GTI scale.

#### Factors Behind Improvement

- **Enhanced Security Measures:** Strengthened counter-terrorism operations.
- **Jammu & Kashmir:** Reduced infiltration and militant activities.
- **Left-Wing Extremism:** Significant decline in Naxalite-related violence.
- **Intelligence Coordination:** Improved multi-agency collaboration.

#### Additional Info

##### Institute for Economics and Peace (IEP)

- **Headquarters:** Sydney, Australia.
- **Founded:** 2007.
- **Key Publications:**
  - **Global Terrorism Index (GTI).**
  - **Global Peace Index (GPI).**
  - **Positive Peace Index.**

##### Constitutional & Legal Framework (India)

- **Article 355:** Union duty to protect states against external aggression and internal disturbance.
- **Article 352:** Provision for National Emergency due to war, external aggression, or armed rebellion.
- **Unlawful Activities (Prevention) Act, 1967 (UAPA):** Primary anti-terror legislation.
- **National Investigation Agency (NIA):** Central counter-terrorism investigation agency.
- **Seventh Schedule:** Defence and public order under Union List.

#### Related Policies & Initiatives

- **National Counter Terrorism Centre (NCTC):** Proposed coordination mechanism.
- **Multi-Agency Centre (MAC):** Intelligence sharing platform.
- **National Security Doctrine:** Comprehensive approach to security threats.
- **Border Management:** Enhanced fencing and surveillance along vulnerable borders.

#### Global Counter-Terrorism Framework

- **UN Global Counter-Terrorism Strategy:** Adopted 2006, reviewed biennially.
- **Financial Action Task Force (FATF):** Combats terror financing.
- **Global Counter-Terrorism Forum (GCTF):** International cooperation platform.

#### Statistics

- **Global terrorism deaths:** Declined to lowest level in 10 years.
- **Pakistan deaths:** 1,139 (highest since 2013).
- **India's rank improvement:** From 11th to 13th position.
- **Incident reduction in India:** 43% decrease.
- **Countries covered:** 163 nations in GTI 2026.
- **Top 5 countries' share:** 70% of global terrorism fatalities.

## Elon Musk Unveils TeraFab: \$25 Billion AI Chip Manufacturing Project

### What's the News?

- **Elon Musk** has announced **TeraFab**, a massive **AI chip manufacturing project** valued at approximately **\$25 billion**.
- The initiative is a joint venture between **Tesla**, **SpaceX**, and **xAI** (Musk's artificial intelligence company).
- The project aims to establish a **mega chip factory** to produce advanced semiconductors for AI applications.
- This move positions Musk to reduce dependency on external chip suppliers like **NVIDIA** and gain control over AI hardware supply chains.

### TeraFab Project: Overview

- **Investment:** Approximately **\$25 billion** dedicated to chip manufacturing infrastructure.
- **Participating Companies:** **Tesla**, **SpaceX**, and **xAI** collaborating on semiconductor production.
- **Primary Objective:** Develop custom **AI-optimized chips** for autonomous vehicles, robotics, and AI computing.
- **Strategic Goal:** Achieve **vertical integration** in AI hardware production.

| Aspect              | Details                                     |
|---------------------|---------------------------------------------|
| Project Name        | TeraFab                                     |
| Total Investment    | \$25 billion (approx.)                      |
| Key Partners        | Tesla, SpaceX, xAI                          |
| Focus Area          | AI chip manufacturing                       |
| Target Applications | Autonomous vehicles, robotics, AI computing |

### Global Semiconductor Context

- **Market Dominance:** **NVIDIA** currently controls approximately **80-90%** of AI chip market share.
- **Supply Constraints:** Global demand for AI chips exceeds production capacity.
- **Geopolitical Factors:** **US-China semiconductor restrictions** impact supply chains.
- **Investment Trends:** Major tech companies pursuing in-house chip development.

| Company        | Chip Initiative                |
|----------------|--------------------------------|
| Google         | Tensor Processing Units (TPUs) |
| Amazon         | AWS Graviton chips             |
| Microsoft      | Maia AI accelerators           |
| Tesla          | Dojo supercomputer chips       |
| Musk Companies | TeraFab (new)                  |

### Additional Information

- **AI Chip Types:**
  - **GPU (Graphics Processing Unit):** General AI computing
  - **TPU (Tensor Processing Unit):** Google's custom AI chips
  - **NPU (Neural Processing Unit):** Specialized for neural networks
  - **ASIC (Application-Specific Integrated Circuit):** Custom-designed chips
- **Key Semiconductor Companies:**
  - **NVIDIA:** AI chip market leader

- **TSMC:** World's largest contract chip manufacturer
- **Intel:** US-based semiconductor giant
- **Samsung:** South Korean chip manufacturer
- **AMD:** Advanced Micro Devices

- **India's Semiconductor Progress:**

- **Tata Electronics:** Setting up semiconductor fabs in Gujarat and Assam
- **CG Power:** Semiconductor assembly and testing facility
- **Micron Technology:** Semiconductor assembly plant in Gujarat
- **Target:** Become global semiconductor hub by 2030

## Philippines Declares National Energy Emergency Amid West Asia Crisis

### What's the News?

- **Philippines** President **Ferdinand Marcos Jr.** has officially declared a state of **National Energy Emergency** via **Executive Order (EO) 110**.
- The decision follows escalating geopolitical tensions in **West Asia**, specifically the conflict involving the **US**, **Israel**, and **Iran**, which has led to a de facto blockade of the **Strait of Hormuz**.
- The Philippines is the first nation to declare a formal energy emergency in direct response to this specific regional conflict, citing an "imminent danger" of critically low fuel supplies and economic destabilization.

### National Energy Emergency & EO 110?

- **Duration & Scope:** The emergency declaration is set to remain in effect for **one year** unless lifted earlier. It activates a "whole-of-government" response to stabilize domestic energy markets.
- **Coordinated Oversight:** A special committee has been established to ensure the uninterrupted supply and distribution of essential goods, including fuel, food, and medicines.
- **Procurement Powers:** The order authorizes the **Department of Energy (DOE)** and state firms to fast-track the procurement of petroleum products. It permits advance payments exceeding the usual **15%** limit to secure international fuel contracts.
- **Market Regulation:** The government is empowered to take direct action against **hoarding** or **profiteering** by oil companies and retailers to prevent artificial price hikes.

### UPLIFT and Strategic Measures?

- **The UPLIFT Framework:** The government introduced the **Unified Package for Livelihoods, Industry, Food, and Transport (UPLIFT)** to shield vulnerable sectors from soaring energy costs.
- **Interventions:**
  - **Transport:** Direct fuel subsidies for public utility vehicle (PUV) drivers and a potential reduction or suspension of aviation fees and toll charges.
  - **Agriculture:** Financial aid and energy-saving support for farmers and fisherfolk to mitigate rising operational costs.

- **MSMEs:** Targeted relief programs for micro, small, and medium enterprises to maintain productivity.
- **Energy Management:** The DOE has been directed to enforce strict conservation measures across all government agencies, including a **10%** mandatory reduction in fuel and electricity consumption.

## Pakistan Tops Global Pollution List 2025; India Ranks Sixth

### What's the News?

- **Pakistan** has been ranked as the **world's most polluted country** in the **2025 World Air Quality Report** released in March 2026.
- **India** ranks as the **sixth most polluted country** globally based on annual average **PM2.5 levels**.
- **Loni in Uttar Pradesh** has been identified as the **most polluted city** worldwide.
- The report was released by **IQAir**, a Swiss air quality monitoring organization.
- **Bangladesh** secured the **second position** in the global pollution ranking.

### Rankings and Data?

- **Top Polluted Nations:**
  1. **Pakistan:** Average annual PM2.5 concentration of **73.7  $\mu\text{g}/\text{m}^3$** .
  2. **Bangladesh:** Follows closely with **61.3  $\mu\text{g}/\text{m}^3$** .
  3. **Tajikistan:** Ranked third.
  4. **Burkina Faso:** Ranked fourth.
  5. **Iraq:** Ranked fifth.
  6. **India:** Recorded an average PM2.5 of **54.4  $\mu\text{g}/\text{m}^3$** .
- **Global Benchmark:** The **WHO** guideline for annual PM2.5 is just **5  $\mu\text{g}/\text{m}^3$** . India's levels are more than **10 times** the recommended limit.
- **City Insights:** **Lahore** (Pakistan), **New Delhi** (India), and **Dhaka** (Bangladesh) continue to feature prominently among the world's most polluted capital cities.

### Regional Air Quality Crisis in South Asia

- **Transboundary Pollution:** The report emphasizes that air pollution in South Asia is a shared crisis, with the **Indo-Gangetic Plain (IGP)** acting as a "pollution trap" due to geographical and climatic factors.
- **Major Sources:**
  - **Vehicle Emissions:** Rapidly increasing vehicular density in urban hubs.
  - **Stubble Burning:** Seasonal agricultural residue burning in Northern India and Pakistan.
  - **Industrial Activity:** Unregulated brick kilns and coal-fired power plants.
- **Health Impact:** Persistent exposure to PM2.5 is linked to increased rates of respiratory diseases, cardiovascular issues, and reduced life expectancy across the region.

### India's Air Pollution Scenario

- **National Ranking:** **6th most polluted country** globally
- **Cities Monitored:** **259 Indian cities** included in the report
- **Top Polluted Cities in India:**
  - **Loni (UP):** Most polluted city globally
  - **Delhi NCR:** Consistently high pollution levels
  - **Other major cities:** Ahmedabad, Asansol reporting poor air quality
- **Improvement Indicators:**
  - Some cities show **improved PM2.5 levels** compared to previous years
  - **7% decline** in India's PM2.5 from 2023 to 2024
  - Continued efforts needed to meet **WHO standards**

## Miscellaneous

### Jammu & Kashmir Clinch Maiden Ranji Trophy Title with Historic Win

#### What's the News?

- **Jammu & Kashmir (J&K)** scripted history by winning their first-ever **Ranji Trophy** title for the **2025-26 season**.
- The team defeated eight-time champions **Karnataka** in the final held at the **KSCA Rajnagar Stadium** in **Hubballi**.
- The victory was secured based on a massive **first-innings lead** after the five-day match ended in a draw.
- Captain **Paras Dogra** led the side to this landmark achievement, ending a **67-year** quest for the premier domestic title.

#### Final Match Highlights

- **First Innings Dominance:** J&K posted a mammoth total of **584 runs**. Key contributors included **Shubham Pundir (121)**, **Yawer Hassan (88)**, and **Sahil Lotra (72)**.
- **Bowling Masterclass:** J&K's pace spearhead **Auqib Nabi** dismantled the Karnataka batting lineup with figures of **5/54**, bowling them out for **293**.
- **Decisive Lead:** J&K secured a **291-run** first-innings lead. They chose not to enforce the follow-on and batted Karnataka out of the game.
- **Second Innings:** J&K reached **342/4** before the match was called. **Qamran Iqbal (160\*)** and **Sahil Lotra (101\*)** both struck unbeaten centuries.
- **Total Lead:** The match concluded with J&K leading by a staggering **633 runs**.

#### Performance Metrics

- **Auqib Nabi (Player of the Series):**
  - Finished the season with **60 wickets**, becoming only the third pacer in Ranji history to reach this milestone.
  - Achieved the rare feat of taking five-wicket hauls in the **Quarter-final, Semi-final, and Final** of a single season.
- **Shubham Pundir (Player of the Match):** Awarded for his crucial **121-run** knock in the first innings that set the foundation for the win.
- **Prize Money:** As per the **BCCI**'s revised pay structure, J&K will receive a prize of **₹5 crore**, while runners-up Karnataka receive **₹3 crore**.

#### Historical Context:

- **Debut:** J&K began competing in the Ranji Trophy in **1960**.
- **First Win:** It took the team **22 years** to record their first match victory (against Services in **1982**).
- **Progress:** Before this title, their best performances were reaching the quarter-finals in **2013-14, 2019-20, and 2024-25**.

### Khelo India Tribal Games 2026: Chhattisgarh to Host Inaugural Edition

#### What's the News?

- **Chhattisgarh** will host the first-ever **Khelo India Tribal Games (KITG)** in its inaugural edition.
- The sporting event aims to promote sports among **tribal youth** and identify talent from remote tribal regions.
- **Union Sports Minister Mansukh Mandaviya** announced the initiative to create a dedicated national platform for tribal athletes.
- The Games will feature representation from most **states and Union Territories** of India.

#### KITG Overview

- **Purpose:** Dedicated national platform to celebrate, preserve, and promote traditional tribal sports.
- **Host State:** Chhattisgarh (first state to host these Games).
- **Venues:** Three cities in Chhattisgarh including **Raipur**.
- **Participants:** Athletes from tribal communities across India.

#### Sports & Competition Structure

- **Medal Sports (7):**
  - Athletics
  - Football
  - Hockey
  - Weightlifting
  - Archery
  - Swimming
  - Wrestling
- **Demonstration Sports (2):**
  - Mallakhamb
  - Kabaddi
- **Talent Identification:** Athletes spotted during competition will be inducted as **Khelo India athletes** for further support.

#### Additional Information

##### Related Initiatives

- **Khelo India Programme:**
  - Launched by **Ministry of Youth Affairs and Sports**
  - Aims to revive sports culture in India at grassroots level
  - Includes **Khelo India Youth Games (KIYG)** and **Khelo India University Games**
- **Khelo India Centres:**
  - Established across India for talent identification
  - Provide training infrastructure and coaching support

#### Key Organisations

- **Ministry of Youth Affairs and Sports** – Nodal ministry
- **Sports Authority of India (SAI)** – Implementation support

- **State Sports Departments** – Coordination at state level

## India Clinches Third ICC Men's T20 World Cup Title

### What's the News?

- India defeated **New Zealand** in the final of the **ICC Men's T20 World Cup 2026** to secure its third global championship in the T20 format.
- The tournament was co-hosted by **India** and **Sri Lanka**, concluding with a decisive victory that solidified India's dominance in international cricket.
- The national leadership, including the **President**, **Vice-President**, and **Prime Minister**, extended congratulations to the team for their historic achievement.

### Historic Achievement?

- **Third Global Title:** India has become the first nation to win **three ICC Men's T20 World Cup trophies**, with previous victories in **2007** and **2024**.
- **Consecutive Victories:** With this win, India is the first team to achieve **back-to-back titles** in the history of the tournament (winning the **2024** and **2026** editions).
- **Unbeaten Streak:** The Indian team remained undefeated throughout the 2026 campaign, winning all their group stage and knockout matches.
- **Performance Metrics:** The victory was characterized by a strong defensive bowling performance in the final, successfully protecting a competitive target against the New Zealand batting lineup.

### Tournament Overview?

- **Hosting:** The **10th** edition of the biennial event was organized jointly by the **Board of Control for Cricket in India (BCCI)** and **Sri Lanka Cricket (SLC)**.
- **Participation:** The event featured **20 teams** from across the globe, maintaining the expanded format introduced in the previous edition to increase the game's global footprint.
- **Economic Impact:** The 2026 World Cup saw record-breaking stadium attendance and digital viewership, marking it as one of the most commercially successful events organized by the **International Cricket Council (ICC)**.

### Additional Info

- **Evolution of T20 World Cup:**
  - The inaugural tournament was held in **2007** in South Africa, which India won.
  - It is a biennial international championship governed by the **ICC**.
- **Statistical Context:**
  - India now leads the tally of T20 World Cup wins (3), followed by the **West Indies** (2) and **England** (2).
  - The **2026** edition utilized **India's** world-class infrastructure, including venues like the **Narendra Modi Stadium** and **R. Premadasa Stadium**.
- **Administrative Bodies:**

- **ICC:** Headquartered in Dubai, UAE; responsible for global cricket governance.
- **BCCI:** The richest cricket board globally, playing a pivotal role in the sport's administration and financial ecosystem.

## 24th National Para Athletics Championship Commences at Kalinga Stadium

### What's the News?

- The **24th National Para Athletics Championship** is currently being hosted at the **Kalinga Stadium** in **Bhubaneswar**, Odisha.
- Organized by the **Paralympic Committee of India (PCI)** in collaboration with the **Government of Odisha**, the event marks another major milestone in the state's sports calendar.

### Bhubaneswar as a Sports Hub?

- **Infrastructure:** **Kalinga Stadium** is renowned for its world-class synthetic tracks and specialized facilities designed to accommodate athletes with disabilities.
- **State Support:** The **Government of Odisha** has consistently positioned itself as a premier destination for sports, providing comprehensive logistics and financial backing for para-sports.
- **Strategic Significance:** Hosting the nationals in **Odisha** reinforces the state's "Sports Capital of India" status and its commitment to the **"Sports for All"** initiative.

### Event Highlights and Participation

- **Athlete Scale:** Over **1,500 para-athletes** representing various states and Union Territories are participating in the multi-day event.
- **Competition Categories:** The meet includes diverse track and field events such as **javelin throw**, **shot put**, **long jump**, and **sprint races**, divided into specific disability classifications.
- **Selection Pathway:** Top performers at this national meet are eligible for selection into the national camp for upcoming international events, including the **World Para Athletics Championships**.

### Additional Info

- **Paralympic Committee of India (PCI):**
  - The PCI is the national governing body for the Paralympic movement in India, recognized by the **International Paralympic Committee (IPC)**.
  - It is responsible for selecting and training the Indian contingent for the **Paralympic Games** and other major para-sporting events.
- **Classification in Para-Athletics:**
  - Athletes are grouped by the degree of activity limitation resulting from their impairment to ensure fair competition.
  - Prefixes like **'T'** (Track) and **'F'** (Field) are followed by numbers indicating the type and level of impairment.
- **Odisha's Sports Initiatives:**
  - The state has established several **High Performance Centres (HPCs)** across

various disciplines to provide elite-level coaching and sports science support.

- Odisha's model of sports governance is often cited as a benchmark for other states due to its sustainable funding and infrastructure development.

## Major Sports Awards in Odisha

Odisha offers some of the most lucrative sports awards in India to foster a "Sports Capital" culture.

### 1. Biju Patnaik Sports Award

The highest state-level sports honor, usually presented on **National Sports Day (August 29)**.

- **Outstanding Performance (Senior):** Awarded for excellence in international/national arenas.
  - *2025 Winner: Animesh Kujur* (Athletics).
  - *Prize: ₹3 Lakh* (Increased from ₹2 Lakh in 2025).
- **Lifetime Achievement:** For long-term contribution to sports.
  - *2025 Winner: Bijay Kumar Satapathy* (Weightlifting).

- *Prize: ₹4 Lakh* (Increased from ₹3 Lakh).

- **Best Coach: Susama Nanda** (Athletics).
- **Best Para-Sportsperson: Rakhal Kumar Sethy** (Wheelchair Fencing).
- **Best Upcoming Athlete (Junior): Sattwik Swain** (Chess).
- **Other Categories:** Excellence in Sports Journalism, Best Contribution to Promotion of Sports, and Biju Patnaik Bravery Award.

### 2. Ekalabya Puraskar

Instituted by **IMPACT** (the charitable wing of IMFA) in 1993, it is the most prestigious private sports award in Odisha for junior athletes.

- **33rd Ekalabya Puraskar (2025): Swetaparna Panda** (Badminton).
  - *Prize: ₹7 Lakh and a citation.*
- **Citations/Runners-up:** **Pritismita Bhoi** (Weightlifting) and **Aahaan** (Tennis).
  - *Prize: ₹1.5 Lakh each.*

## High-Performance Centers (HPCs)

Odisha follows a unique **"State-Corporate-Federation" model** where the government provides infrastructure, and corporate houses manage the high-performance training.

| Discipline        | Corporate Partner / Academy                             | Location                       |
|-------------------|---------------------------------------------------------|--------------------------------|
| Hockey            | Tata Steel & Tata Trusts (Odisha Naval Tata Hockey HPC) | Kalinga Stadium, Bhubaneswar   |
| Athletics         | Reliance Foundation                                     | Kalinga Stadium, Bhubaneswar   |
| Gymnastics        | AM/NS India (ArcelorMittal Nippon Steel)                | Kalinga Stadium, Bhubaneswar   |
| Swimming          | JSW Group (Inspire Institute of Sport)                  | Kalinga Stadium, Bhubaneswar   |
| Badminton         | Dalmia Bharat & Pullela Gopichand Foundation            | Kalinga Stadium, Bhubaneswar   |
| Football          | AIFF & JSW Group (Odisha-AFDC)                          | Bhubaneswar                    |
| Weightlifting     | Reliance Foundation                                     | Bhubaneswar                    |
| Kho-Kho           | AM/NS India                                             | Bhubaneswar                    |
| Sports Science    | Abhinav Bindra (Targeting Performance)                  | Kalinga Stadium, Bhubaneswar   |
| Sports Management | Xavier Emlyon Business School                           | Xavier University, Bhubaneswar |
| Archery           | NTPC (Operationalized in 2026)                          | Rairangpur (Mayurbhanj)        |

## Infrastructure & Recent Developments (2025-2026)

- **Birsa Munda International Hockey Stadium (Rourkela):** World's largest seated hockey stadium; now a major hub for Western Odisha talent.
- **Archery Expansion (2026):** In February 2026, the President of India laid the foundation for a new **NTPC Archery Centre** in Rairangpur, Mayurbhanj, specifically to nurture tribal talent.
- **Adventure Sports:** A new initiative at **Godibari (Chandaka)** was launched in early 2026 to promote adventure sports and eco-tourism.
- **Indoor Stadiums:** 89 multi-purpose indoor stadiums have been completed across various Urban Local Bodies (ULBs) to decentralize training from Bhubaneswar.

**gene screening** to determine eligibility for the female category in international competitions.

- This move shifts the criteria for the female category from hormonal levels (testosterone) to a genetic/biological basis.
- The decision follows a global debate on "fairness versus inclusion," with the **IOC** now prioritizing biological markers to ensure a "level playing field" in women's sports.

## The SRY Gene and Its Role

- **Definition:** The **Sex-determining Region Y (SRY)** is a master-switch gene located on the **Y chromosome**.
- **Biological Function:** It is responsible for initiating the development of male sex organs (testes) in an embryo.
- **Physiological Impact:** The presence of the **SRY gene** typically triggers male puberty, leading to physiological advantages such as increased bone density, larger muscle mass, and higher hemoglobin levels.
- **Testing Mechanism:** The screening involves a simple genetic test to detect the presence or absence of this

## IOC Mandates SRY Gene Screening for Female Category Eligibility

### What's the News?

- The **International Olympic Committee (IOC)** has announced a landmark policy change requiring **SRY**

specific DNA sequence, regardless of an individual's external anatomy or hormone levels.

### New Eligibility Framework

- **Biological Criteria:** Under the new rules, only athletes who do not possess the **SRY gene**—generally those with **XX chromosomes**—are eligible to compete in the female category.
- **Impact on Transgender Athletes:** Transgender women (assigned male at birth) who possess the **SRY gene** will be ineligible for the female category, regardless of their current testosterone levels or transition status.
- **DSD Athletes:** Individuals with **Differences in Sexual Development (DSD)**—who may have female anatomy but possess a **Y chromosome** and the **SRY gene**—will also face restrictions in the female category.
- **Implementation:** The policy is intended for the **2026 Winter Olympics** and will serve as a standard for international federations under the **Olympic Charter**.

### Additional Info

- **Evolution of Gender Testing:**
  - **1960s:** Initial testing involved invasive physical examinations.
  - **1968–1990s: Barr Body** tests were used to check for two **X chromosomes**.
  - **2011–2021:** The focus shifted to **hyperandrogenism** (high testosterone) levels, famously impacting athletes like **Caster Semenya**.
  - **Current (2026):** A shift toward **genetic sex-determination** markers.
- **Legal and Human Rights Context:**
  - **Article 14 (Indian Constitution):** While not directly applicable to the **IOC**, the concept of "reasonable classification" for fairness is often debated in Indian legal circles regarding sports quotas and gender identity.
  - **Court of Arbitration for Sport (CAS):** This international body has historically upheld biological restrictions in sports if they are "necessary, reasonable, and proportionate" to achieve fair competition.