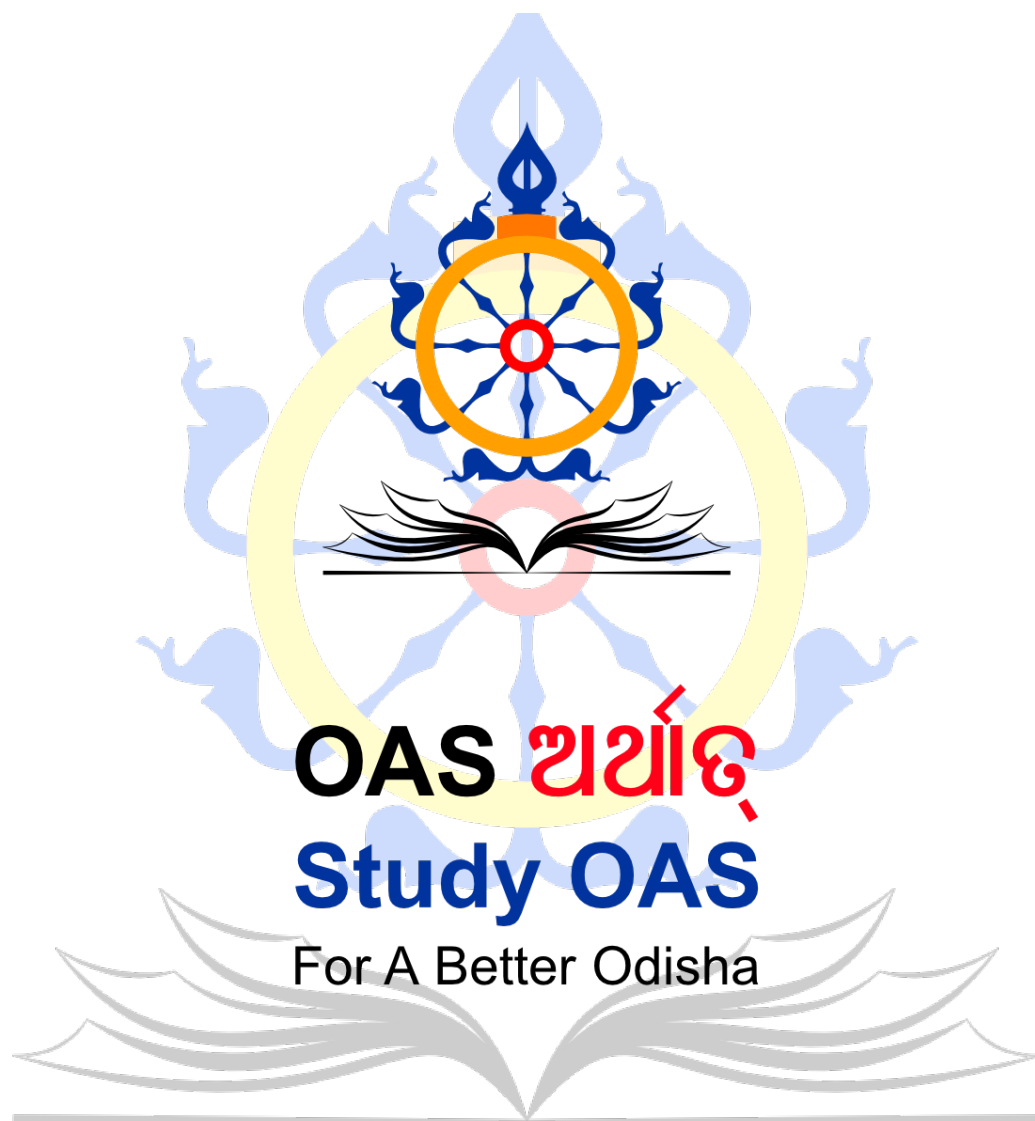


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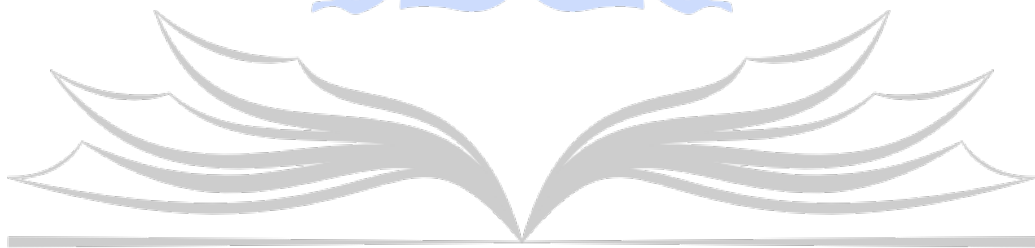
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Governance & Policy

FCRA 2.0 Portal and e-OCI Card Launched

What's the News?

The Ministry of Home Affairs (MHA) has launched the **FCRA 2.0 Portal** and the **Electronic Overseas Citizen of India (e-OCI) Card** to enhance digital governance and improve citizen-centric services. The initiatives aim to make services fully digital, reduce paperwork, improve transparency, and ensure faster processing for NGOs receiving foreign contributions and OCI cardholders.

FCRA 2.0 Portal

The **FCRA 2.0 Portal** is an upgraded digital platform for administering the **Foreign Contribution (Regulation) Act, 2010 (FCRA)**.

- End-to-end online processing of:
 - FCRA registration
 - Prior permission applications
 - Renewal of registration
 - Annual returns
 - Compliance-related services
- Real-time application tracking.
- Digital document submission and verification.
- Improved monitoring of foreign contributions.
- Reduced paperwork and faster disposal of applications.
- Enhanced transparency and accountability through technology-driven compliance.

e-OCI Card

The **Electronic Overseas Citizen of India (e-OCI) Card** is a digital version of the OCI card aimed at improving services for Overseas Citizens of India.

Features

- Completely paperless digital OCI document.
- Online access through a secure digital platform.
- Simplified passport update process.
- Eliminates the need to carry or frequently reissue physical OCI documents in many cases.
- Faster verification and authentication.
- Expected to benefit **over 50 lakh OCI cardholders** worldwide.

Benefits

- Faster service delivery.
- Reduced paperwork.
- Improved accessibility for OCI holders.

- Better integration with digital governance systems.

Foreign Contribution (Regulation) Act (FCRA), 2010

The Act regulates:

- Acceptance of foreign contributions.
- Acceptance of foreign hospitality.
- Utilisation of foreign funds by individuals, associations and organisations.

Its objective is to ensure that foreign contributions are **not used in activities detrimental to India's sovereignty, integrity, security or public interest.**

Overseas Citizen of India (OCI)

The **OCI Scheme** provides lifelong visa and several economic and educational benefits to eligible Persons of Indian Origin who have acquired foreign citizenship.

OCI Cardholders are entitled to

- Multiple-entry, lifelong visa to India.
- Exemption from registration with FRRO irrespective of duration of stay.
- Parity with NRIs in specified economic, financial and educational matters.

OCI Cardholders are not entitled to

- Voting rights.
- Contesting elections.
- Holding constitutional offices.
- Government employment in most public services.
- Obtaining an Indian passport.

Additional Info

Ministry of Home Affairs (MHA)

- Nodal ministry for:
 - Administration of the FCRA.
 - Registration and monitoring of foreign contributions.
 - Administration of the OCI Scheme.

FCRA Registration

Eligible entities include:

- Registered societies
- Public charitable trusts
- Section 8 companies

Foreign contributions may be received through:

- FCRA Registration
- Prior Permission route

Rashtriya Gramin Vikas Sammelan 2026

What's the News?

The **first-ever Rashtriya Gramin Vikas Sammelan 2026** was held in **New Delhi** under the theme **"Gramodaya Se Rashtroudaya"**. Chaired by Union Minister for Rural

Development and Agriculture **Shivraj Singh Chouhan**, the two-day conference brought together Rural Development Ministers, senior officials, and experts from States and Union Territories to formulate a roadmap for achieving **Viksit Gram-Viksit Bharat** through stronger Centre-State coordination and improved implementation of rural development programmes.

Highlights

- Theme: **Gramodaya Se Rashtroudaya**.
- Focused on:
 - Reviewing flagship rural development programmes.
 - Strengthening Centre-State coordination.
 - Enhancing Gram Panchayat-level planning.
 - Improving convergence and utilisation of resources.
 - Promoting sustainable livelihoods and inclusive rural growth.
- Ministers and senior officials from **29 States and Union Territories** participated in the conference.

Major Announcements

Viksit Bharat–Gramin (VB–GRAM) Scheme

- The Union Government announced the nationwide rollout of the **Viksit Bharat–Gramin (VB–GRAM) Scheme**.
- The scheme aims to:
 - Strengthen rural livelihoods.
 - Generate employment opportunities.
 - Accelerate rural infrastructure development.
 - Promote convergence of various rural development programmes.
- The initiative aligns with the vision of **Viksit Bharat @2047**.

SARAS Shakti Collection

- The Ministry of Rural Development launched the **SARAS Shakti Collection**.
- Objective:
 - Promote products made by women Self-Help Groups (SHGs).
 - Expand market access for rural women entrepreneurs.
 - Strengthen women-led enterprises under the **DAY–NRLM** framework.
- The initiative supports women's economic empowerment through branding, marketing, and digital outreach.

Additional Info

Ministry of Rural Development (MoRD)

- **Nodal Ministry** for rural poverty alleviation and livelihood promotion.
- Major programmes:

- Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)/successor programmes
- Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY–NRLM)
- Pradhan Mantri Gram Sadak Yojana (PMGSY)
- Pradhan Mantri Awaas Yojana – Gramin (PMAY–G)

DAY–National Rural Livelihoods Mission (DAY–NRLM)

- Reduce rural poverty through sustainable livelihood opportunities.
- Promotion of **Self-Help Groups (SHGs)**.
- Financial inclusion through bank linkage.
- Skill development and entrepreneurship.
- Capacity building of rural women.

SARAS

- A marketing initiative of the Ministry of Rural Development.
- Provides rural SHGs with:
 - Market access.
 - Product branding.
 - Exhibition opportunities.
 - E-commerce support.
- Aims to increase incomes of rural artisans and women entrepreneurs.

Gram Panchayat Development Plan (GPDP)

- Annual participatory planning process undertaken by Gram Panchayats.
- Focuses on:
 - Local infrastructure.
 - Livelihoods.
 - Basic services.
 - Social inclusion.
- Encourages convergence of Central and State schemes.

Centre Asks Meta to Pause WhatsApp Username Rollout

What's the News?

The **Ministry of Electronics and Information Technology (MeitY)** has directed **Meta** to **pause the rollout of WhatsApp's proposed Username feature in India** and submit a detailed explanation within **three days**. The government has raised concerns that the feature could facilitate **impersonation, phishing, digital fraud, and cybercrime** by allowing users to communicate without disclosing their phone numbers. The rollout will remain on hold until consultations with the government are completed.

WhatsApp Username Feature

What is it?

- An upcoming WhatsApp feature that allows users to create a **unique username** instead of sharing their mobile number.
- Intended to enhance user privacy by enabling communication without revealing phone numbers.
- Similar to username-based messaging on platforms like Telegram, Signal, and Instagram.

Proposed Features

- Optional feature; users can continue using phone numbers.
- Usernames are expected to be unique.
- Phone numbers remain hidden during eligible chats.
- Includes safeguards such as restrictions on username format and messaging controls, according to Meta.

Government's Concerns

Cybersecurity Risks

- Increased risk of:
 - Identity impersonation.
 - Phishing attacks.
 - Online financial fraud.
 - "Digital arrest" scams.
 - Creation of fake identities.

Regulatory Concerns

- Difficulty in identifying malicious users.
- Possible impact on law enforcement investigations.
- Need to understand:
 - Username verification mechanism.
 - Prevention of lookalike or fake usernames.
 - Abuse reporting and account removal processes.
 - Availability of backend identifiers for lawful investigations.

Government Action

- Directed Meta **not to launch the feature in India** until consultations conclude.
- Sought a detailed technical explanation within three days.
- Asked Meta to explain:
 - How usernames will be allocated.
 - User verification process.
 - Safeguards against impersonation and fraud.
 - Mechanisms to ensure compliance with Indian laws.

Meta's Response

- Meta stated that:
 - The feature is **still under development**.
 - It has **not been fully rolled out** to users.

- Built-in safeguards are designed to reduce misuse and enhance privacy.

Legal & Policy Context

Information Technology Act, 2000

- Provides the legal framework for electronic governance and cyber offences in India.

Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021

- Require intermediaries to:
 - Exercise due diligence.
 - Remove unlawful content upon valid orders.
 - Appoint grievance and compliance officers.
 - Cooperate with law enforcement agencies.

Digital Personal Data Protection Act, 2023

- Governs processing of digital personal data.
- Balances user privacy with lawful processing obligations.

Additional Info

Ministry of Electronics and Information Technology (MeitY)

- Nodal ministry for:
 - Information Technology.
 - Electronics.
 - Digital governance.
 - Cybersecurity policy.

Why the Issue Matters

- Highlights the balance between:
 - **Privacy and anonymity** for users.
 - **Cybersecurity and law enforcement** requirements.
- Reflects increasing regulatory scrutiny of encrypted messaging platforms and new privacy-enhancing features.

Government Orders Removal of Apps Linked to Remote E-Rickshaw Shutdowns

What's the News?

The government has ordered the removal of **BAT-BMS, Epoch-i-ion, and Lossigy** apps from Indian app stores after reports that they were being misused to remotely disable e-rickshaws. The issue involved Bluetooth-enabled **Battery Management Systems (BMS)** in lithium-ion batteries, raising concerns over EV cybersecurity, public safety, and app-store due diligence.

BAT-BMS Issue

- The apps were reportedly used to connect to certain e-rickshaw batteries through Bluetooth.
- Some batteries had weak security controls, including lack of password protection or authentication.
- Once connected, users could allegedly switch off the battery discharge function.
- This led to sudden vehicle stoppages, creating risks for drivers, passengers, and road users.

Battery Management System

- **BMS** is an electronic system used in lithium-ion battery packs.
- It monitors:
 - Charge level
 - Voltage
 - Temperature
 - Current flow
 - Battery health
- In EVs, BMS is critical for safety, performance, and battery life.
- Bluetooth-enabled BMS allows mobile apps to monitor battery data but can create risks if access controls are weak.

EV Cybersecurity Concerns

- The case shows that electric mobility is not only a transport and energy issue, but also a cybersecurity issue.
- Key risks include:
 - Remote vehicle disruption
 - Weak authentication in connected components
 - Misuse of diagnostic or monitoring apps
 - Public safety threats in last-mile transport

Government Response

- **MeitY** reportedly directed removal of the apps from Android and iOS platforms in India.
- App stores were asked to exercise greater due diligence before allowing potentially harmful applications.
- Delhi's Transport Department was also directed to verify claims related to misuse of the BAT-BMS app.

Additional Info

- **E-rickshaws in India**
 - Widely used for affordable last-mile urban and semi-urban transport.
 - Increasingly use rechargeable lithium-ion battery packs.
 - Many vehicles use imported or low-cost battery components.
- **Cybersecurity exam angle**

- Connected vehicles are part of the Internet of Things ecosystem.
- Cyber risks in EVs may affect:
 - Transport safety
 - Consumer protection
 - Critical mobility infrastructure
 - Data and device security

Relevant institutions

- **MeitY**: Ministry of Electronics and Information Technology.
- Handles issues related to digital platforms, cybersecurity, and online harms.

India Designates 23 Pakistan-Based JeM and LeT Operatives as Terrorists under UAPA

What's the News?

The Ministry of Home Affairs has designated **23 Pakistan-based operatives linked to Jaish-e-Mohammed, Lashkar-e-Taiba and associated terror networks as individual terrorists** under the **Unlawful Activities (Prevention) Act, 1967**.

The action targets operatives allegedly involved in **terror recruitment, cross-border infiltration, training of cadres, drone-based arms supply, terror financing, logistics support, online radicalisation and planning of attacks in Jammu & Kashmir**.

With these additions, the number of individuals designated as terrorists under UAPA has increased to **80**.

UAPA Designation

The designation has been made under **Section 35 of the UAPA**, which empowers the Central Government to notify an individual as a terrorist if it believes that the person is involved in terrorism.

Legal points

- **Law**: Unlawful Activities (Prevention) Act, 1967.
- **Provision used**: Section 35.
- **Schedule involved**: Fourth Schedule.
- **Authority**: Central Government / Ministry of Home Affairs.
- **Nature of action**: Individual terrorist designation.
- **Result**: The names of the 23 operatives are added to the **Fourth Schedule** of UAPA.

Why Fourth Schedule matters

- The **First Schedule** of UAPA lists terrorist organisations.
- The **Fourth Schedule** lists individual terrorists.

- Before the 2019 amendment, UAPA mainly enabled the listing of terrorist organisations.
- The **2019 amendment** allowed the Central Government to designate **individuals** as terrorists.

Groups Involved

The 23 individuals are linked mainly to:
Jaish-e-Mohammed

- Pakistan-based terror organisation.
- Active in cross-border terrorism against India.
- Has been linked to attacks on Indian security forces in Jammu & Kashmir.
- Already listed as a terrorist organisation under UAPA.

Lashkar-e-Taiba

- Pakistan-based terror organisation.
- Linked to multiple attacks in India.
- Closely associated with Jamaat-ud-Dawa networks.
- Its founder Hafiz Muhammad Saeed has long been a key figure in India's counter-terrorism concerns.

Associated modules

Some individuals are also alleged to have links with:

- The Resistance Front.
- Jamaat-ud-Dawa.
- Al-Qaeda-linked modules.
- ISIS-linked modules.

Alleged Activities

The designated individuals are accused of supporting terrorism through multiple channels:

Cross-border terrorism

- Facilitating infiltration from Pakistan and Pakistan-occupied Jammu & Kashmir.
- Acting as launching commanders for terrorists entering Jammu & Kashmir.
- Providing safe routes and local logistical backing.

Drone-based arms supply

- Sending arms, ammunition and other consignments across the border using drones.
- Supplying material support to terror modules in Jammu & Kashmir.

Recruitment and radicalisation

- Recruiting youth into JeM and LeT cadres.
- Using social media platforms for online radicalisation.
- Training cadres in encrypted communication and fake identities.

Financing and logistics

- Raising funds for terror activities.
- Collecting and routing money for terror networks.

- Providing weapons, technical support and safe passage.

Attack planning

- Alleged links to attacks on security forces in:
 - Nagrota Army camp.
 - Sunjwan Military Station.
 - Other Jammu & Kashmir security installations.

Additional Info

UAPA, 1967

- India's principal anti-terror legislation.
- Covers unlawful activities, terrorist acts, terrorist organisations and terror financing.
- Provides for investigation, prosecution, seizure and forfeiture of proceeds of terrorism.

Important UAPA provisions

- **Section 15:** Defines terrorist act.
- **Section 35:** Empowers Central Government to list terrorist organisations and individuals.
- **Section 36:** Provides for application to remove a name from the Schedule.
- **First Schedule:** Terrorist organisations.
- **Fourth Schedule:** Individual terrorists.

2019 UAPA Amendment

- Allowed designation of individuals as terrorists.
- Earlier, only organisations could be formally designated.
- Strengthened action against masterminds, handlers, financiers and recruiters who may operate without being formally part of a single organisation.

Centre Launches Amnesty Scheme for Provident Fund Trusts

What's the News?

The **Employees' Provident Fund Organisation** has introduced **Amnesty Scheme, 2026** for establishments running **exempted Provident Fund trusts**. It gives such employers a **one-time six-month window** to regularise PF trusts that are recognised under the income-tax framework but lack a formal exemption notification from the appropriate government.

Amnesty Scheme 2026

- It applies to establishments operating a **Provident Fund Trust** recognised under the **Income Tax Act, 1961**, but without formal exemption approval from the **Central or State Government**.

- The scheme allows **retrospective regularisation** of such PF trusts.
- It aims to reduce:
 - Long-pending compliance disputes.
 - Litigation over PF dues, damages and interest.
 - Regulatory mismatch between income-tax recognition and EPF exemption status.
- Applications must be routed through the concerned **EPFO Regional Office**.

Eligible Establishments

- **Category I:**
 - Establishments seeking retrospective trust regularisation.
 - They have either started compliance as **un-exempted establishments** or are opting for future compliance as un-exempted establishments.
- **Category II:**
 - Establishments seeking retrospective trust regularisation.
 - They want to continue operating as **exempted establishments** under the **Code on Social Security, 2020**.

Benefits

- **Retrospective exemption:**
 - Trust recognition and exemption status may be granted from the inception of the trust up to the notified cut-off point.
- **Waiver of eligibility conditions:**
 - Minimum employee headcount requirement waived.
 - Corpus-size norms waived.
 - Three-year prior compliance condition deemed satisfied.
- **Litigation relief:**
 - Pending assessments for PF dues, damages and interest may be withdrawn or abated.
 - Finalised past orders may be treated as void from the beginning, subject to conditions.
- **Employee protection condition:**
 - Relief is linked to whether member accounts received contributions and interest at rates equal to or better than statutory EPF rates.

Provident Fund Trusts

- A **PF Trust** is an employer-managed retirement savings mechanism.
- Instead of depositing contributions with EPFO, the employer manages

employee PF accumulations through a trust.

- Such trusts must ensure that employee benefits are **not less favourable** than those under the statutory EPF scheme.
- They are usually maintained by large organisations with internal governance capacity.
- They remain subject to:
 - EPFO oversight.
 - Audits and inspections.
 - Statutory record-keeping.
 - Filing of prescribed returns.

Additional Info

- **EPFO:**
- Full form: Employees' Provident Fund Organisation.
- Works under: Ministry of Labour and Employment.
- Administers provident fund, pension and insurance schemes for covered employees.
- **EPF & MP Act, 1952:**
- Full form: Employees' Provident Funds and Miscellaneous Provisions Act, 1952.
- Provides the statutory framework for employee provident fund, pension and insurance benefits.
- **Section 17 of EPF & MP Act, 1952:**
 - Deals with exemption from the statutory EPF scheme.
 - Exempted establishments must provide benefits at least equal to those under the EPF scheme.
- **Code on Social Security, 2020:**
 - Consolidates laws relating to social security, including provident fund provisions.
 - Relevant provision: **Section 143**, linked with exemption-related treatment.
- **Employer obligations under the scheme:**
 - Submit formal application to the Central Government through EPFO Regional Office.
 - Ensure financial accounts are audited by a Chartered Accountant.
 - Complete special or compliance audits directed by EPFO within **three months** of application.

DoT Disconnects Over Five Crore Fraudulent Mobile Connections

What's the News?

The **Department of Telecommunications (DoT)** has disconnected more than **five crore fraudulent mobile connections** as

part of a nationwide campaign against telecom-enabled cybercrime.

The anti-fraud measures have also:

- Helped prevent potential cyber frauds exceeding **₹1,800 crore**.
- Facilitated the recovery of more than **12 lakh** lost or stolen mobile phones.
- Targeted fake SIM networks used for phishing, digital-arrest scams, identity theft, OTP fraud and financial impersonation.

DoT also inaugurated its **first Network Security Laboratory** in Hyderabad to strengthen telecom-security research, threat analysis and technical capacity.

Financial Fraud Risk Indicator

The **Financial Fraud Risk Indicator (FRI)** is a risk-based metric developed by DoT's **Digital Intelligence Unit**.

- It classifies mobile numbers according to their association with financial fraud as:
 - Medium risk
 - High risk
 - Very high risk
- The classification uses information received from:
 - National Cybercrime Reporting Portal
 - DoT's Chakshu facility
 - Banks and financial institutions
 - Telecom and law-enforcement intelligence
- Banks, NBFCs and UPI service providers can use the indicator to:
 - Generate customer alerts
 - Delay suspicious transactions
 - Conduct enhanced verification
 - Decline high-risk transactions
 - Restrict fraud-linked accounts

The FRI supports a shift from investigation after fraud to **real-time preventive intervention**.

Sanchar Saathi Platform

Sanchar Saathi is DoT's citizen-centric digital-safety platform. Its important components include:

- **TAF COP**
 - Allows citizens to check mobile connections registered in their name.
 - Enables reporting of unauthorised or unknown connections.
- **Central Equipment Identity Register**
 - Uses a handset's **International Mobile Equipment Identity number** to block lost or stolen devices across telecom networks.

- Prevents blocked devices from being reused with another SIM card.

- **Chakshu**

- Allows citizens to report suspected fraudulent communications received through calls, SMS or messaging applications.
- Covers impersonation, fake KYC updates, malicious links and financial scams.

Network Security Laboratory

The Network Security Laboratory established at the DoT's **Andhra Pradesh Licensed Service Area office in Hyderabad** is the first such facility under the department.

Its functions include:

- Telecom-network vulnerability analysis
- Cyber-threat research
- Capacity building and technical training
- Live demonstration of security solutions
- Support for investigations into telecom-enabled cybercrime
- Development of responses to emerging network-security threats

Andhra Pradesh Licensed Service Area

The Andhra Pradesh Licensed Service Area emerged as DoT's best-performing service-area unit in telecom-security enforcement during **2025-26**.

Key achievements included:

- Dismantling **11 illegal telecom and cybercrime networks**.
- Recovering approximately **2.04 lakh** lost or stolen mobile phones—the highest recovery by any DoT Licensed Service Area.
- Coordinating with telecom operators, banks and law-enforcement agencies against fraudulent SIM and communication networks.

Additional Information

- **Department of Telecommunications**
 - Functions under the **Ministry of Communications**.
 - Formulates telecom policies and administers spectrum, licensing, network security and subscriber-verification frameworks.
- **Licensed Service Area**
 - A defined geographical area used for administering telecom licences and services.
 - DoT field units in these areas undertake compliance monitoring, security enforcement and

coordination with telecom service providers.

- **Ghost SIM Network**

- A network of SIM cards obtained through forged, stolen or misused identity credentials.
- Such connections provide criminals with temporary and difficult-to-trace communication channels.

- **Operation Octopus 3.0**

- A coordinated enforcement initiative highlighted by Hyderabad Police.
- It targets organised cybercrime syndicates and telecom-enabled financial-fraud networks.

Centre Tightens ISRO Scientist Exit Rules Amid Reported Resignations

What's the News?

The Department of Space has tightened rules for resignation and voluntary retirement of ISRO scientists and technical personnel working on critical missions such as **Gaganyaan**. The move follows reports that over **100 scientists** have left or sought to leave ISRO in recent months, raising concerns over continuity in nationally important space projects.

New Exit Rules?

- The revised procedure applies to **Group 'A' scientific and technical personnel** associated with major ISRO missions.
- ISRO centre directors can no longer routinely approve resignation or voluntary retirement requests.
- Such requests must now be forwarded to the **Department of Space** with clear recommendations from the concerned centre or unit head.
- The final decision will rest with the Department of Space.
- The change reverses the earlier administrative arrangement that had delegated such approval powers to ISRO centre directors.

Why Was It Tightened?

- Reports suggest that **100–120 scientists** may have resigned or sought voluntary retirement in recent months.
- Major exits were reported from:
 - **U R Rao Satellite Centre**, Bengaluru.
 - **Vikram Sarabhai Space Centre**, Thiruvananthapuram.
- Some reported exits involved personnel linked with projects such as:

- **Gaganyaan**.
- **LVM3**.
- **SpaDeX**.
- **Chandrayaan-3-related work**.

- The objective is to prevent sudden disruption in mission-critical projects.

Impact on ISRO Missions

- The government has indicated that the move is administrative in nature and meant to ensure continuity.
- ISRO leadership has stated that departures are part of organisational functioning and that project responsibilities can be reassigned.
- However, loss of experienced personnel may create short-term delays or knowledge-transfer gaps, especially in high-complexity missions.

Additional Info

- **ISRO**
 - Full form: **Indian Space Research Organisation**.
 - Functions under the **Department of Space**, Government of India.
 - Roles:
 - Space launch systems.
 - Satellite development.
 - Space science missions.
 - Remote sensing and navigation.
 - Human spaceflight programme.
- **Gaganyaan Mission**
 - India's human spaceflight programme.
 - Involves crew module, human-rating of launch vehicle, life-support systems, crew escape system and recovery operations.
 - High dependence on specialised engineering and mission-management expertise.
- **Important ISRO Centres**
 - **VSSC**: Launch vehicle development.
 - **URSC**: Satellite design and development.
 - **SDSC-SHAR**: Launch base at Sriharikota.
 - **LPSC**: Liquid and cryogenic propulsion systems.
 - **SAC**: Space applications, payloads and communication systems.
- **Private Space Sector Link**
 - India opened the space sector to greater private participation in 2020.

- The **Indian Space Policy, 2023** clarified roles for ISRO, IN-SPACe, NSIL and private players.
- Growth of private space firms may increase demand for experienced space scientists and engineers.

India Mandates Local Storage of Telecom-Network Data

What's the News?

- The Union Government has prohibited authorised communication-infrastructure providers from routing, sharing or making copies of telecom-network data, logs and related information available outside India.
- The data-localisation requirement is part of the **Telecommunications (Authorisation for Telecommunication Network) Rules, 2026**, administered by the Department of Telecommunications.
- It covers infrastructure such as cloud-hosted telecom networks, mobile towers, internet exchange points and satellite earth-station gateways. Providers using overseas storage or network-management systems may consequently need to localise their data architecture.

Telecom-Network Authorisation Framework

The framework replaces the earlier licence- and registration-oriented system with authorisations under the **Telecommunications Act, 2023**.

It provides six categories of authorisation:

1. Infrastructure provider
2. Digital connectivity infrastructure provider
3. Internet exchange point provider
4. Satellite earth-station gateway provider
5. Cloud-hosted telecommunication network provider
6. Mobile number portability provider

The first five operate over the **national area**, while mobile-number-portability authorisation is granted for specified zones. An authorisation may remain valid for a maximum of **20 years**, subject to applicable conditions.

Data Localisation and Remote Access

- All telecom-network systems and associated data, logs and information must be stored within India.
- No copy may be routed, shared or made available outside India.
- Remote access from abroad requires prior Central Government permission

and is limited to approved locations, persons, purposes and duration.

- Such access cannot provide entry to lawful-interception systems, call-detail records, message content or other notified sensitive data.
- A complete audit trail of overseas remote-access activity must be retained in India for **six months**.

Inspection and Compliance

- The Central Government may inspect sites containing telecom equipment, including installations located on a user's premises.
- It may audit the systems and processes of authorised entities through a designated agency.
- Prior notice may be dispensed with when immediate action is considered necessary in the public interest.
- Delays in receiving **Right of Way** permission cannot be used as grounds for non-compliance with authorisation obligations.
- A breach may result in civil penalties or the suspension, curtailment or revocation of authorisation under Section 32 of the Telecommunications Act, 2023.

Authorisation Fees

- **Processing fee:** ₹10,000 for each category.
- **Entry fee:**
 - Infrastructure provider: Nil
 - Internet exchange point provider: Nil
 - Digital connectivity infrastructure provider: ₹10 lakh
 - Satellite earth-station gateway provider: ₹10 lakh
 - Cloud-hosted telecom-network provider: ₹10 lakh
 - Mobile number portability provider: ₹50 lakh
- Mobile-number-portability providers must also furnish an initial guarantee of **₹40 lakh**.

Additional Info

- **Department of Telecommunications**
 - Functions under the **Ministry of Communications**.
 - Formulates telecom policy and administers authorisations, spectrum and network-security requirements.
- **Telecommunications Act, 2023**
 - **Section 3:** Requires Central Government authorisation for providing telecom services, establishing or operating

telecom networks, and possessing specified radio equipment.

- **Section 19:** Empowers the Centre to notify standards for telecom equipment, networks, cybersecurity, encryption and data processing.
- **Section 32:** Provides for civil penalties and recommendations concerning suspension or revocation for breach of authorisation conditions.

Dharmendra Pradhan Resigns Amid Student Protests; Pralhad Joshi Gets Education Ministry Charge

What's the News?

- **Dharmendra Pradhan resigned from the Union Council of Ministers** amid sustained student protests over alleged irregularities and a paper leak in **NEET-UG 2026**.
- The protests, led prominently by the **Cockroach Janta Party (CJP)**, demanded Pradhan's resignation, accountability for examination irregularities and reforms in the national examination system.
- President **Droupadi Murmu accepted Pradhan's resignation** on the advice of Prime Minister Narendra Modi.
- Union Cabinet Minister **Pralhad Joshi was assigned the additional charge of the Ministry of Education** while retaining his existing portfolios.
- Following the resignation and government assurances, the CJP called off its agitation at Delhi's Jantar Mantar.

Why Did Dharmendra Pradhan Resign?

- The immediate trigger was the controversy surrounding the alleged **NEET-UG 2026 paper leak and examination irregularities**.
- Student groups accused the government of failing to ensure examination integrity and demanded political as well as administrative accountability.
- The agitation expanded from Delhi to other cities and included demonstrations, sit-ins, hunger strikes and a proposed march towards Parliament.
- Pradhan stated that he had resigned to protect students' interests, prevent further disruption and ensure that students did not become entangled in legal and political disputes.

- His resignation became one of the most significant outcomes of the weeks-long youth-led protest movement.

Government Response to the NEET Crisis

The government announced several measures following the alleged examination irregularities:

- Transfer of the investigation to the **Central Bureau of Investigation**.
- Cancellation of the affected examination and announcement of a re-examination.
- Proposed shift of future NEET examinations to **Computer-Based Test mode**.
- Restructuring of the **National Testing Agency**.
- Strengthening examination security and action against officials connected with administrative failures.

Pralhad Joshi's New Responsibility

- Pralhad Joshi has been given the Education Ministry as an **additional charge**, indicating that the arrangement may be interim.
- He continues to hold the portfolios of:
 - Consumer Affairs, Food and Public Distribution
 - New and Renewable Energy
- Joshi is a five-time Lok Sabha member representing **Dharwad, Karnataka**.
- His immediate responsibilities include:
 - Restoring confidence in national entrance examinations
 - Restructuring the NTA
 - Implementing examination-security reforms
 - Supervising the transition to computer-based testing
 - Continuing the implementation of the National Education Policy 2020.

Constitutional Provisions

- **Article 74:** Provides for a Council of Ministers headed by the Prime Minister to aid and advise the President.
- **Article 75(1):** Union ministers are appointed by the President on the advice of the Prime Minister.
- **Article 75(2):** Ministers hold office during the pleasure of the President.
- **Article 75(3):** The Council of Ministers is collectively responsible to the Lok Sabha.
- **Article 77(3):** Authorises the President to make rules for allocating Union government business among ministers.

Additional Info

• NEET-UG

- National-level entrance examination for admission to undergraduate medical courses.
- Conducted by the **National Testing Agency**.
- Covers admissions to courses such as MBBS, BDS and other undergraduate medical programmes.

• Ministry of Education

- Consists of:
 - Department of School Education and Literacy
 - Department of Higher Education

• Public Examinations (Prevention of Unfair Means) Act, 2024

- Seeks to prevent paper leaks, organised cheating and other unfair practices in public examinations.
- Covers examinations conducted by specified central authorities, including the NTA, UPSC, SSC, Railway Recruitment Boards and IBPS.
- Provides imprisonment of **three to five years** and a fine of up to **₹10 lakh** for specified offences.
- Organised examination crime can attract imprisonment of **five to ten years** and a minimum fine of **₹1 crore**.

Supreme Court Restricts Online Sharing of Court-Hearing Recordings

What's the News?

- The Supreme Court issued an **interim order** restricting the unauthorised use of audio-video recordings of judicial proceedings on social media and other digital platforms.
- Recordings or clips cannot be extracted, altered, posted, reposted, uploaded, circulated or monetised without prior permission from the authorised court official.
- Permission must be obtained from the **Secretary General of the Supreme Court** or the **Registrar General of the jurisdictional High Court**, as applicable.
- The Court clarified that the direction does **not restrict bona fide and accurate news reporting** of judicial proceedings.

- The order was passed by a three-judge Bench comprising Chief Justice of India **Surya Kant** and Justices **Joymalya Bagchi** and **V. Mohana**.

What Does the Order Restrict?

Without prior judicial permission, users and digital platforms cannot:

- Record live-streamed proceedings
- Extract selected portions from recordings
- Edit or modify courtroom clips
- Post, repost or upload such material
- Disseminate recordings through social media
- Monetise or commercially exploit the content
- Create misleading or decontextualised versions of courtroom exchanges

The restriction applies to **social media as well as other digital platforms**. It regulates the reuse of judicial recordings rather than imposing a complete ban on court live-streaming.

Why Was the Restriction Imposed?

The Court was concerned that selective courtroom clips were being:

- Circulated without the factual or legal context of the hearing
- Combined with misleading captions and sensational commentary
- Used as memes, shorts and entertainment content
- Monetised for engagement and commercial gain
- Used to target judges, lawyers and litigants through trolling
- Manipulated through artificial-intelligence tools

Such practices can distort preliminary oral observations and present them as final judicial conclusions, thereby affecting the dignity of courts and public confidence in the justice-delivery system.

Public Interest Litigation

- The interim direction arose from a **Public Interest Litigation filed by journalist Harshita Grover**.
- The petition sought safeguards governing the clipping, editing, dissemination and commercial use of recordings of judicial proceedings.
- It argued that live-streaming promotes transparency, but the absence of effective controls over republication has enabled sensationalism and misinformation.
- The petition was filed under **Article 32 of the Constitution**, which empowers individuals to approach the Supreme

Court for enforcement of fundamental rights.

What Is Exempted?

News Reporting

The Court expressly stated that its order would have **no bearing on news reporting**. This means journalists may continue to:

- Report courtroom developments
- Summarise submissions and observations
- Analyse judicial proceedings
- Publish fair and accurate accounts of hearings

However, the exemption does not automatically permit the unauthorised reproduction or commercial circulation of official audio-video recordings.

Official Use

The Supreme Court and High Courts may continue to:

- Record proceedings
- Maintain audiovisual archives
- Provide authorised access
- Publish official live streams
- Permit specific uses under their respective rules

Further Directions

The Supreme Court also:

- Sought responses from the Union government and other stakeholders.
- Issued notice to digital intermediaries, including **Meta and X**.
- Asked High Courts to report whether they had adopted the Supreme Court's model live-streaming rules.
- Sought information on the impact of continuous live-streaming of courtroom proceedings.
- Directed that the interim order be displayed on the websites of the Supreme Court and High Courts.

Open Justice and Live-Streaming

The **open-court principle** requires judicial proceedings ordinarily to remain accessible to the public. It promotes:

- Transparency
- Judicial accountability
- Public confidence
- Legal education
- Accurate public understanding of courts

In **Swapnil Tripathi v. Supreme Court of India**, the Supreme Court supported live-streaming of proceedings, particularly matters of constitutional and national importance, subject to safeguards.

The Court's guidelines also recognised that:

- Courts retain control over official recordings.
- Unauthorised recording is prohibited.

- Re-editing, redistribution and derivative use require permission.
- Sensitive proceedings may be excluded from live-streaming.
- The presiding judge may suspend streaming when required in the interests of justice.

Interim Order

An **interim order** is a temporary judicial direction issued while a case remains pending.

Therefore:

- The present restriction is not the Court's final judgment on the PIL.
- It remains operative until modified, replaced or confirmed by a subsequent order.
- A broader regulatory framework may be considered after responses are received from the government, High Courts and digital platforms.

Additional Info

- **Article 124**
 - Provides for the establishment and constitution of the Supreme Court.
- **Article 129**
 - Declares the Supreme Court a court of record.
 - Gives it the power to punish for contempt of itself.
- **Article 215**
 - Declares every High Court a court of record.
 - Gives High Courts contempt jurisdiction.
- **Article 19(1)(a)**
 - Guarantees freedom of speech and expression.
 - Includes freedom of the press, subject to reasonable restrictions under Article 19(2).
- **Public Interest Litigation**
 - Allows public-spirited persons to approach constitutional courts on matters affecting public interest.
 - The Supreme Court may be approached under Article 32 and High Courts under Article 226.

India Plans 44-Airport Hub-and-Spoke Aviation Network

What's the News?

- The Union Government plans to develop a **44-airport aviation network**, comprising **4 hub airports and 40 spoke airports**, to improve international

connectivity from Tier-II and Tier-III cities.

- **Delhi** is presently operating as the hub, while **Varanasi** and **Amritsar** are the initial spoke airports.
- Air India has introduced **Easy Connect** services from Amritsar, following their launch from Varanasi.
- Under the Amritsar service, passengers can connect through Delhi to **27 international destinations**. Ahmedabad is expected to become the next spoke, followed by services from Goa, Kochi and other cities.

Hub-and-Spoke Model?

The Hub-and-Spoke model organises air traffic around:

- **Hub airports:** Major airports handling high passenger volumes, international flights and connecting traffic.
- **Spoke airports:** Regional airports that feed passengers into a hub for onward domestic or international travel.

Instead of operating direct international flights from every smaller city, passengers are consolidated at major Indian hubs. This can increase aircraft utilisation, improve route viability and provide smaller cities with access to more destinations.

Easy Connect Service

Under Air India's Easy Connect arrangement:

- Passengers complete **check-in, immigration and customs formalities** at the originating spoke airport.
- Baggage is tagged through to the final international destination.
- Passengers transfer at Delhi without rechecking baggage or changing terminals.
- International connections from Amritsar are scheduled within approximately **four hours of arrival at Delhi**.
- Two daily Easy Connect flights are planned from Amritsar.

Present Network

Component	Current position
Planned network	4 hubs and 40 spokes
Operational hub	Delhi
First spoke	Varanasi
Second spoke	Amritsar
Next proposed spoke	Ahmedabad
Other planned cities	Goa and Kochi
Amritsar connectivity	27 international destinations through Delhi

The remaining three hub airports under the specific 44-airport plan have not been formally identified in the provided reports.

Why Is It Important?

- **Regional international connectivity:** Tier-II and Tier-III passengers can begin international journeys from their local airports.
- **Reduced dependence on foreign hubs:** More Indian passengers can transit through Delhi and other future Indian hubs instead of Dubai, Doha, Singapore or European airports.
- **Airline efficiency:** Airlines can consolidate passengers before deploying larger aircraft on international routes.
- **Passenger convenience:** Through check-in and baggage transfer reduce repeated formalities at the hub.
- **Economic impact:** Better connectivity can support tourism, trade, investment, employment and regional development.
- **Aviation sovereignty:** A larger share of India-related international passenger traffic and expenditure can be retained within the domestic aviation ecosystem.

Additional Information

- **International Aviation Hub Strategy**
 - Seeks to position India as an aviation hub of choice for Indian passengers by **2030** and a major global aviation hub by **2047**.
 - Focuses on stronger Indian airlines, efficient passenger transfers, competitive airports and greater retention of international transit traffic.
- **National Civil Aviation Policy, 2016**
 - Provides the broad policy framework for expanding regional connectivity and developing India as an international aviation hub.
 - Supports code-sharing, bilateral air-service arrangements and improved airport infrastructure.
- **Relation with UDAN**
 - **UDAN—Ude Desh ka Aam Nagrik** improves affordable regional air connectivity.
 - The hub-and-spoke strategy can use airports developed or operationalised under UDAN to connect regional passengers with international networks.
 - UDAN primarily strengthens regional routes, while the hub-

and-spoke model focuses on coordinated domestic-to-international transfers.

• Key Institutions

- **Ministry of Civil Aviation:** Policy formulation and coordination.
- **Airports Authority of India:** Airport infrastructure and air-navigation services.
- **DGCA:** Aviation safety and operational regulation.
- **BCAS:** Civil aviation security standards.
- **Bureau of Immigration and Customs:** Passenger and baggage clearance at spoke airports.

One Nation, One Election Panel Gets Extension to Submit Report

What's the News?

- The Lok Sabha has extended the deadline for the **Joint Parliamentary Committee (JPC)** examining the proposed *One Nation, One Election* framework.
- The extension was approved through a **voice vote** after committee chairperson **P. P. Chaudhary** moved a resolution seeking additional time.
- The **41-member committee** will now submit its report by the first day of the final week of Parliament's upcoming Winter Session.
- The panel is conducting nationwide consultations on synchronising elections to the Lok Sabha, State Legislative Assemblies and, under the broader roadmap, local bodies.

Bills Under Examination

Constitution (129th Amendment) Bill, 2024

The Bill proposes to:

- Insert **Article 82A** to provide for simultaneous elections to the Lok Sabha and State Legislative Assemblies.
- Amend:
 - **Article 83:** Duration of the Houses of Parliament.
 - **Article 172:** Duration of State Legislatures.
 - **Article 327:** Parliament's power to make laws relating to elections.
- Authorise the President to notify the commencement of the simultaneous-election cycle on the first sitting of the Lok Sabha following a general election.
- Align the terms of State Assemblies with the term of the Lok Sabha.

- Limit the tenure of a House elected after premature dissolution to the **unexpired portion of the common five-year cycle**.

Union Territories Laws (Amendment) Bill, 2024

The accompanying Bill seeks to extend the simultaneous-election framework to the Legislative Assemblies of:

- Delhi
- Puducherry
- Jammu and Kashmir

It proposes amendments to the Government of Union Territories Act, 1963; Government of National Capital Territory of Delhi Act, 1991; and Jammu and Kashmir Reorganisation Act, 2019.

Election Deferral Mechanism

- If the **Election Commission of India (ECI)** considers it impracticable to hold a State Assembly election along with the Lok Sabha election, it may recommend postponement to the President.
- The President may permit the election to be conducted later.
- Even after deferment, the Assembly's term would end with the Lok Sabha constituted during that simultaneous-election cycle.

Joint Parliamentary Committee

- A JPC is an **ad hoc parliamentary committee** comprising members from both the Lok Sabha and Rajya Sabha.
- It undertakes detailed scrutiny of a Bill, examines documents and consults officials, experts and other stakeholders.
- Its report is **recommendatory**; Parliament may accept, modify or reject its recommendations.
- The extension enables the committee to complete its consultations and examine safeguards relating to premature dissolution, government stability, anti-defection provisions and constructive votes of no-confidence.

Additional Info

Historical Background

- Lok Sabha and State Assembly elections were conducted together in **1951–52, 1957, 1962 and 1967**.
- The cycle was disrupted following the premature dissolution of some State Assemblies and the early dissolution of the Fourth Lok Sabha.

High-Level Committee Recommendations

The High-Level Committee headed by former President **Ram Nath Kovind** recommended implementation in two stages:

1. Simultaneous elections to the Lok Sabha and State Assemblies.
2. Municipal and Panchayat elections within **100 days** of the Lok Sabha-Assembly elections.

Key Metrics

- Around **five to six State Assembly elections** are conducted in India annually.
- An earlier ECI estimate placed government expenditure on Lok Sabha and Assembly elections at approximately **₹4,500 crore**.
- The Lok Sabha election process extended across **43 days** in 2024, compared with much shorter election schedules in earlier decades.

Birth and Death Registration Bill Proposes Stricter Rules for Long Delays

What's the News?

- The **Registration of Births and Deaths (Amendment) Bill, 2026** has been introduced in the Lok Sabha by Minister of State for Home Affairs **Nityanand Rai**.
- It seeks to amend **Section 13(3)** of the Registration of Births and Deaths Act, 1969.
- Registration reported **more than two years after a birth or death** would require an order from a **Judicial Magistrate of the First Class (JMFC)**.
- The objective is to strengthen verification, discourage excessive delays and improve the reliability of India's civil-registration records.
- The Bill is currently pending before Parliament and will not become operational until enacted and notified.

Revised Delayed-Registration Framework

Reporting period	Proposed requirement
Within the prescribed normal period—generally 21 days	Regular registration
After 21 days but within 30 days	Registration on payment of the prescribed late fee
After 30 days but within one year	Written permission of the District Registrar or prescribed authority, supporting documents and fee

After one year but within two years	Order of the DM, SDM or an Executive Magistrate authorised by the DM
After two years	Order of a Judicial Magistrate of the First Class

For registrations delayed by more than one year, the competent authority must verify the correctness of the birth or death, and the prescribed fee must be paid.

What Changes?

Existing Provision

Under the existing Act, every registration delayed by **more than one year** may be authorised by:

- District Magistrate;
- Sub-Divisional Magistrate; or
- Executive Magistrate authorised by the District Magistrate.

Proposed Provision

The Bill divides such cases into two categories:

- **One to two years:** Executive authorities will continue to approve registration.
- **Beyond two years:** Approval shifts to a **JMFC**, introducing judicial scrutiny for exceptionally delayed claims.

The Bill also updates the definition of an Executive Magistrate by referring to **Section 14(1) of the Bharatiya Nagarik Suraksha Sanhita, 2023**.

Registration of Births and Deaths Act, 1969

- It is the principal legislation regulating the compulsory registration of:
 - Births;
 - Deaths; and
 - Stillbirths.
- It is administered by the **Ministry of Home Affairs** through the **Registrar General of India**.
- States and Union Territories implement registration through Chief Registrars, District Registrars and local Registrars.
- Birth and death certificates are admissible as evidence for proving the occurrence of the respective vital event.

Additional Info

Constitutional Provision

- **Seventh Schedule, Concurrent List, Entry 30:**

“Vital statistics including registration of births and deaths.”

- Therefore, both Parliament and State Legislatures can make laws on the subject, subject to constitutional rules governing repugnancy.

Major Changes Introduced in 2023

The 2023 amendment:

- Established national- and state-level databases of registered births and deaths.
- Enabled electronic registration and electronic issuance of certificates.
- Made the birth certificate the primary document for proving the date and place of birth of persons born after the amendment commenced, for purposes including:
 - Admission to educational institutions;
 - Driving licence;
 - Voter-list preparation;
 - Aadhaar and passport;
 - Marriage registration; and
 - Government employment.

Civil Registration System

- The **Civil Registration System (CRS)** continuously records births, deaths and stillbirths.
- Its data support:
 - Population and mortality statistics;
 - Public-health planning;
 - Electoral-roll updating;
 - Welfare-service delivery; and
 - Demographic policy formulation.

Centre Tightens “One Officer, One Official Car” Policy

What’s the News?

- The **Department of Expenditure**, Ministry of Finance, has issued additional instructions governing the use of staff cars in Central government offices.
- An officer already using an entitled official car for their regular post cannot receive another vehicle merely because they hold additional charge in another ministry, department, attached or subordinate office, autonomous body or public sector undertaking.
- Unutilised government vehicles must be kept in safe custody.
- Central government officials cannot keep vehicles belonging to PSUs, government undertakings, autonomous organisations or quasi-government bodies at their disposal, except while on an official tour.
- The instructions seek to optimise vehicle utilisation, prevent misuse of public assets and avoid overlapping vehicle entitlements.

Key Instructions

One Officer, One Car

- Eligibility for an additional official position will not automatically create a second vehicle entitlement.
- An officer holding multiple charges must ordinarily use the staff car already allotted for the regular post.
- The restriction covers additional charge in:
 - Another ministry or department;
 - Attached or subordinate offices;
 - Autonomous bodies; and
 - Public sector undertakings.

Restrictions on Other Organisations’ Vehicles

Central government officials cannot routinely retain vehicles owned by:

- Government undertakings;
- Quasi-government organisations;
- Autonomous organisations; or
- Public sector undertakings.

The stated exception applies when the official is **on tour**. Thus, the order does not prohibit authorised vehicle use during an official tour; it prevents vehicles of other public bodies from being kept permanently at an officer’s disposal.

Idle Vehicle Management

- Vehicles not being utilised must be placed in **safe custody**.
- This is intended to reduce:
 - Unauthorised use;
 - Informal diversion of vehicles;
 - Duplicate allocation; and
 - Avoidable operating and maintenance expenditure.

Scope of the Order

- The instructions apply to **Central government ministries and departments**.
- The memorandum was also circulated to:
 - Financial advisers of ministries and departments;
 - Private secretaries to Union ministers; and
 - Other offices covered by the government’s standard circulation system.

- It supplements the consolidated staff-car instructions issued by the Department of Expenditure in 2022.

Additional Info

Department of Expenditure

- It functions under the **Ministry of Finance**.
- It is the nodal department for the Central government’s public financial-management system.
- Its responsibilities include expenditure control, financial rules, government allowances and

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administrative instructions relating to public resources.

Office Memorandum

- An **Office Memorandum**, or OM, is an executive-administrative communication used to issue instructions, clarifications or procedures within the government.
- The present measure is an administrative instruction and not a separate Act of Parliament.
- The memorandum was issued with the approval of the **Secretary, Department of Expenditure**.

Parliament Passes Bill Protecting Vande Mataram from Intentional Disruption

What's the News?

Parliament has passed the **Prevention of Insults to National Honour (Amendment) Bill, 2026**, extending statutory protection to the National Song, *Vande Mataram*.

The Rajya Sabha cleared the Bill by voice vote amid an Opposition walkout. The Lok Sabha subsequently approved it, and the Bill now requires the **President's assent** to become law.

What Does the Bill Provide?

The Bill substitutes **Section 3** of the Prevention of Insults to National Honour Act, 1971. It makes the following intentional acts punishable:

- Preventing the singing of the National Anthem or National Song.
- Disturbing an assembly engaged in singing either of them.

Punishment

- Imprisonment for up to **three years**; or
- Fine; or
- Both.

The punishment is unchanged from the existing provision governing the National Anthem.

Scope of the Offence

Despite headlines referring broadly to "insulting" *Vande Mataram*, the Bill's operative provision is narrower. It specifically penalises **intentional prevention or disruption of its singing**.

It does not expressly:

- Criminalise every expression of criticism concerning the song.
- Make singing *Vande Mataram* compulsory for every individual.
- Create a separate offence merely for remaining silent without disrupting others.

These distinctions arise from the actual wording of the proposed Section 3.

National Honour Act, 1971

The existing central legislation protects major national symbols:

- **Section 2:** Penalises specified forms of disrespect to the National Flag and the Constitution.
- **Section 3:** Penalises intentional prevention or disturbance of the singing of the National Anthem.
- **Section 3A:** For a second or subsequent conviction under Sections 2 or 3, imprisonment must be at least **one year**.

Once enacted, the amended Section 3 will cover both the National Anthem and the National Song.

Why Was the Amendment Introduced?

The Statement of Objects and Reasons notes that:

- *Vande Mataram* played a significant role in the freedom struggle.
- Constituent Assembly President **Dr Rajendra Prasad** stated that it should be honoured equally with *Jana Gana Mana*.
- Unlike the National Anthem, the National Song previously had no specific penal protection against intentional disruption of its singing.

Constitutional Context

- **Article 19(1)(a):** Freedom of speech and expression.
- **Article 19(2):** Permits reasonable restrictions on specified grounds, including public order and the sovereignty and integrity of India.
- **Article 25:** Freedom of conscience and religion, subject to public order, morality and health.
- **Article 51A(a):** Fundamental duty to respect the Constitution, its institutions, the National Flag and the National Anthem.
 - The provision does not expressly mention the National Song.

Bijoe Emmanuel v. State of Kerala

The Supreme Court held that students who stood respectfully but did not sing the National Anthem could not be punished merely for non-participation based on a genuine conscientious religious belief. The Court distinguished **respectful silence** from intentionally preventing or disturbing the singing. This principle may be relevant when courts interpret the amended provision, although its specific application to *Vande Mataram* would depend on future judicial interpretation.

Additional Info

- **Vande Mataram**

- Written by **Bankim Chandra Chattopadhyay**.
- Published in his novel *Anandamath*.
- Recognised as India's **National Song**.
- The official version prescribed by the Ministry of Home Affairs has a playing time of approximately **3 minutes and 10 seconds**.
- When the National Song and National Anthem are both performed, the National Song is played or sung first.

India Introduces Safety and Liability Rules for Spacecraft Re-entry

What's the News?

The **Indian National Space Promotion and Authorisation Centre (IN-SPACe)** has issued a regulatory framework for the planned atmospheric re-entry of satellites, rocket stages, capsules and other space objects.

Prior IN-SPACe authorisation is required for planned re-entry missions undertaken by Indian entities. The framework establishes a **human-casualty risk limit of less than 1 in 10,000**, while placing responsibility for third-party damage on the mission operator.

Planned Re-entry?

A planned re-entry is an intentional return of a space object into Earth's atmosphere in which the operator can fully or partially control:

- Re-entry timing and trajectory.
- Probable impact or landing area.
- Survival and recovery of the spacecraft or its components.

It may cover re-entry capsules, reusable spacecraft, cargo-return vehicles, experimental payloads, rocket stages and future crewed missions.

Safety Requirements

Operators must demonstrate that the **expected casualty risk** from a re-entry is below:

- **1 in 10,000**, or
- **10^{-4} per re-entry event**.

This refers to the probability that surviving spacecraft debris could cause at least one human casualty, not merely the probability that debris will reach Earth.

Applications must include:

- Spacecraft design and physical characteristics.

- De-orbit and re-entry strategy.
- Predicted re-entry corridor and impact zones.
- Fragmentation and debris-survivability analysis.
- Ground-casualty risk assessment.
- Tracking and monitoring arrangements.
- Environmental and hazardous-material assessment.
- Ability to alter or abort the re-entry sequence during an anomaly.

The **1-in-10,000 threshold** is also used by several international space regulators and the European Space Agency as a benchmark for re-entry safety.

Authorisation Process

- Indian entities require IN-SPACe approval even when the planned re-entry occurs outside Indian territory.
- Foreign entities planning re-entry within Indian territory must apply through an **Indian-incorporated entity**, such as a subsidiary or joint venture.
- When re-entry is planned after launch, the operator must generally apply at least **six months in advance**.
- Risk calculations must be updated closer to the proposed re-entry, including approximately **three months before the event**.
- Operators must coordinate with aviation and maritime authorities.
 - **Notice to Air Missions-NOTAM**
 - Maritime danger-zone notification
 - Such notifications are expected around **45 days before re-entry**.

Liability and Insurance

The operator will bear responsibility for damage caused by the spacecraft or its surviving debris, including damage to:

- Persons and property on Earth.
- Aircraft in flight.
- Ships and maritime infrastructure.
- Assets located outside India.

Operators must maintain adequate insurance, including third-party liability coverage where prescribed, and ensure that the re-entry operation does not expose the Government of India to avoidable financial liability.

International-Law Position

Domestic transfer of financial liability to a private operator does not eliminate India's obligations under international space law.

Outer Space Treaty

- Article VI makes states internationally responsible for national space activities,

including those conducted by private entities.

- Private space activities require state authorisation and continuing supervision.
- Article VII provides for international liability for damage caused by a state's space objects.

- **Liability Convention, 1972**

- A launching state has **absolute liability** for damage caused by its space object on Earth or to aircraft in flight.
- Liability for damage caused to another space object in outer space is generally fault-based.
- India may therefore face an international claim and subsequently recover the amount from the responsible operator under domestic authorisation and indemnity arrangements.

Which Re-entries Are Exempt?

Separate re-entry authorisation is generally not required where:

- A satellite naturally re-enters because of orbital decay.
- Re-entry forms part of routine post-mission disposal.
- The spacecraft is expected to burn up substantially or completely.
- Surviving debris and casualty risk are minimal.

However, the disposal method must be included in the mission's **space-debris mitigation plan** submitted to IN-SPACe.

Additional Info

- **IN-SPACe**

- Autonomous government organisation under the **Department of Space**.
- Acts as the single-window agency for promoting, authorising and supervising non-governmental space activities.

- Authorises planned re-entry of space objects with or without recovery.

- **Indian Space Policy 2023**

- Opened a wider range of space activities to non-government entities.
- Separates major institutional roles:
 - **IN-SPACe:** Promotion and authorisation.
 - **ISRO:** Research, development and advanced space technologies.
 - **NewSpace India Limited:** Commercialisation of publicly developed technologies.
 - **Department of Space:** Overall policy and implementation.

Social Issues

India's Social Protection Coverage Crosses 100 Crore

What's the News?

India's social protection system now covers **over 100 crore people**, equivalent to around **68.4% of the population**, according to government figures based on the International Labour Organization's running estimates.

ILO Director-General **Gilbert F. Hounbo** acknowledged the milestone during the **12th BRICS Labour and Employment Ministers' Meeting** in Hyderabad. Union Minister for Labour and Employment **Mansukh Mandaviya** stated that coverage had increased from approximately **25 crore people, or 19% of the population, in 2015**.

Social Protection Coverage?

Social protection refers to public measures that protect people against economic and social risks such as:

- Old age and loss of income
- Sickness and healthcare expenditure
- Maternity and disability
- Employment injury and unemployment
- Poverty and livelihood insecurity

The coverage indicator measures the proportion of the population receiving **at least one social protection benefit**. It is associated with **SDG Indicator 1.3.1**, which monitors the implementation of nationally appropriate social protection systems and floors.

Coverage Expansion

Indicator	2015	2025	2026 estimate
People covered	About 25 crore	About 94 crore	Over 100 crore
Population coverage	19%	64.3%	68.4%

The 2026 number is a **running or preliminary estimate**. The latest established ILOSTAT figure for 2025 was **64.3%**, while subsequent estimates indicate that coverage has crossed one billion people.

Major Social Security Institutions

- **Employees' Provident Fund Organisation**
 - Has more than **8 crore active members**.
 - Provides provident fund, pension and insurance benefits.
 - Has around **80 lakh pensioners**.
- **Employees' State Insurance Corporation**
 - Covers more than **15 crore insured persons and their dependants**.
 - Provides medical care and benefits relating to sickness, maternity, disability and employment injury.
- **e-Shram**
 - Has registered more than **31.7 crore unorganised workers**.
 - Creates a national database using unique identification and de-duplication.
 - Facilitates workers' access to eligible welfare and social security schemes.

Code on Social Security, 2020

The **Code on Social Security, 2020**, brought into force as part of the four Labour Codes, consolidates **nine central social security laws**.

Its key features include:

- Extension of the legal framework to organised and unorganised workers
- Formal recognition of **gig workers and platform workers**
- Provision for social security schemes covering:
 - Life and disability
 - Accident insurance
 - Health and maternity
 - Old-age protection
- Registration of unorganised, gig and platform workers
- Provision for contributions by digital-platform aggregators to social security funds

Additional Info

- **Constitutional provisions**
 - **Article 38:** Directs the State to promote a social order based on justice.
 - **Article 41:** Provides for public assistance in cases such as unemployment, old age, sickness and disability, within the State's economic capacity.

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- **Article 42:** Requires just and humane working conditions and maternity relief.
- **Article 43:** Directs the State to secure a living wage and decent conditions of life for workers.
- **Entry 23, Concurrent List:** Covers social security and social insurance.
- **Entry 24, Concurrent List:** Covers labour welfare, including provident funds, pensions and maternity benefits.
- **International Labour Organization**
 - Established in **1919**.
 - Became the first specialised agency of the United Nations in **1946**.
 - Headquarters: **Geneva, Switzerland**.
 - Functions through a **tripartite structure** comprising governments, employers and workers.

India Creates Framework to Ban Forced-Labour Goods Imports

What's the News?

India has amended the **Foreign Trade Policy, 2023** to prohibit the import of goods produced or manufactured, wholly or partly, through forced labour.

The **Directorate General of Foreign Trade (DGFT)** inserted **Paragraph 2.20B**, establishing the prohibition, and **Paragraph 11.64**, defining forced labour. The provisions become operational after a 30-day commencement period.

How Will the Ban Operate?

- The prohibition covers goods made **wholly or partly** using forced labour.
- The Central Government can notify specific goods for prohibition based on:
 - A DGFT inquiry; or
 - Other relevant evidence available to the government.
- The inquiry procedure will be prescribed under the **Handbook of Procedures, 2023**.
- Complaints from industries and other stakeholders may trigger scrutiny.
- The framework applies across products and supply-chain stages; it is not limited to one country or commodity.

Forced Labour?

The definition follows the **ILO Forced Labour Convention, 1930–Convention No. 29**.

Forced labour means work or service:

- Exacted from a person;
- Under the threat or menace of a penalty; and
- Performed without the person's voluntary and informed consent.

The definition can cover all sectors, including informal work. Coercion may involve threats, withholding of wages, restriction of movement, debt bondage, deception or confiscation of identity documents.

Why Was the Policy Changed?

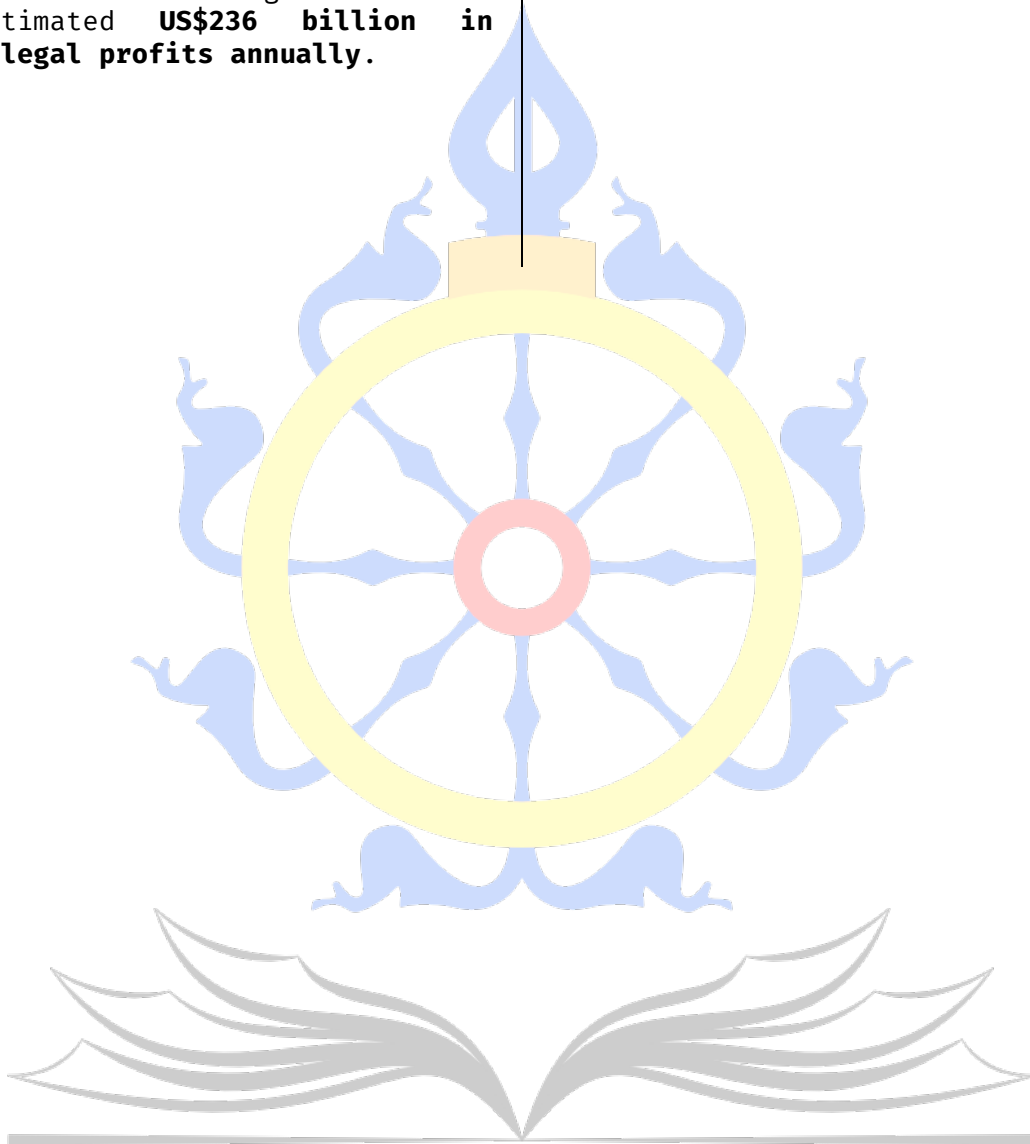
The measure brings India's import regime closer to international rules linking trade with labour and human-rights standards.

It was announced amid a **US Section 301 investigation** examining whether around 60 economies, including India, adequately prevent the import of goods produced through forced labour. India and the United States were also engaged in bilateral trade negotiations.

Additional Info

- **DGFT**
 - Functions under the **Department of Commerce, Ministry of Commerce and Industry**.
 - Implements the Foreign Trade Policy and regulates imports and exports.
- **Legal basis**
 - The Foreign Trade Policy is framed under the **Foreign Trade (Development and Regulation) Act, 1992**.
 - **Section 3:** Empowers the Central Government to regulate imports and exports.
 - **Section 5:** Empowers the Central Government to formulate and amend the Foreign Trade Policy.
- **International conventions**
 - **ILO Convention No. 29:** Forced Labour Convention, 1930.
 - **ILO Convention No. 105:** Abolition of Forced Labour Convention, 1957.
 - **SDG Target 8.7:** Calls for the eradication of forced labour, modern slavery, human trafficking and the worst forms of child labour.
- **Indian constitutional and statutory provisions**
 - **Article 23:** Prohibits trafficking in human beings, begar and other similar forms of forced labour.

- **Bonded Labour System (Abolition) Act, 1976:** Abolishes bonded labour and extinguishes bonded debts.
- **Bharatiya Nyaya Sanhita, 2023:** Penalises unlawful compulsory labour.
- **Global metrics**
 - Around **27.6 million people** were estimated to be in forced labour worldwide.
 - Approximately **15.1 million** were in the Asia-Pacific region.
 - Forced labour generates an estimated **US\$236 billion in illegal profits annually.**



Empowerment

Tribex Launched for Tribal Knowledge and Digital Learning

What's the News?

The Ministry of Tribal Affairs launched **Tribex**, a digital learning platform for preserving and promoting India's tribal arts, languages, culture, crafts and traditional knowledge. It was launched by Union Tribal Affairs Minister **Jual Oram** during the **National Workshop on Strengthening Tribal Research Institutes** in Bhubaneswar, Odisha.

Tribex Platform

- A digital learning ecosystem for tribal heritage and skill development.
- Objective: Make authentic tribal knowledge accessible to learners in India and abroad.
- Key components:
 - **Learning Management System** for online courses.
 - **Repository Management System** for digital documentation.
 - **Heritage Archive** for tribal festivals, oral traditions, art forms and socio-cultural practices.
- Current offerings:
 - **20 free certificate courses.**
 - Courses cover tribal paintings, handicrafts, handloom traditions, artefacts and musical instruments.
- Planned expansion:
 - More than **100 certificate courses.**
 - Repository expansion from **5,000+ multimedia resources to 10,000+ resources.**

Academic & Institutional Linkages

- The Ministry of Tribal Affairs signed an MoU with **Sampurnanand Sanskrit University, Varanasi.**
- The partnership will support **UGC-recognised postgraduate diploma programmes.**
- Proposed one-year hybrid PG diploma areas:
 - Santali language in **Ol Chiki script**
 - Sustainable tribal culture-based livelihood practices
 - Museology and tribal museum management
 - Tribal arts and crafts
 - Tribal textiles

- The courses will include classroom learning, internships and dissertation work.

Tribal Research Institutes

- TRIs are specialised institutions for research and documentation of tribal communities.
- Major functions:
 - Study tribal customs, languages, livelihoods and social institutions.
 - Preserve indigenous knowledge and oral traditions.
 - Support policy-making for tribal welfare.
 - Document tribal art, culture and heritage.
- Tribex is expected to help TRIs digitise and disseminate their research outputs.

Additional Info

Ministry of Tribal Affairs

- Nodal ministry for welfare and development of Scheduled Tribes.
- Implements schemes related to education, livelihood, health, culture and institutional support for tribal communities.

Scheduled Tribes

- Covered under **Article 342** of the Constitution.
- The President may specify tribes or tribal communities as Scheduled Tribes for a state or Union Territory.
- Parliament can amend the list by law.

Ol Chiki Script

- Script used for writing the **Santali language.**
- Santali is included in the **Eighth Schedule** of the Constitution.

Odisha Readies Fifth Subhadra Instalment for Over 1.01 Crore Women

What's the News?

The Odisha government has finalised **1,01,99,119 women beneficiaries** for the fifth instalment of the **Subhadra Yojana**. Each eligible woman will receive **₹5,000 through Direct Benefit Transfer (DBT)** on the occasion of Rakhi Purnima.

More than **1.15 crore applications** have been registered under the scheme. After scrutiny, around 1.02 crore women were initially identified, but **5,277 deceased**

beneficiaries were removed from the final list.

Fifth Instalment

- **Final beneficiaries:** 1,01,99,119
- **Amount per beneficiary:** ₹5,000
- **Estimated fifth-instalment payout:** About ₹5,099.56 crore
- **Transfer mode:** Aadhaar-enabled DBT
- **Nodal department:** Odisha's Department of Women and Child Development

Officials are completing DBT activation, biometric e-KYC, field verification, NPCI account mapping and coordination with banks to ensure error-free transfers.

Subhadra Yojana?

Subhadra is a women-centric financial-assistance scheme of the Odisha government. It provides each eligible woman:

- **₹50,000 over five years**, covering 2024-25 to 2028-29.
- **₹10,000 annually** in two instalments of ₹5,000 each.
- One instalment on **Rakhi Purnima**.
- One instalment on **International Women's Day**.
- Payment directly into an Aadhaar-enabled and DBT-enabled bank account.

The scheme seeks to strengthen women's financial independence, access to formal banking and participation in digital transactions.

Eligibility

An applicant should generally:

- Be a permanent resident of Odisha.
- Be between **21 and 60 years of age**.
- Be covered under the **National Food Security Act or State Food Security Scheme**.
 - Women not covered under these schemes may qualify if their annual family income does not exceed **₹2.5 lakh**.

- Possess an Aadhaar-linked, single-holder bank account enabled for DBT.

Major Exclusions

Women are generally excluded if they:

- Receive government financial assistance of at least **₹1,500 per month or ₹18,000 annually**.
- Are income-tax payers.
- Are serving or retired regular government employees.
- Belong to households meeting specified landholding, elected-office or vehicle-ownership exclusion criteria.

Implementation Status

- **Registered applications:** 1,15,75,633
- **Fresh applications during 2026-27:** 3,17,966

- **Pending DBT activations:** 82,036
- **Pending biometric e-KYC cases:** 28,621
- **Pending field-enquiry cases:** 3,53,059
- **Grievances resolved:** 2,68,396 out of 3,57,953 received

Additional Info

Direct Benefit Transfer

- DBT transfers government benefits directly into beneficiaries' bank accounts.
- It aims to reduce intermediaries, duplication, leakages and payment delays.
- **NPCI mapping** links a beneficiary's Aadhaar number to the bank account selected for receiving government payments.

CSIR Showcases Women-Led Research through ASPIRE-SHAKTI

What's the News?

The **Council of Scientific and Industrial Research (CSIR)** organised **ASPIRE-SHAKTI: Celebrating Women in STEM & Initiating Project Review Sessions** at its headquarters, Anusandhan Bhawan, New Delhi.

The event brought together women Principal Investigators, research fellows and subject-area committee members associated with the **CSIR-ASPIRE Research Scheme**. CSIR Director General **Dr N. Kalaiselvi** released the **ASPIRE-SHAKTI Compendium**, documenting the scheme's research achievements.

What is CSIR-ASPIRE?

CSIR-ASPIRE is a competitive research-grant programme exclusively for women scientists, implemented by the **CSIR Human Resource Development Group**.

- It was launched on **International Women's Day 2023**.
- It supports women researchers as independent **Principal Investigators**.
- Eligible research areas include:
 - Life Sciences
 - Chemical Sciences
 - Physical Sciences
 - Engineering Sciences
 - Interdisciplinary and transdisciplinary sciences
- Funding may cover research personnel, contingency expenditure and minor equipment.

The scheme aims to strengthen women's research leadership, financial independence and continued participation in scientific careers.

Scheme Performance

- **Project proposals received:** 2,878
- **Participating institutions:** 969

- **Women researchers selected:** 301
- **Approximate selection rate:** 10%
- **SCI-indexed publications:** More than 253
- **Patent filings:** More than 15
- **International conference presentations:** More than 20
- **Research fellows trained:** More than 300, including Junior Research Fellows, Senior Research Fellows and Research Associates.

Discipline-Wise Projects

- Life Sciences: 152
- Engineering Sciences: 54
- Interdisciplinary and Transdisciplinary Sciences: 37
- Chemical Sciences: 34
- Physical Sciences: 25

The published discipline-wise figures total **302**, although the reported overall selection is **301 researchers**, indicating a likely tabulation inconsistency in the reported data.

Next Phase of ASPIRE

CSIR plans to identify approximately **20-30 outstanding projects** for support beyond the research stage.

Selected researchers may be connected with:

- Start-ups
- Technology incubators
- Innovation partners
- Industry and commercialisation platforms

The objective is to convert promising research into **patents, products and market-ready technologies**, thereby bridging the laboratory-to-market gap.

Project Review Sessions

ASPIRE Subject Area Committees will assess the mid-term progress of funded projects. The review process will examine:

- Achievement of research objectives
- Scientific quality and research outputs
- Potential for patenting and technology transfer
- Scope for commercialisation
- Need for technical or institutional guidance

Regional Participation

CSIR observed comparatively low participation from:

- North-Eastern States
- Ladakh
- Universities and colleges located in Tier-2 and Tier-3 cities

Future calls are expected to focus on targeted awareness, regional outreach and broader institutional participation to

improve the geographical inclusiveness of public research funding.

Additional Information

- **CSIR**
 - Stands for the Council of Scientific and Industrial Research.
 - Functions under the **Department of Scientific and Industrial Research**, Ministry of Science and Technology.
 - It is India's major publicly funded scientific and industrial research organisation.
- **CSIR-HRDG**
 - Human Resource Development Group of CSIR.
 - Administers research fellowships, grants, awards and scientific human-resource development programmes.
- **Principal Investigator**
 - The lead scientist responsible for planning, implementing and supervising a research project.
- **SCI-Indexed Journal**
 - A journal included in the Science Citation Index.
 - SCI-indexed publications are commonly used to assess the visibility and research impact of scientific work.
- **International Women's Day**
 - Observed annually on **8 March**.
 - It promotes women's rights, equality and participation in social, economic, political and scientific fields.

Centre Reserves 50% CAPF and Assam Rifles Vacancies for Ex-Agniveers

What's the News?

The Union Government has created a separate **Ex-Agniveer recruitment category** for the posts of **Constable (General Duty)** in the Central Armed Police Forces and **Rifleman** in the Assam Rifles.

Under the new framework, **50% of vacancies** in these posts will be reserved for Ex-Agniveers. Eligible candidates will also receive upper-age relaxation and exemption from the written and physical recruitment tests. A dedicated wing has been established under the Ministry of Home Affairs to coordinate their transition to these security forces.

Recruitment Benefits

- **Reservation:** 50% of vacancies in:

- Constable (General Duty) posts in CAPFs
- Rifleman posts in Assam Rifles
- **Upper-age relaxation:**
 - Three years for Ex-Agniveers generally
 - Five years for candidates from the first Agniveer batch
- **Exemptions from:**
 - Written examination
 - Physical Standards Test
 - Physical Efficiency Test
- **Administrative mechanism:** A dedicated Ex-Agniveer wing under the Ministry of Home Affairs will coordinate recruitment and post-service progression.

Exam clarification: The official formulation provides a **three-year relaxation generally and a five-year relaxation for the first batch**. It does not explicitly provide a cumulative eight-year relaxation.

Scope of the Quota

The 50% reservation applies specifically to the newly created Ex-Agniveer category for **Constable (GD) and Rifleman recruitment**. It should not be interpreted as a 50% quota across every rank or specialised post in the CAPFs.

The relevant forces include the BSF, CISF, CRPF, ITBP and SSB, while the Assam Rifles has been separately identified for Rifleman recruitment. These forces function under the administrative framework of the Ministry of Home Affairs.

Previous Provision

An earlier recruitment framework had provided **10% reservation** for Ex-Agniveers, along with age relaxation and exemption from physical tests. The new policy substantially expands the quota for the specified posts and also introduces exemption from the written examination.

Agnipath Scheme

- The Agnipath Scheme provides short-term recruitment into the **Army, Navy and Air Force**.
- Agniveers serve for a period of **four years**, including training.
- After completing the engagement:
 - Up to **25%** may be selected for enrolment in the regular armed forces, subject to merit and organisational requirements.
 - The remaining personnel leave military service and may pursue employment in government, security or private-sector organisations.

- The CAPF-Assam Rifles quota seeks to utilise their military training, discipline and operational experience in internal-security roles.

Additional Info

- **Implementing ministry:** Ministry of Home Affairs
- **Announcement mechanism:** Written reply in the Lok Sabha
- **Minister concerned:** Minister of State for Home Affairs Nityanand Rai
- **Present status:**
 - The first Agniveer batch has not completed its full term of engagement.
 - Consequently, recruitment under the new category has not yet commenced.
 - Detailed merit-ranking and selection procedures are expected to be specified through recruitment rules or notifications.
- **Constitutional context:**
 - Article 16 provides for equality of opportunity in public employment.
 - The Ex-Agniveer quota is a service-specific recruitment preference based on prior military engagement and should not be confused with vertical social reservations such as SC, ST, OBC or EWS quotas.

Two Lakh Anganwadi Centres Approved for Saksham Upgradation

What's the News?

- The **Ministry of Women and Child Development** has approved the upgradation of **2 lakh government-owned Anganwadi Centres** into **Saksham Anganwadis**.
- The upgradation is being implemented under **Mission Saksham Anganwadi and Poshan 2.0** during the **15th Finance Commission cycle**, at a planned rate of **40,000 centres per year**.
- As of March 2026, **1,04,403 Anganwadi Centres** had been upgraded—more than the 57,897 centres reported in July 2025.
- The initiative seeks to improve nutrition delivery and **Early Childhood Care and Education (ECCE)** through better physical infrastructure, digital monitoring and child-friendly learning facilities.

What are Saksham Anganwadis?

Saksham Anganwadis are upgraded Anganwadi Centres with infrastructure and learning

facilities superior to those available at conventional centres.

Major facilities include:

- Internet or Wi-Fi connectivity
- LED screens and audio-visual learning aids
- Water purifiers or RO systems
- **Poshan Vatikas**, or nutrition gardens
- ECCE materials and child-friendly equipment
- Educational wall paintings
- Practice and information boards
- **Building as Learning Aid**, or BaLA, features

These facilities aim to support the creative, cognitive, emotional, intellectual and social development of children below six years.

Mission Saksham Anganwadi and Poshan 2.0

It is a **Centrally Sponsored Scheme** administered by the Ministry of Women and Child Development.

It brings together:

- Anganwadi Services
- POSHAN Abhiyaan
- Scheme for Adolescent Girls
- Supplementary nutrition services
- Early Childhood Care and Education
- Anganwadi infrastructure development

Beneficiaries

- Children below six years
- Pregnant women
- Lactating mothers
- Adolescent girls aged 14–18 years in:
 - Aspirational Districts
 - North-Eastern states

ECCE services primarily cover children aged **three to six years**, while nutrition and care interventions extend from birth to six years.

Approval vs Upgradation

The two figures should not be confused:

- **2,00,000 centres:** Approved for conversion into Saksham Anganwadis.
- **1,04,403 centres:** Actually upgraded by March 2026.

Only government-owned centres possessing essential facilities such as electricity, drinking water and suitable buildings are generally selected for upgradation. Financial assistance of **₹1 lakh per centre**, with flexibility among prescribed components, is provided according to the applicable Centre-State cost-sharing ratio.

Selected State-wise Approvals

- **Madhya Pradesh:** 24,662 centres
- **Uttar Pradesh:** 23,697 centres
- **Karnataka:** 17,732 centres

- **Jharkhand:** 16,775 centres
- **Odisha:** 12,140 centres
- **Jammu and Kashmir:** 338 centres

Madhya Pradesh has received the highest number of approvals among the states and Union Territories.

Digital Monitoring Poshan Tracker

The **Poshan Tracker** is an ICT-based governance platform used for:

- Near real-time monitoring of Anganwadi Centres
- Tracking service delivery by Anganwadi Workers
- Beneficiary registration and verification
- Monitoring nutrition and growth indicators
- Tracking supplementary nutrition and Take-Home Ration distribution
- Identifying children affected by malnutrition

The platform monitors more than **14 lakh Anganwadi Centres** and nearly **9 crore beneficiaries** under the mission.

Poshan Bhi Padhai Bhi

- It was introduced to strengthen the education component of the Anganwadi system.
- It promotes play-based and activity-based foundational learning in alignment with the **National Education Policy 2020**.
- Anganwadi Workers are trained in ECCE curriculum, pedagogy and child assessment.
- By 2026, approximately **10.58 lakh Anganwadi Workers** had received nutrition and ECCE training.

Implementation Structure

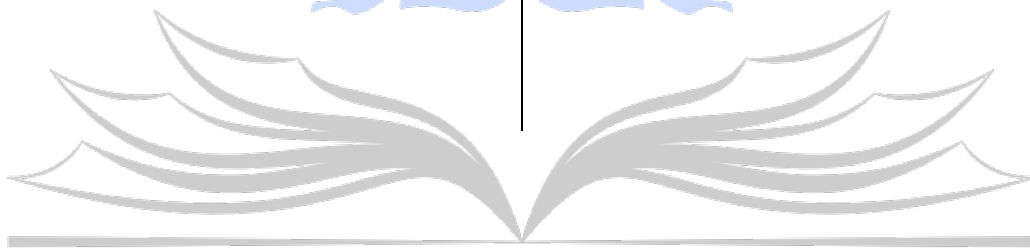
- **Central Government**
 - Policy formulation
 - Planning and financing
 - Programme guidelines
 - Monitoring and review
- **States and Union Territories**
 - Day-to-day implementation
 - Selection and upgradation of centres
 - Recruitment and filling of staff vacancies
 - Delivery of nutrition and ECCE services

The Centre reviews implementation through meetings and video conferences with state governments and Union Territory administrations.

Additional Info

- **Anganwadi Services**

- Originally introduced as the **Integrated Child Development Services programme in 1975.**
- Provide:
 - Supplementary nutrition
 - Pre-school non-formal education
 - Immunisation
 - Health check-ups
 - Nutrition and health education
 - Referral services
- **Early Childhood Care and Education**
 - Recognised under the **National Education Policy 2020** as an essential part of the foundational stage.
 - The foundational stage covers children from **three to eight years**, including three years of preschool and Classes I-II.
- **Poshan Vatika**
 - A nutrition garden established at or near an Anganwadi Centre.
 - Promotes access to locally available fruits, vegetables, medicinal plants and nutrient-rich foods.
- **BaLA**
 - Stands for **Building as Learning Aid.**
 - Uses walls, floors, doors and other building components as interactive educational resources.



Culture & Arts

Chandannagar Jalbhara Sweet Gets GI Tag

What's the News?

Chandannagar Jalbhara, also known as Jolbhora Sandesh, from Chandannagar in Hooghly district, West Bengal, has received the Geographical Indication tag. The recognition protects the sweet's **regional identity, traditional preparation method and cultural legacy**. It also formally links the sweet to Chandannagar, even though similar versions are made in other parts of Bengal.

The sweet has a legacy of more than **220 years** and is one of Bengal's well-known traditional confectionery items.

Jalbhara Sweet

Jalbhara is a traditional Bengali sweet known for its **soft outer shell and liquid-filled centre**.

Key features

- **Region:** Chandannagar, Hooghly district, West Bengal.
- **Other name:** Jolbhora Sandesh.
- **Main ingredient:** Fresh **chhena**, or cottage cheese.
- **Outer layer:** Soft sandesh-like chhena shell.
- **Filling:**
 - Nolen gur or date palm jaggery syrup.
 - Rose syrup or sugar syrup in some versions.
- **Distinctive feature:** The liquid filling bursts out when the sweet is bitten.

Why it is unique

- It looks like an ordinary sandesh from outside.
- Its identity comes from the hidden liquid filling.
- The name itself reflects this feature:
 - **Jol/Jal** means water or liquid.
 - **Bhora/Bhara** means filled.

Origin and Historical Link

The sweet is closely associated with **Chandannagar's confectionery tradition**, especially the **Telinipara/Telenipara** area of Hooghly.

Local tradition

- The sweet is linked to confectioner **Surjya Kumar Modak** and his son **Siddheshwar Modak**.
- According to popular local accounts, it was created as a playful wedding sweet.

- The idea was to make a sweet that would surprise a new son-in-law when the syrup spilled out after the first bite.
- Over time, Jalbhara became strongly associated with Chandannagar's food culture.

Cultural importance

- Chandannagar was a former French settlement.
- The sweet reflects the town's long-standing Bengali confectionery tradition.
- It has become part of the region's culinary identity and local heritage.

GI Tag

A **Geographical Indication** tag is given to products that have a specific geographical origin and possess qualities, reputation or characteristics linked to that place.

Legal points

- **Law:** Geographical Indications of Goods (Registration and Protection) Act, 1999.
- **Registry:** Geographical Indications Registry, Chennai.
- **Product category:** Food / traditional sweet.
- **State:** West Bengal.
- **Protected identity:** Chandannagar Jalbhara / Jolbhora Sandesh.

Why GI tag matters

- Protects the product name from misuse.
- Recognises Chandannagar as the place of origin.
- Helps traditional sweet makers preserve authenticity.
- Supports branding and market value.
- Promotes local food heritage and cultural tourism.
- Can help expand domestic and export opportunities.

Examples of GI-tagged products from West Bengal

- Darjeeling Tea
- Banglar Rasogolla
- Santiniketan Leather Goods
- Nakshi Kantha
- Baluchari Saree
- Fazli Mango

Eight Traditional Himachal Products Secure GI Tags

What's the News?

Eight traditional products from **Himachal Pradesh** have been registered as **Geographical Indications**.

The products represent the state's **agricultural, food, textile and craft traditions**. With these additions, Himachal Pradesh now has **17 GI-registered traditional products**.

The recognition is expected to protect the authenticity of these products, prevent imitation, improve market value and support farmers, artisans, weavers and rural entrepreneurs.

Newly GI-Tagged Products

The eight newly registered products come from different regions of Himachal Pradesh.

Region-wise list

- **Spiti**
 - **Spiti Seabuckthorn / Chharma**
- **Chamba**
 - **Salooni Safed Makka** or white maize.
 - **Chamba Metal Art**
- **Sirmaur**
 - **Sirmauri Loiya**, a traditional woollen gown.
- **Kinnaur**
 - **Kinnauri Topi**
 - **Kinnauri Apple**
 - **Kinnauri Jewellery**
- **Mandi**
 - **Sepuvadi**, a traditional lentil-based dish.

Role of HIMCOSTE

The registration process has been supported through the **Himachal Pradesh State Council for Science, Technology and Environment**, commonly known as **HIMCOSTE**.

Key role

- Promotes protection of local heritage products.
- Supports GI registration efforts in the state.
- Helps document traditional products and their regional identity.
- Works with relevant authorities for recognition and protection.

Earlier GI-tagged products from Himachal Pradesh

Before these eight additions, Himachal Pradesh had **nine GI-tagged traditional products**:

- **Kullu Shawl**
- **Kangra Tea**
- **Chamba Rumal**
- **Kinnauri Shawl**
- **Kangra Painting**
- **Himachali Kalazeera**
- **Himachali Chulli Oil**
- **Chamba Chappal**
- **Lahauli Knitted Socks and Gloves**

CWGC Adds 9,909 Forgotten Indian WWI Soldiers to Records

What's the News?

The **Commonwealth War Graves Commission** has added **9,909 previously uncommemorated British Indian Army servicemen** to its First World War casualty records. These soldiers, mostly from pre-Partition India, were earlier omitted due to historical classification decisions that denied them formal war-grave status.

Commonwealth War Graves Commission

- **Full form:** Commonwealth War Graves Commission.
- **Established:** 1917 as the Imperial War Graves Commission.
- **Function:**
 - Maintains graves and memorials of Commonwealth war dead.
 - Records and commemorates soldiers who died in the First and Second World Wars.
- **Current action:**
 - Added 9,909 Indian Army servicemen to its casualty database.
 - Described as the largest single addition to CWGC casualty records since the Second World War.

Punjab Registers Project

- The recognition came through the **Punjab Registers Project**.
- It was a five-year partnership involving:
 - CWGC
 - UK Punjab Heritage Association
 - University of Greenwich
- Researchers digitised and analysed records preserved at the **Lahore Museum**.
- The records contained service details of around **3.2 lakh Punjabi recruits**.
- Verification covered:
 - **15,935 deaths**
 - Comparison with around **74,000 existing CWGC Indian Army records**
 - Review by CWGC and Indian Army specialists

Why Were They Omitted?

- Most missing casualties were soldiers who died in **non-operational zones within India** during the war.
- Due to rulings by the British Indian Government at that time:
 - They were not granted war-grave status.
 - Their names were not shared with the Commission.
- The new recognition corrects this historical omission.

Additional Info

- **Indian Army in World War I**
 - More than **1.4 million** men from the Indian Army served on major battlefronts.
 - About **one in six** soldiers fighting for the British came from pre-Partition India.
 - Around **5 lakh** soldiers came from Punjab, including Sikh, Muslim, Hindu and Christian servicemen.
- **Non-Commemoration Programme**
 - Started by CWGC in **2021**.
 - Objective: Address historical inequalities in war commemoration.
 - More than **20,000 additional names** have been identified so far.

Sirsa Kinnow Gets GI Tag, Becomes Haryana's First GI-Recognised Fruit

What's the News?

Sirsa Kinnow has received the **Geographical Indication (GI) tag**, becoming **Haryana's first fruit** to get this recognition. The GI status recognises the distinct quality, reputation and geographical linkage of kinnow grown in **Sirsa district**. The recognition is expected to improve branding, prevent imitation and support better market value for farmers.

Sirsa Kinnow?

- **Product:** Kinnow, a citrus fruit.
- **Region:** Sirsa district, Haryana.
- **GI applicant/holder:** Farmer Producer Organisation/Company linked to **Khari Sureran village, Sirsa**.
- **Granting authority:** Geographical Indications Registry, Chennai.
- **Official logo:** Features an orange kinnow with a green leaf inside a circular "**Sirsa Kinnow**" emblem.

Why Is It Unique?

- Sirsa Kinnow is known for:
 - Sweeter taste
 - Higher juice content
 - Larger fruit size
 - Attractive colour and appearance
- Its quality is linked to:
 - Semi-arid climate of Sirsa
 - Soil conditions suitable for citrus cultivation
 - Modern horticulture practices adopted by local farmers

Scientific Farming Role

- The **Indo-Israel Centre of Excellence at Mangiana village, Sirsa** played a major role in improving kinnow cultivation.
- Farmers were trained in:

- Drip irrigation
- Fertigation
- High-density plantation
- Scientific nutrient management
- Pruning and orchard management
- Sirsa is now Haryana's largest kinnow-producing district.
- Key data:
 - **13,106 hectares** under kinnow orchards
 - Around **1.82 lakh metric tonnes** annual production

Additional Info

- **Geographical Indication (GI) Tag**
 - A GI tag is an intellectual property right given to products whose quality, reputation or characteristics are linked to a specific geographical origin.
 - In India, GI registration is governed by the **Geographical Indications of Goods (Registration and Protection) Act, 1999**.
 - GI tags are administered by the **Geographical Indications Registry, Chennai**, under the framework of intellectual property rights.
- **Examples of GI-tagged agricultural products**
 - Darjeeling Tea – West Bengal
 - Basmati Rice – Indo-Gangetic plains
 - Nagpur Orange – Maharashtra
 - Malihabadi Dusseheri Mango – Uttar Pradesh
 - Allahabad Surkha Guava – Uttar Pradesh

2,000-Year-Old Gold Rings in Thailand Reveal Ancient India Link

What's the News?

Archaeologists in Thailand have found **two ancient gold rings** at the **Don Yai Thong archaeological site** in **Phetchaburi province**. One ring has an inscription believed to be in **Brahmi script**, indicating early cultural and trade links between **ancient India and Southeast Asia**. The find is significant for understanding India's maritime trade, cultural diffusion and early Indian presence in the region.

Don Yai Thong Site?

- **Location:** Phetchaburi province, western Thailand.
- **Site type:** Ancient burial site.

- **Period:** Late prehistoric/Iron Age phase of Thailand.
- **Approximate age:** Around **2,000 years old**.
- The site was identified after local residents found fragments of **ancient bronze drums** in a rice field.
- Excavations have revealed:
 - Human skeletons
 - Gold and bronze ornaments
 - Pottery
 - Ritual burial objects

Gold Rings and Brahmi Inscription

- Two gold rings were found along with human remains.
- One ring is a plain gold band.
- The other bears characters believed to be in **Brahmi script**, an ancient writing system associated with the Indian subcontinent.
- The inscription has been read as "**pusarakhitasa**", meaning "**the one protected by Pushya**".
- **Pushya** refers to an auspicious nakshatra/zodiacal reference in Indian astronomy and astrology.
- Experts suggest that the ring's owner may have been linked to ancient Indian merchant communities.

Ancient India-Southeast Asia Link

- The discovery supports evidence of early contact between India and present-day Thailand through:
 - Maritime trade
 - Merchant movement
 - Cultural exchange
 - Script and religious-astronomical influence
- Indian traders likely used sea routes across the **Bay of Bengal** and **Andaman Sea** to connect with Southeast Asian settlements.
- Such finds show that Indian cultural elements reached Southeast Asia before the rise of later Indianised kingdoms such as **Funan, Champa, Dvaravati and Srivijaya**.

Additional Info

- **Brahmi Script**
 - One of the earliest major writing systems of ancient India.
 - Used in several early inscriptions, including many **Ashokan inscriptions**.
 - Many modern Indian scripts are historically linked to Brahmi.
- **Ancient Indian Maritime Trade**
 - Indian traders connected with:
 - Southeast Asia
 - Sri Lanka
 - West Asia

- Roman world
- Key exports included:
 - Spices
 - Textiles
 - Beads
 - Ivory
 - Metal goods
 - Religious and cultural ideas

Thailand and Indian Influence

- Ancient Thailand had contact with Indian cultural traditions through trade and migration.
- Later Southeast Asian polities adopted Indian influences in:
 - Sanskrit and Pali vocabulary
 - Brahmi-derived scripts
 - Hindu-Buddhist religious ideas
 - Kingship and statecraft models

Aizawl Natural History Museum Becomes India's 21st Repository

What's the News?

The **Natural History Museum at Mizoram University, Aizawl** has been notified as India's **21st Designated Repository** under the **Biological Diversity Act, 2002**. The notification was issued by the **Ministry of Environment, Forest and Climate Change** on the recommendation of the **National Biodiversity Authority**. The museum will preserve authenticated biological specimens from Mizoram and the North-East, strengthening India's biodiversity documentation and research infrastructure.

Designated Repository

- A **Designated Repository** is an institution notified by the Central Government to keep biological material in safe custody.
- It maintains:
 - **Voucher specimens:** Reference biological samples used for identification and verification.
 - **Type specimens:** Original reference specimens used to describe and name a new species.
 - Authenticated biological resources used in research and conservation.
- It acts as a **legal registry** for biological material used in scientific research and commercial activity.
- It supports:
 - Species identification
 - Traceability of biological resources

- Taxonomic research
- Long-term conservation planning

Natural History Museum, Aizawl

- Located at **Mizoram University, Aizawl**.
- Established under the aegis of **Mizoram University**.
- Situated within the **Indo-Burma Biodiversity Hotspot**.
- Already preserves **500+ biological specimens**, including herbarium sheets and wet-preserved collections.
- It will maintain specimens of:
 - **Flora**: Pteridophytes, macrofungi
 - **Fauna**: Reptiles, amphibians, fishes, moths, beetles and butterflies
- It will also serve as a depository for **newly discovered species from the region**.

Biodiversity Significance

- Mizoram and the wider North-East region are biodiversity-rich areas.
- The region has:
 - **7,500+ flowering plant species**
 - **2,000+ faunal species**
- The museum fills an institutional gap in documenting lesser-studied taxa such as:
 - Pteridophytes
 - Macrofungi
 - Moths
 - Beetles
 - Amphibians
- It strengthens local preservation of specimens close to their natural habitat.

Additional Info

- **Biological Diversity Act, 2002**
 - Provides the legal framework for biodiversity conservation in India.
 - Focuses on:
 - Conservation of biological diversity
 - Sustainable use of biological resources
 - Fair and equitable benefit sharing
- **Section 39 of the Act**
 - Empowers the Central Government to designate institutions as repositories.
 - Requires deposit of voucher/type specimens of newly discovered taxa.
- **National Biodiversity Authority**
 - Statutory body under the **Ministry of Environment, Forest and Climate Change**.

- Implements provisions related to access, benefit sharing and biodiversity governance.

Three-Tier Biodiversity Governance

- **National Biodiversity Authority**: National level
- **State Biodiversity Boards / UT Biodiversity Councils**: State or UT level
- **Biodiversity Management Committees**: Local level
- **Indo-Burma Biodiversity Hotspot**
 - One of the major global biodiversity hotspots.
 - Includes parts of North-East India and South-East Asia.
 - Known for high endemism and habitat diversity.

Handloom Hackathon 2026 Launched to Promote Innovation in Weaving Sector

What's the News?

The **Office of the Development Commissioner (Handlooms)** under the Ministry of Textiles has launched **Handloom Hackathon 2026 – "Weaving Innovation"**.

The national innovation challenge seeks practical and scalable solutions based on technology, design, entrepreneurship and sustainability to strengthen India's handloom sector. It is being organised as part of the **National Handloom Day 2026** celebrations.

Handloom Hackathon 2026

- **Organiser**: Office of the Development Commissioner (Handlooms), Ministry of Textiles
- **Nature**: Nationwide innovation competition
- **Grand finale venue**: Foundation for Innovation and Technology Transfer (FITT), IIT Delhi
- **Participants**:
 - Students
 - Handloom weavers and weaver associations
 - Artisans and designers
 - Researchers and professionals
 - Startups, entrepreneurs and innovators
- Participants may form teams of **two to five members**.
- Shortlisted teams will present their solutions before a jury drawn from academia, industry, design, technology and the handloom sector.

Four Thematic Areas

Innovation in Design and Operations

Focuses on:

- Modernisation of pre-weaving processes
- Smart production-tracking systems
- Ergonomic loom designs
- Adaptation of traditional designs for global markets

Market Access and Digital Integration

Includes:

- Digital platforms connecting rural weavers with consumers
- Business-to-business marketplaces for bulk orders
- QR code or blockchain-based product authentication
- Digital storytelling and global branding of Indian handlooms

Sustainability and Environmental Impact

Covers:

- Eco-friendly natural dyes
- Water conservation in textile production
- Recycling and circular use of handloom waste
- Renewable-energy solutions for handloom units

Weaver Livelihoods and Financial Inclusion

A dedicated new track focusing on:

- Fintech and microcredit access
- Income-stability mechanisms
- Demand-forecasting tools
- Digitisation of cooperatives
- Platforms supporting collective bargaining by weavers

Awards and Incubation

- The hackathon has a total prize pool of **₹4 lakh** across four themes.
- Under each theme:
 - **Winner:** ₹60,000
 - **Runner-up:** ₹40,000
- All **15 finalists** will have an opportunity to enter a **one-year structured incubation programme**.
- Selected implementable solutions may receive mentoring, institutional incubation and further development support.
- A mandatory virtual immersion with weavers is intended to ensure that proposed solutions address actual field-level problems.

Additional Info

- **Office of the Development Commissioner (Handlooms)**
 - Functions under the Ministry of Textiles.
 - It is the apex organisation responsible for the promotion, development and welfare of the handloom sector.

- Its functions include policy intervention, market promotion, institutional support and improvement of weavers' livelihoods.

• National Handloom Day

- Observed annually on **7 August**.
- It commemorates the launch of the **Swadeshi Movement on 7 August 1905**.
- The Government of India first observed National Handloom Day in **2015**.
- It recognises the contribution of handloom workers to India's economy, cultural heritage and rural livelihoods.

• National Handloom Development Programme

- Provides need-based support for the integrated development of handloom clusters and the welfare of weavers.
- Interventions include improved looms, design development, skill upgradation, marketing support and concessional credit.

Gujarat's Unjha Cumin and Fennel Receive GI Tags

What's the News?

Unjha Cumin—officially registered as “Unjha Jeera”—and Unjha Fennel from North Gujarat have received **Geographical Indication (GI) tags** from India's GI Registry.

The registrations recognise the spices' geographical identity, quality and reputation. They are expected to improve product traceability, prevent misuse of the Unjha name and strengthen opportunities for branding, value addition and exports.

GI Registration Details

- **Registered proprietor:** Agriculture Produce Market Committee, Unjha
- **Product category:** Agricultural goods
- **Classification:** Class 30, covering spices and specified food products
- **Unjha Jeera application:** 1289
- **Unjha Fennel application:** 1290
- **Region:** Unjha, North Gujarat
- **GI Registry journal:** Journal No. 212

The applications were filed by **APMC Unjha**, which now represents the collective interests of eligible producers associated with the registered geographical area.

Unjha Spice Economy

Unjha, located in **Mehsana district**, is a major regulated agricultural market and trading centre for seed spices, particularly:

- Cumin or jeera
- Fennel or variyali
- Isabgol
- Fenugreek
- Coriander
- Ajwain

The GI recognition strengthens Unjha's position as an origin-based spice brand rather than merely a trading location. It can support better market differentiation between authentic produce and spices marketed by unauthorised sellers using the Unjha name.

Institutional Collaboration

The GI registrations resulted from coordination among:

- APMC Unjha
- Department of Horticulture and Farmers' Welfare, Gujarat
- Sardarkrushinagar Dantiwada Agricultural University
- Entrepreneurship Development Institute of India
- Farmers, traders and agricultural scientists

The collaboration combined producer representation, scientific documentation, geographical evidence and institutional assistance required for GI registration.

Additional Information

- **Geographical Indication**
 - An intellectual-property sign identifying goods whose quality, reputation or characteristics are linked to a specific geographical origin.
 - A GI is a collective right connected to producers of the notified region; it is not ordinarily owned by a single private manufacturer.
- **Legal framework**
 - Governed by the **Geographical Indications of Goods (Registration and Protection) Act, 1999**.
 - The legislation implements India's obligations under the **WTO Agreement on Trade-Related Aspects of Intellectual Property Rights**.
 - GI protection is recognised under **Article 22 of the TRIPS Agreement**.
- **Validity**

- A GI registration remains valid for **10 years**.
- It can be renewed repeatedly for additional ten-year periods.

• Administrative authority

- The GI Registry functions under the **Controller General of Patents, Designs and Trade Marks**.
- It comes under the **Department for Promotion of Industry and Internal Trade**, Ministry of Commerce and Industry.
- The GI Registry is located in **Chennai**.

• Other agricultural GIs from Gujarat

- Gir Kesar Mango
- Bhalia Wheat
- Kachchhi Kharek
- Amalsadi Chikoo

72nd National Film Awards Announced; Article 370 Wins Best Feature Film

What's the News?

The Ministry of Information and Broadcasting announced the **72nd National Film Awards**, recognising films certified by the Central Board of Film Certification during 2024.

Article 370 won **Best Feature Film**, while **Rajkumar Periasamy** received Best Direction for **Amaran**. **Mammootty** and **Kartik Aaryan** jointly won Best Actor, while **Yami Gautam** received Best Actress. The winners were selected by an 11-member feature-film jury chaired by filmmaker **Jayaraj**.

Major Awards

Category	Winner
Best Feature Film	<i>Article 370</i>
Best Direction	Rajkumar Periasamy – <i>Amaran</i>
Best Actor	Mammootty – <i>Bramayugam</i> ; Kartik Aaryan – <i>Chandu Champion</i>
Best Actress	Yami Gautam – <i>Article 370</i>
Best Supporting Actor	Sanjay Mishra – <i>Bhakshak</i>
Best Supporting Actress	Sachana Namidass – <i>Maharaja</i> ; Ropashree Varkady – <i>Mithya</i>
Best Debut Film of a Director	Randeep Hooda – <i>Swatantrya Veer Savarkar</i>
Best Popular Film Providing Wholesome Entertainment	<i>Kalki 2898 AD</i>

Best Children's Film	35 – <i>Chinna Katha Kaadu</i>
Best Film Promoting National, Social and Environmental Values	<i>Captain Miller</i>

Technical and Creative Awards

- **Best Cinematography:** Shehnad Jalal – *Bramayugam*
- **Best Original Screenplay:** Sukumar – *Pushpa: The Rule-Part 2*
- **Best Adapted Screenplay:** Yogesh Deshpande – *Swargandharva* Sudhir Phadke
- **Best Dialogue:** Venky Atluri – *Lucky Baskhar*
- **Best Editing:** R. Kalaivannan – *Amaran*
- **Best Production Design:** Nitin Zihani Choudhary – *Kalki 2898 AD*
- **Best Music Direction-Songs:** Shashwat Sachdev – *Article 370*
- **Best Background Music:** G.V. Prakash Kumar – *Amaran*
- **Best Lyrics:** Manoj Muntashir – “Jaane Do” from *Maidaan*
- **Best Choreography:** Vijay Ganguly – “Aaj Ki Raat” from *Stree 2*
- **Best Action Direction:** Anl Arasu – *Maharaja*

Best Films by Language

Language	Film
Hindi	<i>Srikanth</i>
Tamil	<i>Raayan</i>
Telugu	<i>Committee Kurrollu</i>
Malayalam	<i>Feminichi Fathima</i>
Kannada	<i>Mithya</i>
Marathi	<i>Mukkam Post Bombilwadi</i>
Bengali	<i>Chalchitra Ekhon</i>
Assamese	<i>Juiphool</i>
Gujarati	<i>Maaran</i>
Odia	<i>Lahari</i>
Manipuri	<i>Sunita</i>
Konkani	<i>Mog Asum</i>

Dholi won Best Garhwali Film and *IMBU* won Best Tulu Film under languages not specified in the Constitution's Eighth Schedule.

Non-Feature Films and Writing on Cinema

- **Best Non-Feature Film:** *Bhangaar*
- **Best Documentary:** *Ram-Nami*
- **Best Short Film:** *Hamsafar*
- **Best Animation Film:** *Touched as Water*
- **Best Non-Feature Film Promoting Social and Environmental Values:** *Piplantri: A Tale of Eco Feminism*
- **Best Non-Feature Film Direction:** Aanand L. Rai – *Statue of Unity-Ekta Ka Prateek*
- **Best Film Critic:** Sanjeev Shrivastava

- **Best Book on Cinema:** K. Pradeep Kumar Shetty's Kannada book on the political and philosophical dimensions of Kannada cinema.

National Film Awards

- Instituted in **1954**, initially as the State Awards for Films.
- Conferred annually by the Government of India through the **Ministry of Information and Broadcasting**.
- Managed by the **National Film Development Corporation** since 2021.
- Major divisions:
 - Feature films
 - Non-feature films
 - Writing and criticism on cinema
 - Dadasaheb Phalke Award
- Awards seek to promote:
 - Aesthetic and technical excellence
 - Socially relevant cinema
 - India's linguistic and cultural diversity
 - National unity and integrity
- **Swarna Kamal:** Golden Lotus, generally awarded in major film and direction categories.
- **Rajat Kamal:** Silver Lotus, generally awarded for acting, technical and language-specific categories.

Additional Info

- **Central Board of Film Certification**
 - Statutory body under the Ministry of Information and Broadcasting.
 - Regulates the public exhibition of films under the **Cinematograph Act, 1952**.
 - Films considered for this edition were required to have received CBFC certification during 2024.
- **Constitutional Link**
 - The Eighth Schedule currently recognises **22 languages**.
 - National Film Awards separately recognise films in languages included in the Eighth Schedule and films in other Indian languages.

Vellalore Excavation Reveals Ancient Settlement and Trade Links

What's the News?

The Tamil Nadu State Department of Archaeology (TNSDA) has unearthed over **1,000 artefacts** at Vellalore in Coimbatore district. The excavation has revealed evidence of an ancient settlement extending across nearly **100 acres** on the southern bank of the Noyyal River.

The findings include Roman copper coins, ornaments, household objects, craft tools and structural remains. The earliest material has been provisionally dated between the **1st century BCE and the 3rd-4th century CE**, while other finds belong to medieval and colonial periods.

Vellalore Excavation

- **Location:** Vellalore, Coimbatore district, Tamil Nadu
- **River:** Southern bank of the Noyyal River
- **Important locality:** Uppiliyar Thittu
- **Settlement area:** Nearly 100 acres
- **Excavating agency:** Tamil Nadu State Department of Archaeology
- **Excavation spread:** Four locations across three sites near the Theneeswarar Temple
- **Total discoveries:** More than 1,000 artefacts

Major Archaeological Finds

Objects and Structural Features

- Roman copper coins
- Household articles and ornaments
- Stone structures and floor remains
- Water channels
- A circular pit coated with lime plaster
- Shell and glass ornaments
- Weaving-related implements

Craft Activities

The recovered material indicates specialised production activities, including:

- Bead-making
- Pottery production
- Shell-ornament manufacturing
- Weaving
- Iron and steel working

Chronological Phases

The artefacts have been classified into three broad occupational phases:

1. Early historic phase

- Approximately 1st century BCE to 3rd-4th century CE
- Overlaps with the conventional Sangam-period chronology

1. Medieval phase

- Produced the largest number of artefacts
- Includes material broadly associated with the 8th-15th centuries CE

1. Colonial phase

- Includes remains belonging to the British period

Some artefacts are provisionally estimated to be around **2,100 years old**. Their exact antiquity remains subject to scientific dating.

Additional Information

Historical Identity

- Vellalore was historically known as **Velilur**.
- It is believed to have been associated with the **Velir chieftains**, who operated under or alongside the wider political influence of the Cheras.
- The excavation strengthens evidence for a substantial settlement at Uppiliyar Thittu.

Noyyal River

- The Noyyal forms part of the **Cauvery river basin**.
- It flows through the Coimbatore region, which historically served as a passage between the western coast, the Palghat Gap and the interior Tamil country.
- River valleys facilitated habitation, agriculture, craft production and movement of goods.

Tamil Nadu Excavation Programme

- Vellalore forms part of a wider archaeological programme covering **eight sites** in Tamil Nadu.
- The State government allocated **₹7 crore** for excavation and scientific research across these sites.
- Scientific dating is essential for confirming chronology because comparative dating based on pottery, coins and structural styles provides only provisional estimates.

Tamil Nadu State Department of Archaeology

- TNSDA is the State-level agency responsible for archaeological exploration, excavation, documentation and preservation in Tamil Nadu.
- Its excavations contribute to reconstructing the region's prehistoric, Iron Age, early historic, medieval and colonial cultural sequences.

Shabdlok: India's First Immersive Language Museum

What's the News?

India's first immersive language museum, **Shabdlok-Museum of Word**, has been inaugurated at the **National Library campus in Kolkata**. Developed by the National Library under the **Union Ministry of Culture**, it presents India's linguistic and literary heritage through interactive exhibits, artefacts and digital technologies.

What is Shabdlok?

- **Official name:** Museum of Word
- **Popular name:** Shabdlok

- **Location:** Belvedere House, National Library campus, Kolkata, West Bengal
- **Administrative ministry:** Ministry of Culture
- **Implementing institution:** National Library of India
- **Status:** India's first immersive language museum
- **First-phase cost:** Approximately ₹14 crore
- **Number of galleries:** Nine

The museum differs from a conventional repository by allowing visitors to hear, view and interact with languages through sensory and technology-driven installations.

Linguistic Coverage

Shabdlok presents the history, evolution and contemporary position of nearly **380 languages**. These include the **121 languages recorded in the Census of India 2011**, along with several historical languages that are no longer commonly spoken. Its galleries trace the development of communication through:

- Oral traditions and folk narratives
- Mother tongues and lullabies
- Ancient grammar and writing systems
- Shruti and Smriti traditions
- Manuscripts and inscriptions
- Printing and published literature
- Electronic texts, digital archives and artificial intelligence
- Contributions of poets, writers and language scholars
- Public libraries and their role in knowledge dissemination

Immersive Technologies

The museum uses modern technologies to make linguistic heritage accessible, particularly to students and younger visitors. These include:

- Artificial intelligence
- Augmented and virtual reality
- Holograms
- Projection mapping
- Gesture-reading and motion sensors
- Interactive digital displays
- Audio-visual installations
- Acoustically designed passageways

Visitors can also examine how the pronunciation, meaning and usage of words have changed over time.

Artefacts Displayed

Shabdlok combines digital installations with physical heritage objects, including:

- Stone inscriptions
- Copper-plate inscriptions
- Bhojpatra or birch-bark manuscripts

- Handwritten manuscripts
- Ancient and historical texts
- Printed books
- Audio archives and recordings of oral traditions

Additional Information

Languages under the Constitution

- **Eighth Schedule**
 - Contains **22 Scheduled Languages**.
 - These should not collectively be described as India's "national languages" or "official languages."
- **Article 343**
 - Hindi in the Devanagari script is the official language of the Union.
 - English continues to be used for Union official purposes under parliamentary legislation.
- **Article 345**
 - A State legislature may adopt one or more languages used in the State, or Hindi, for official purposes.
- **Article 350A**
 - Provides for facilities for primary education in the mother tongue for children belonging to linguistic minority groups.
- **Article 350B**
 - Provides for a Special Officer for Linguistic Minorities.
- **Article 29**
 - Protects the right of citizens to conserve their distinct language, script or culture.

National Library of India

- Located at Belvedere Estate in Kolkata.
- Functions under the Ministry of Culture.
- Serves as an important national institution for collecting, preserving and providing access to published heritage and knowledge resources.

Puri Jagannath Temple Seeks Trademark Protection for Sacred Names

What's the News?

The **Shree Jagannath Temple Administration (SJTA)** has secured preliminary approval for trademark applications covering five sacred names and symbols associated with the Jagannath Temple in Puri.

The applications have cleared examination by the **Trade Marks Registry** and have been approved for publication in the Trademark Journal. This is **not final registration**;

the marks must first complete the statutory opposition process. The initiative seeks to prevent unauthorised commercial exploitation and preserve the distinct religious and cultural identity of the Puri shrine. The SJTA has filed **29 trademark applications** in total.

Sacred Terms Covered

The five applications cleared for publication are:

- **Jagannath Dham**
 - A sacred appellation associated with Puri and Lord Jagannath.
- **Shree Kshetra**
 - A traditional religious name for Puri.
- **Mahaprasad**
 - The sanctified food offered to the deities and subsequently distributed among devotees.
- **Nilachakra**
 - The eight-spoked metal wheel installed at the top of the temple.
- **Koili Vaikuntha**
 - The sacred garden within the temple complex where old wooden deities are interred during the **Nabakalebara** ritual.

Earlier applications involving **Patitapaban, Ananda Bazaar** and the **Nilachakra logo** had also cleared examination.

Why Trademark Protection?

The move followed a dispute over the use of “**Jagannath Dham**” for the newly constructed Jagannath temple at Digha in West Bengal.

Odisha maintained that:

- The title has a unique religious and historical association with Puri.
- Its unrestricted use could dilute the identity of the original shrine.
- Sacred names and symbols could be commercially exploited through merchandise, services, advertisements or unauthorised digital platforms.
- Legal protection would help SJTA act against deceptive or misleading commercial usage.

The term “Dham” was subsequently removed from the official name of the Digha temple following a change of government in West Bengal.

Trademark Registration Process

Trademark registration in India is governed by the **Trade Marks Act, 1999** and the **Trade Marks Rules, 2017**.

1. An applicant files a trademark application for specified classes of goods or services.
2. The Trade Marks Registry examines the application.
3. An accepted application is published in the **Trademark Journal**.
4. Any person may oppose it within **four months** of publication.
5. Registration is granted when:
 - No opposition is filed; or
 - An opposition is decided in favour of the applicant.

Therefore, journal publication represents an important preliminary clearance rather than the grant of a final trademark certificate.

Scope of Protection

- A trademark protects a name, logo, symbol or other mark used to distinguish particular goods or services.
- Protection applies according to the classes and conditions under which the mark is registered.
- Registration does not automatically prohibit every religious, cultural or non-commercial reference to the sacred terms.
- It primarily strengthens the SJTA's ability to challenge misleading or unauthorised commercial use.

Additional Info

- **Shree Jagannath Temple Administration**
 - Statutory authority responsible for administering the 12th-century Jagannath Temple in Puri.
 - Oversees temple rituals, properties, servitors, pilgrim facilities and preservation of temple traditions.
- **Trademark and Geographical Indication**
 - **Trademark:** Identifies the commercial source of goods or services.
 - **Geographical Indication:** Identifies goods whose quality, reputation or characteristics are linked to a geographical origin.
 - The protection sought for “Jagannath Dham” and associated terms is under trademark law, not the GI framework.

Sarnath Becomes India's 45th UNESCO World Heritage Site

What's the News?

The **Ancient Buddhist Site of Sarnath** in Uttar Pradesh has been inscribed on the **UNESCO World Heritage List**, becoming

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India's **45th World Heritage Site** and Uttar Pradesh's fourth.

The decision was taken at the **48th Session of the World Heritage Committee** in Busan, Republic of Korea. Sarnath was recognised as a cultural property under UNESCO criteria **(iii) and (vi)** for its enduring Buddhist heritage and direct association with the life and teachings of Gautama Buddha.

Ancient Buddhist Site of Sarnath

Sarnath is situated near Varanasi and is one of the four principal Buddhist pilgrimage sites identified with the life of Gautama Buddha.

- Buddha delivered his **first sermon** here after attaining enlightenment at Bodh Gaya.
- The event is known as **Dharmachakra Pravartana** or "Setting in Motion the Wheel of Dharma".
- Buddha taught his first five disciples here, marking the emergence of the **Buddhist Sangha**.
- Sarnath is also known in Buddhist traditions as:
 - **Rishipattana**
 - **Isipatana**
 - **Mrigadava or Deer Park**

The archaeological record reflects patronage from the pre-Mauryan period through the Mauryan, Kushana and Gupta periods.

UNESCO Property Components

Sarnath has been inscribed as a **serial property** consisting of two component parts:

1. Chaukhandi Stupa

- Marks the place where Buddha is believed to have met his first five disciples.
- Its brick structure is crowned by an octagonal Mughal-period tower.

1. Archaeological Remains of Sarnath

- Include stupas, monasteries, temples and other remains of the ancient Buddhist complex.
- Major structures include:
 - Dhamek Stupa
 - Dharmarajika Stupa remains
 - Ashokan Pillar remains
 - Monastic and temple ruins

UNESCO changed the property's nominated name from "**Ancient Buddhist Site, Sarnath, Varanasi**" to "**Ancient Buddhist Site of Sarnath**."

UNESCO Selection Criteria

Criterion (iii)

A site must provide unique or exceptional testimony to a cultural tradition or civilisation.

Sarnath demonstrates the continuing spiritual importance of one of Buddhism's principal pilgrimage centres through its religious structures, archaeological remains and revival as a modern pilgrimage destination.

Criterion (vi)

A site must be directly or tangibly associated with events, traditions, ideas or beliefs of outstanding universal significance.

Sarnath is directly associated with:

- Buddha's first sermon.
- The formation of the Buddhist Sangha.
- The teachings of the Buddha.
- The concept of the **Triratna**—Buddha, Dhamma and Sangha.

Protection and Management

- The two component sites are protected under the **Ancient Monuments and Archaeological Sites and Remains Act, 1958**, amended in 2010.
- The Act provides:
 - A **100-metre prohibited area** around a protected monument.
 - A further **200-metre regulated area**, where construction requires approval.
- The **Archaeological Survey of India** is responsible for conservation and management.
- Additional protection is provided through:
 - Varanasi Master Plan 2031.
 - Wildlife protection regulations applicable to the buffer zone.

UNESCO has recommended a carrying-capacity study, stronger tourism management, heritage-impact assessments and measures to preserve Sarnath's spiritual character.

Additional Info

• Ashokan legacy

- Emperor Ashoka constructed the Dharmarajika Stupa and erected a pillar at Sarnath.
- The four-lion capital of this pillar became India's **State Emblem**.
- The **Ashoka Chakra** on the National Flag is based on the wheel depicted on the Sarnath Lion Capital.

• World Heritage Convention

- Adopted by UNESCO in **1972**.

- Covers cultural, natural and mixed properties possessing **Outstanding Universal Value**.
- The World Heritage Committee consists of representatives from **21 States Parties**.
- **Uttar Pradesh's UNESCO World Heritage Sites**
 - Taj Mahal.
 - Agra Fort.
 - Fatehpur Sikri.
 - Ancient Buddhist Site of Sarnath.
- **Key Facts**
 - **Site:** Ancient Buddhist Site of Sarnath
 - **State:** Uttar Pradesh
 - **India's tally:** 45
 - **UNESCO criteria:** (iii) and (vi)
 - **Committee session:** 48th
 - **Venue:** Busan, Republic of Korea

Ladakh Declares 23 Heritage Sites as Protected Monuments

What's the News?

The Ladakh administration has declared **23 heritage sites** across the Union Territory as **Protected Monuments** under the **Jammu and Kashmir Ancient Monuments Preservation Act**. The decision was approved by Lieutenant Governor **Vinai Kumar Saxena** to provide legal protection to archaeological, historical and cultural sites, including petroglyphs, rock carvings, caves, gompas, forts, palaces and inscriptions.

Protected Monuments?

- A **Protected Monument** is a heritage site given legal protection for conservation and regulated management.
- The status allows the administration to:
 - prevent encroachments,
 - regulate activities that may damage the site,
 - undertake scientific conservation,
 - document and restore heritage structures,
 - support responsible cultural tourism.
- The notified sites were reportedly in a dilapidated condition and faced threats from neglect, natural decay and unregulated activity.

Sites Notified

- The 23 protected monuments include:
 - Petroglyph Site at Sharnos
 - Maitreya Buddha Rock Carving at Shey near Sindhu Ghat
 - Tingmosgang Fort
 - Ancient Caves at Saspol

- Petroglyph Sites at Domkhar, Lehdo, Alchi and Murgi
- Stongday Gonpa
- Meditation Cave of Onpo at Hunder
- Hunder Cave
- Dechen Tsomo Khar Fort
- Stampuk Cave
- Chamba Rock Carving
- Zong Chamba / Rock Carving of Maitreya Buddha
- Rock-Carved Buddha Statue at Hunder
- Rigsum Gonbo Rock Carvings at Diggar
- Chamba Karpo / White Maitreya Buddha at Diggar
- Chamba Rock Carving at Tokpo, Diggar
- Folang Singey / Boulder-like Lion Face at Diggar
- Sumoor Fort
- Rock Inscriptions at Yourbaltak in Kargil
- Petroglyph Site at Mangmore in Kargil

Additional Info

• Petroglyphs

- Rock engravings made by prehistoric or early historic communities.
- Useful for studying early human activity, hunting scenes, religious symbols and movement of communities.

• Gompa

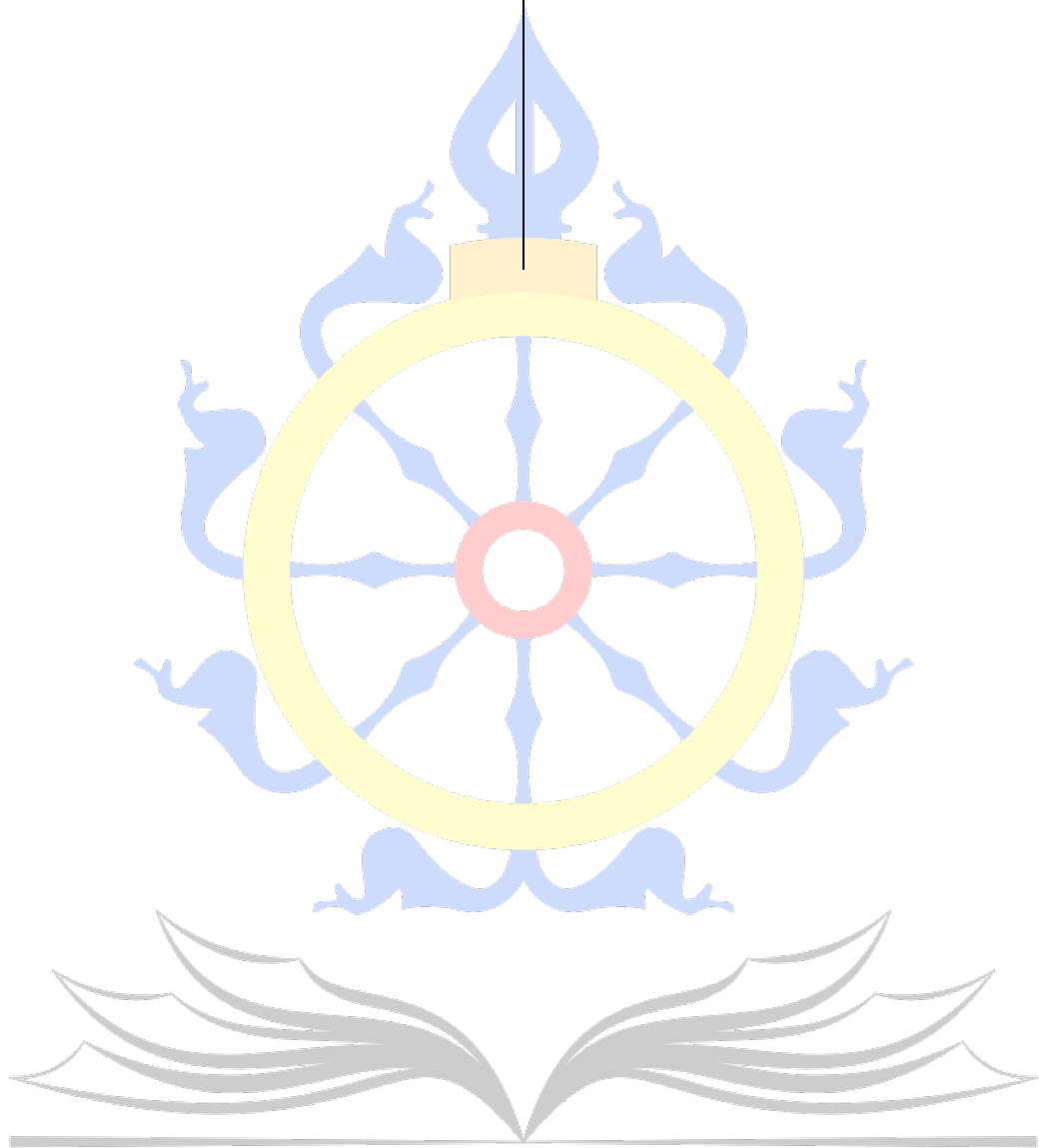
- A Buddhist monastery in Himalayan regions.
- Important for studying Tibetan Buddhist culture, manuscripts, murals and monastic architecture.

• Constitutional Link

- **Article 49** directs the State to protect monuments, places and objects of national importance from spoliation, disfigurement, destruction, removal, disposal or export.

• Legal Context

- **Jammu and Kashmir Ancient Monuments Preservation Act:** Used here for protection of monuments in Ladakh.
- **Ancient Monuments and Archaeological Sites and Remains Act:** Provides the legal framework for centrally protected monuments under the Archaeological Survey of India.



Environment

Satkosia Tiger Reserve: NTCA Approves Resumption of Tiger Reintroduction

What's the News?

The **National Tiger Conservation Authority (NTCA)** has granted **in-principle approval** to resume the **tiger reintroduction programme** in **Satkosia Tiger Reserve, Odisha**. The approval follows compliance by the Odisha Forest Department with NTCA's recommendations after the failure of the earlier translocation programme in 2018. The project will proceed only after a fresh assessment of ground conditions and habitat readiness.

Tiger Reintroduction Plan

The renewed programme aims to restore a viable tiger population in Satkosia through a phased and scientifically managed approach.

Features

- **In-principle approval** granted by NTCA.
- Fresh assessment of:
 - Habitat suitability.
 - Prey availability.
 - Human-wildlife conflict potential.
 - Protection infrastructure.
- Implementation will follow NTCA's **Tiger Reintroduction Protocol**.
- Tigers will be introduced only after ensuring ecological preparedness.

Why Was the Earlier Project Suspended?

The first tiger translocation programme began in **2018**, when tigers were relocated from **Kanha Tiger Reserve (Madhya Pradesh)**. However, the project was halted due to:

- Death of one translocated tiger.
- Conflict involving another tiger with local communities.
- Inadequate prey base.
- Habitat management challenges.
- Social opposition and insufficient community participation.

As of the latest assessment, **Satkosia has no resident tiger population**.

NTCA Recommendations

- Before reintroduction, NTCA recommended:
- Voluntary relocation of villages from critical habitats.
 - Creation of **inviolate spaces** for tigers.
 - Augmentation of prey populations.
 - Strengthening anti-poaching measures.
 - Capacity building of frontline forest staff.

- Improved habitat management and monitoring mechanisms.

Additional Info

Satkosia Tiger Reserve

- **Location:** Odisha.
- **Declared Tiger Reserve:** 2007.
- **Total Area:** 1,136.70 sq. km
 - **Core Area:** 523.61 sq. km
 - Remaining area forms the buffer.
- Spread across:
 - Angul
 - Nayagarh
 - Cuttack
 - Boudh districts.
- Encompasses the **Satkosia Gorge**, where the **Mahanadi River** flows through a 22-km gorge in the Eastern Ghats.

National Tiger Conservation Authority (NTCA)

- **Established:** 2006.
- **Statutory body** under the **Wildlife (Protection) Act, 1972**.
- Functions:
 - Implements **Project Tiger**.
 - Approves Tiger Conservation Plans.
 - Frames tiger reintroduction protocols.
 - Monitors tiger reserves across India.

Project Tiger

- **Launched:** 1973.
- **Ministry:** Ministry of Environment, Forest and Climate Change.
- Objectives:
 - Ensure a viable population of tigers in their natural habitats.
 - Protect critical tiger habitats.
 - Reduce poaching and habitat degradation.
 - Promote scientific conservation and ecosystem management.

Tiger Reintroduction

Tiger reintroduction involves relocating wild tigers from healthy source populations to reserves where tiger numbers have declined or become locally extinct.

Preconditions include:

- Adequate prey density.
- Suitable habitat.
- Strong protection mechanisms.
- Community participation.
- Long-term scientific monitoring.

Delhi Launches 70-Lakh Tree Plantation Drive

What's the News?

Union Home Minister Amit Shah and Delhi Chief Minister Rekha Gupta launched **Mission 70 Lakh Tree Plantation Campaign** in Delhi under the **Ek Ped Maa Ke Naam** initiative. The campaign is linked with Delhi's broader green agenda, including **Ridge forest restoration**, native species plantation, Yamuna pollution control, electric mobility expansion, and urban ecological rejuvenation.

Mission 70 Lakh Tree Plantation Campaign

- Aim: Plant **over 70 lakh saplings** across Delhi.
- Part of Delhi's **Green Action Plan 2026–27**.
- Focus areas:
 - Open land
 - Parks
 - Roadside stretches
 - Forest areas
 - Urban public spaces
- Citizen participation is planned through the **Green Drive Portal**.
- Around **12 lakh saplings** are to be distributed free of cost.
- Saplings will be **geo-tagged and digitally monitored** to improve survival rates.

Delhi Ridge Rejuvenation Plan

- Delhi government has prepared an **Eco-restoration Plan 2026–2030** for Ridge forests.
- Target: Restore nearly **6,300 hectares** of Ridge forest.
- Plantation goal: **Over 1 crore native trees** over four years, along with shrubs, bamboo and climbers.
- Key ecological actions:
 - Removal of invasive species such as **babul/kikar/Vilayati Keekar**.
 - Replacement with native species such as:
 - Peepal
 - Banyan
 - Neem
 - Arjun
 - Jamun
- Nearly **5,000 hectares** of Ridge land have been brought under legal forest protection.
- More than **70 water bodies/ponds** are planned or proposed for revival and development.

Green Drive Portal

- Technology platform for public participation in plantation.

- Functions:
 - Register for plantation activities.
 - Reserve plantation slots.
 - Locate government nurseries.
 - Request sapling delivery through **Vriksh Rath**.
- Useful for improving transparency, monitoring and citizen engagement in urban afforestation.

Yamuna & Clean Mobility Link

- The campaign is part of a wider environmental package for Delhi.
- The government plans cooperation with the **National Dairy Development Board** to process cattle dung into:
 - Biogas
 - Organic manure
- This aims to reduce waste flow into the Yamuna.
- Delhi also flagged off **300 electric buses** and inaugurated electric bus depots to support clean transport.
- Delhi's public bus fleet includes thousands of electric buses, with targets to expand e-bus deployment further.

Additional Info

- **Delhi Ridge**
 - Northern extension of the **Aravalli hill system**.
 - Acts as Delhi's major ecological buffer and "green lung".
 - Commonly divided into:
 - Northern Ridge
 - Central Ridge
 - South-Central Ridge
 - Southern Ridge
- **Reserved Forest**
 - A legally protected forest category under Indian forest law.
 - Activities such as grazing, cutting trees or collecting forest produce are restricted unless permitted.
- **Vilayati Keekar**
 - Common name: **Prosopis juliflora**.
 - Invasive alien species.
 - Often spreads rapidly in dry regions and can suppress native biodiversity.
- **Ek Ped Maa Ke Naam**
 - A plantation campaign encouraging citizens to plant a tree in honour of their mother.
 - Relevant for topics such as:
 - Urban forestry
 - Climate action
 - Citizen participation
 - Environmental governance

WII Society Sets Three-Year Wildlife Science Roadmap

What's the News?

- The reconstituted **Wildlife Institute of India (WII) Society** held its **28th meeting** at the Central Academy for State Forest Service in Coimbatore.
- Union Minister for Environment, Forest and Climate Change **Bhupender Yadav**, who is also President of the WII Society, chaired the meeting.
- It was the Society's first meeting after its reconstitution for a **three-year tenure**.
- The Society established an agenda for WII's scientific work over the next three years, with emphasis on:
 - Human-wildlife conflict resolution
 - Technology-driven wildlife management
 - Capacity building
 - Alignment of research, training and policy support with **Viksit Bharat @ 2047**.

Wildlife Institute of India?

- **Status:** Autonomous institution under the Ministry of Environment, Forest and Climate Change.
- **Headquarters:** Dehradun, Uttarakhand.
- **Functions:**
 - Wildlife and biodiversity research
 - Training of forest and wildlife personnel
 - Scientific and technical advice for wildlife management
 - Support for protected-area and species-conservation programmes
- WII Director and Society Member-Secretary **Dr G. S. Bhardwaj** presented the institute's achievements, current priorities and action taken on decisions of the previous meeting.

Related Wildlife Governance Review

The Environment Minister also held discussions with the:

- Standing Committee of the National Board for Wildlife
- National Tiger Conservation Authority
- Central Zoo Authority
- WII Society

The wildlife board's Standing Committee appraised more than **100 development proposals**. Its agenda contained **118 proposals**, including:

- **24** defence-sector projects
- **23** road and bridge projects
- **12** power-transmission projects

Proposals were assessed on ecological impact, public welfare, national-development requirements and adequacy of wildlife-mitigation measures.

Species-Conservation Measures

- Long-term conservation strategies for the **Great Indian Bustard** and **Greater One-horned Rhinoceros** were reviewed.
- A second Great Indian Bustard chick produced through the **"jumpstart" method** survived the crucial initial period of 40 days.
 - Under this method, a fertile egg from a captive-breeding centre replaces an infertile egg in a wild nest.
 - The egg is subsequently incubated by a wild female bird.
- The inclusion of the **Pygmy Hog** under the Environment Ministry's **Species Recovery Programme** was also considered.

Additional Info

- **Great Indian Bustard**
 - Conservation status: Critically Endangered
 - Its present range is largely restricted to Rajasthan and Gujarat.
 - Captive-breeding centres are located in Rajasthan's Jaisalmer district.

Aastha Van Sanrakshan Yojana to Conserve 15,000 Sacred Groves

What's the News?

The Union government has approved the **Aastha Van Sanrakshan Yojana** to conserve and restore nearly **15,000 sacred groves**, termed *Aastha Vans*, across India.

The scheme has an initial corpus of **₹3,000 crore** for five years, covering **2026-27 to 2030-31**. It will be financed through the **National Compensatory Afforestation Fund**.

Aastha Van Sanrakshan Yojana

- **Nodal institution:** National Compensatory Afforestation Fund Management and Planning Authority-National CAMPA.
- **Implementing ministry:** Ministry of Environment, Forest and Climate Change.
- **Coverage:** Nearly 15,000 sacred groves across the country.
- **Outlay:** ₹3,000 crore.
- **Duration:** Five years.
- **Focus areas:**
 - Conservation of relatively intact sacred forests.

- Ecological restoration of degraded groves.
- Protection of biodiversity, water sources and culturally important landscapes.
- Community participation and traditional ecological knowledge.
- Improved resilience against land degradation and climate change.

The scheme was approved at the **seventh meeting of National CAMPA's Governing Body** in Coimbatore, chaired by Union Environment Minister Bhupender Yadav.

Sacred Groves

Sacred groves are patches of forests or groups of trees protected by local communities because of their religious, spiritual or cultural significance. They frequently conserve natural vegetation outside formally notified protected areas and may protect springs, aquifers and local drinking-water sources.

Regional Names

- **Rajasthan:** Oran
- **Maharashtra:** Devrai
- **Karnataka:** Devarakadu
- **Kerala:** Kavu
- **Meghalaya:** Law Kyntang or Law Lyngdoh
- **Manipur:** Umanglai
- **Himachal Pradesh:** Devban
- **West Bengal:** Gramthan
- **Andhra Pradesh:** Pavithravana

National CAMPA

National CAMPA is a statutory authority operating under the **Compensatory Afforestation Fund Act, 2016**.

- It administers money collected from user agencies when forest land is diverted for non-forest purposes.
- The collections principally include:
 - Compensatory-afforestation charges.
 - Net Present Value of diverted forest land.
 - Additional or penal compensatory-afforestation payments.
- **90%** of the collected amount is transferred to the respective State or Union Territory fund.
- **10%** is retained in the National Compensatory Afforestation Fund.
- The National Authority comprises a **Governing Body, Executive Committee and Monitoring Group**.

Legal Context

In the *T.N. Godavarman Thirumulpad* case concerning Rajasthan's Orans, the Supreme Court directed detailed ground and satellite mapping of sacred groves and

their classification as forests based on their cultural and ecological significance, irrespective of their size. The Court also suggested:

- Appropriate groves may be declared **Community Reserves under Section 36C of the Wildlife (Protection) Act, 1972**.
- Traditional communities may receive recognition over these areas as **Community Forest Resources under the Forest Rights Act, 2006**.

Other CAMPA Decisions

The Governing Body also approved conservation initiatives relating to:

- River dolphins.
- Project Snow Leopard Phase II.
- Indian rhinoceros.
- Wild water buffalo.
- Continued protection of the Sangai deer.

It extended **MISHTI** until 2029 with an additional ₹500 crore, increasing its overall outlay to **₹600 crore**.

BIS to Introduce India's First Mangrove Restoration Standards

What's the News?

The **Bureau of Indian Standards** is set to introduce India's first national standard for **mangrove ecosystem restoration**. The draft standard, titled **"Restoration of Mangrove Ecosystem – Guidelines"**, aims to streamline mangrove restoration practices across coastal India and improve the quality of plantation-based restoration work. It is especially relevant for regions such as the **Sundarbans**, where mangroves are critical for biodiversity, livelihoods and coastal protection.

Mangrove Restoration Guidelines

- The proposed standard will act as a **best-practice manual** for mangrove restoration.
- It seeks to reduce erratic or poorly planned plantation activities.
- Key concerns addressed:
 - Selection of suitable mangrove species.
 - Site-specific plantation methods.
 - Avoidance of harmful plantation materials.
 - Community participation in restoration.
 - Integration of livelihoods with ecological restoration.
- Stakeholders suggested replacing **polythene packets** with **cloth or biodegradable bags** during plantation.

Why Mangroves Matter?

- Mangroves are **salt-tolerant coastal forests** found in intertidal zones, estuaries, deltas and sheltered coastlines.
- They provide:
 - Coastal protection against cyclones, storm surges and erosion.
 - Nursery habitats for fish, crabs and other marine species.
 - Carbon sequestration through **blue carbon** storage.
 - Livelihood support for coastal communities.
- The **Sundarbans** is India's largest mangrove ecosystem and one of the largest mangrove forests in the world.

Role of BIS

- **BIS** is India's national standards body.
- It functions under the **BIS Act, 2016**.
- It works under the **Ministry of Consumer Affairs, Food and Public Distribution**.
- Indian Standards are generally **voluntary**, unless made mandatory by law or government order.
- In this case, ministries and state departments may later decide whether the guidelines should be made binding for restoration projects.

MISHTI Programme

- **Full form:** Mangrove Initiative for Shoreline Habitats and Tangible Incomes.
- Launched to promote mangrove plantation and restoration across coastal India.
- Coverage target:
 - **540 sq km** of mangrove restoration.
 - Across **nine coastal states** and **four Union Territories**.
- Financial allocation:
 - Total allocation: **₹600 crore**
 - Additional allocation mentioned: **₹500 crore**
 - Funds released to six states/UTs: **₹88.40 crore**

Additional Info

- **Important mangrove regions in India:**
 - Sundarbans – West Bengal
 - Bhitarkanika – Odisha
 - Gulf of Kachchh – Gujarat
 - Godavari-Krishna delta – Andhra Pradesh
 - Pichavaram and Muthupet – Tamil Nadu
 - Andaman and Nicobar Islands
- **State-level relevance:**
 - West Bengal, Gujarat and Andhra Pradesh have mangrove cells or

specialised institutional mechanisms.

- State-specific manuals may be developed using the BIS standard as a national framework.

All India Water Secretaries' Conference Focuses on Water Security and Dam Safety

What's the News?

The **Ministry of Jal Shakti** organised the **All India Water Secretaries' Conference** in New Delhi to strengthen Centre-State coordination in water-resource management.

The conference was chaired by Union Minister for Jal Shakti **C. R. Patil**, with the participation of Minister of State **Raj Bhushan Choudhary**, Water Resources Secretary **V. L. Kantha Rao**, and senior officials from all States and Union Territories.

Around **200 officials** participated, including representatives of the **Central Water Commission, National Dam Safety Authority and National Water Mission**.

Eight Priority Areas

The conference reviewed eight major water-sector priorities:

1. Modernisation of Command Area Development and Water Management.
2. Nationwide **Catch the Rain** campaign.
3. Revised project-appraisal guidelines for irrigation, multipurpose and flood-management projects.
4. Effective implementation of reservoir rule curves.
5. State Water Reforms Framework.
6. Comprehensive Dam Safety Evaluations under the Dam Safety Act, 2021.
7. Progress of irrigation and water-resource censuses.
8. Framework for Model State Water Awards.

M-CADWM Scheme

The **Modernisation of Command Area Development and Water Management Scheme** seeks to improve the delivery and productive use of irrigation water in agricultural command areas.

States were asked to accelerate:

- Tendering and issuance of work orders.
- Formation of **Water User Associations**.
- Modernisation of irrigation-distribution systems.
- On-ground execution of approved projects.

Its objectives include improving irrigation efficiency, reducing water losses and increasing farmers' incomes.

Catch the Rain Campaign

States and Union Territories were asked to make **Catch the Rain 2026** a people-led water-conservation movement.

Major activities include:

- Rainwater harvesting.
- Groundwater recharge.
- Restoration of traditional water bodies.
- Desilting of ponds and tanks.
- Plantation and public-awareness campaigns.

Water-conservation activities are to be uploaded on the **Jal Sanchay Jan Bhagidari: Catch the Rain Portal** for monitoring and public participation.

State Water Reforms Framework

The **State Water Reforms Framework**, launched in May 2026, promotes improvements in:

- Water governance.
- Digitisation of water-sector information.
- Project monitoring.
- Citizen participation.
- Benchmarking and exchange of best practices.

All **36 States and Union Territories** have nominated nodal officers under the framework.

Dam Safety Measures

The conference reviewed the implementation of the **Dam Safety Act, 2021**.

- States were asked to complete the **Comprehensive Dam Safety Evaluation** of all specified dams by December 2026.
- Reservoir **rule curves** must be implemented effectively for:
 - Safe reservoir operations.
 - Flood moderation.
 - Efficient water storage and release.
 - Reduction of dam-related risks.

Water-Resource Censuses

The government is conducting four important national data-collection exercises:

- **7th Minor Irrigation Census**
- **2nd Census of Water Bodies**
- **1st Census of Major and Medium Irrigation Projects**
- **1st Springs Census**

These censuses will support evidence-based planning, resource allocation and monitoring of India's irrigation and water infrastructure.

Documents Released

Three water-management documents were released during the conference:

- **City-Level Action Plan for Reuse of Treated Water for Varanasi**
 - Provides a roadmap for safe wastewater reuse and a circular water economy.
- **Operation and Maintenance Manual for Artificial Recharge and Groundwater Conservation Structures**
 - Jointly developed by the National Water Mission and Central Ground Water Board.
- **Schedule of Rates for Drilling and Allied Works**
 - Prepared by the Central Ground Water Board to improve standardisation and transparency.

Additional Information

- **Water under the Constitution**
 - **Entry 17, State List:** Water supply, irrigation, canals, drainage, embankments and water storage.
 - **Entry 56, Union List:** Union regulation of inter-State rivers and river valleys in the public interest.
 - **Article 262:** Parliament may provide for adjudication of disputes concerning inter-State river waters.
- **Ministry of Jal Shakti**
 - Contains:
 - Department of Water Resources, River Development and Ganga Rejuvenation.
 - Department of Drinking Water and Sanitation.
- **Central Water Commission**
 - Technical organisation responsible for water-resource planning, flood forecasting, hydrological monitoring and appraisal of water projects.
- **National Dam Safety Authority**
 - Established under the Dam Safety Act, 2021.
 - Implements national dam-safety policies and resolves matters between State Dam Safety Organisations.
- **Conference Outcome**
 - Participants committed to time-bound implementation under the objective "**Jal Surakshit, Bharat Surakshit**".

Government Issues Draft CAFE-III Norms for Passenger Vehicles

What's the News?

The Ministry of Power has released the draft **Corporate Average Fuel Economy-III norms** for stakeholder consultation. The proposed rules seek to make passenger vehicles more fuel-efficient, reduce fleet-level carbon dioxide emissions, and encourage cleaner technologies such as electric vehicles, hybrids, ethanol-based vehicles, biofuels, and compressed bio-gas. The norms will replace CAFE-II and apply to **M1 category passenger vehicles** manufactured or imported for sale in India.

CAFE-III Norms?

- CAFE stands for **Corporate Average Fuel Economy**.
- It measures the **fleet-average fuel consumption and CO₂ emissions** of vehicles sold by a manufacturer.
- Unlike individual vehicle emission limits, CAFE norms assess the **overall average performance** of an automaker's passenger-vehicle fleet.
- In India, the proposed CAFE-III norms apply to **M1 category vehicles**:
 - Passenger vehicles.
 - Not more than **eight seats in addition to the driver's seat**.

Targets

- The draft proposes progressively stricter fuel-consumption and CO₂ targets:
 - **2027-28**: 3.996 litres/100 km or 94.76 gCO₂/km.
 - **2031-32**: 3.3273 litres/100 km or 78.90 gCO₂/km.
- Compliance will be assessed in two blocks:
 - First block: **three years**.
 - Second block: **two years**.
- The approach gives automobile manufacturers a phased regulatory pathway to develop more efficient vehicles.

Compliance Mechanism

- The draft introduces a **market-based compliance system**.
- Automakers that exceed the permitted fleet-average emission level may:
 - Purchase fuel-efficiency credits from other manufacturers with surplus credits.
 - Buy credits from the **Bureau of Energy Efficiency**.
- Proposed BEE credit buyout price:
 - ₹2,500 per gram of CO₂/km in FY28.

- ₹4,500 per gram of CO₂/km by FY32.

- This creates a financial incentive for manufacturers to improve fuel efficiency rather than merely pay penalties.

Technology Incentives

- Manufacturers may claim compliance benefits for approved fuel-saving technologies.
- Maximum benefit:
 - Up to **9 gCO₂/km** overall.
 - Maximum **1 gCO₂/km per technology**.
- The draft recognises carbon-neutrality adjustments for:
 - Ethanol.
 - Biofuels.
 - Compressed bio-gas.
- For current ethanol levels, an **8% carbon-neutrality factor** is proposed; for CBG and biofuels, the reduction will depend on the prevailing actual blending level.

Why It Matters

- Helps reduce fuel consumption and oil import dependence.
- Supports India's climate commitments and long-term net-zero pathway.
- Encourages transition towards cleaner mobility without depending only on battery electric vehicles.
- Pushes original equipment manufacturers to invest in:
 - Efficient internal combustion engines.
 - Hybrid systems.
 - EVs.
 - Alternative fuels.
 - Lightweighting and fuel-saving technologies.

Additional Info

- **Bureau of Energy Efficiency**
 - Statutory body under the **Ministry of Power**.
 - Established under the **Energy Conservation Act, 2001**.
 - Mandate: promote efficient use of energy and energy conservation.
- **CAFE vs BS Norms**
 - **CAFE norms**: regulate fuel efficiency and CO₂ emissions at fleet level.
 - **Bharat Stage norms**: regulate air pollutants such as NO_x, PM, CO and hydrocarbons.

NMCG Proposes Separate Framework for Rejuvenating Small Rivers

What's the News?

The **National Mission for Clean Ganga (NMCG)** has prepared a draft **Small River Rejuvenation (SRR) Framework** for restoring India's smaller rivers.

The framework recognises that small rivers differ from major river systems in their catchment size, seasonal flow, groundwater dependence and pollution sources. It therefore prioritises **river-specific scientific planning, nature-based solutions, decentralised implementation and community stewardship**, instead of relying mainly on large engineering projects.

Why a Separate Strategy?

Small rivers generally have:

- Localised catchments that respond rapidly to land-use changes.
- Seasonal flows dependent on rainfall and shallow aquifers.
- Pollution from village drains, municipal waste, agricultural runoff and local dumping.
- Greater vulnerability to encroachment, channel modification and disruption of natural connectivity.

Consequently, interventions designed for major rivers—such as large sewage-treatment plants, barrages and centralised infrastructure—may not adequately address their ecological and hydrological conditions.

Small River Rejuvenation Framework

The draft proposes a **basin- and river-specific planning process** covering:

- **Scientific studies:** Hydrology, hydrogeology, ecology, water quality and land-use assessment.
- **GIS mapping:** Catchment boundaries, drainage networks, encroachments and land-use changes.
- **Detailed Project Reports:** Site-specific interventions, costs, implementation schedules and monitoring indicators.
- **Pollution abatement:** Control of liquid waste, solid waste and pollution at source.
- **Ecological restoration:** Recovery of riparian vegetation, aquatic habitats and river connectivity.
- **Channel improvement:** Restoration of the natural river channel without unnecessary concretisation.
- **Public-river connection:** Community participation in maintenance, monitoring and protection.

Rural and Urban Approach

Rural Small Rivers

The framework prioritises:

- Restoration of natural longitudinal and lateral connectivity.
- Catchment treatment through soil conservation and vegetation.
- Local water-storage and groundwater-recharge structures.
- Decentralised management of sanitation, greywater and agricultural runoff.

Urban Small Rivers

The focus is on:

- Maintaining continuous or adequate environmental flow.
- Preventing sewage from entering stormwater drains and rivers.
- Managing urban runoff through constructed wetlands, permeable surfaces and vegetated drainage systems.
- Replacing hard-engineered riverbanks, where feasible, with bioengineering and nature-based restoration.

Funding and Governance

The framework favours **convergence of existing Central and State schemes** rather than creating standalone, capital-intensive projects.

Implementation would require coordination among water resources, rural development, urban development, sanitation, agriculture and forest departments. Gram Panchayats, Urban Local Bodies and riverbank communities are expected to undertake routine maintenance and local monitoring.

Suggested performance indicators include:

- Improvement in seasonal baseflow.
- Reduction in **Biochemical Oxygen Demand (BOD)** and faecal-coliform levels.
- Restoration of riparian vegetation.
- Improvement in aquatic-habitat connectivity.
- Reduction in direct discharge of sewage and solid waste.

Additional Info

• National Mission for Clean Ganga

- Functions under the Department of Water Resources, River Development and Ganga Rejuvenation, Ministry of Jal Shakti.
- Implements the **Namami Gange Programme**.
- Its river-management approach is based on:
 - **Nirmal Dhara:** Unpolluted or clean flow.

- **Aviral Dhara:** Continuous and adequate flow.
- **Constitutional Linkages**
 - **State List, Entry 17:** Water, irrigation, canals, drainage and embankments.
 - **Union List, Entry 56:** Regulation and development of inter-State rivers when Parliament declares it expedient in the public interest.
 - **Article 48A:** Directs the State to protect and improve the environment.
 - **Article 51A(g):** Makes protection of the natural environment a Fundamental Duty.
 - Panchayats and Urban Local Bodies have relevant responsibilities relating to water management, sanitation, watershed development and environmental protection under the Eleventh and Twelfth Schedules.

Maharashtra Approves India's First AI-Powered Bird Sanctuary

What's the News?

Maharashtra has approved the development of **India's first AI-powered bird sanctuary** at the **Thane Creek Flamingo Sanctuary** in the Mumbai metropolitan region. The ₹45-crore project, also referred to as the **Bhandup Bird Park or Eco-Nature Park**, will combine artificial intelligence-based bird monitoring with habitat conservation, environmental education and controlled eco-tourism facilities.

AI-Powered Bird Monitoring?

The proposed centre will use:

- AI-enabled cameras
- Acoustic sensors
- Automated image and sound recognition
- Real-time species identification
- Migration and movement tracking
- Centralised biodiversity databases and digital analytics

The system will monitor birds across an approximately **1.5-km stretch or radius**. It can identify species from photographs and calls, reducing dependence on manual surveys and limiting disturbance to birds. The collected data can support:

- Bird-population estimation
- Detection of changes in nesting and migratory behaviour
- Habitat-restoration planning
- Identification of illegal activity or habitat disturbance

- Assessment of climate-change impacts on wetland species

Bhandup Bird Park?

- **Project area:** Approximately 20.09 hectares along the Thane Creek shoreline
- **Physical infrastructure:** About 0.35 hectares
- **Mangrove nature trail:** Approximately 2.16 km
- **Project allocation:** ₹45 crore
- **Funding:** Special fund of the District Planning Committee

Proposed visitor facilities include observation towers, viewing decks, birdwatching points, interpretation centres, educational exhibits and nature trails. Most of the project area will remain dedicated to ecological and habitat-related functions.

Thane Creek Flamingo Sanctuary

Thane Creek Flamingo Sanctuary lies along the eastern edge of Mumbai and Navi Mumbai. It is known for large seasonal congregations of **Greater Flamingos and Lesser Flamingos**, along with shorebirds, herons, egrets and kingfishers.

The sanctuary supports more than **200 bird species** and forms part of the **Central Asian Flyway**, a major migration route connecting breeding grounds in Eurasia with wintering areas in the Indian subcontinent.

Additional Info

- **Ramsar Site**
 - Thane Creek is designated as a Wetland of International Importance.
 - Ramsar site number: **2490**
 - Ramsar-site area: Approximately **6,521 hectares**
 - The notified flamingo sanctuary accounts for around **1,690 hectares** of this area.
- **Ramsar Convention**
 - An intergovernmental treaty adopted in Ramsar, Iran, in 1971.
 - It promotes the conservation and "wise use" of wetlands.
 - India became a contracting party in 1982.
- **Central Asian Flyway**
 - One of the world's major migratory-bird flyways.
 - It covers routes between northern Eurasia and the Indian Ocean region.
 - India is a critical wintering and stopover region within the flyway.
- **Importance of Mangroves**

- Protect coastlines from erosion and storm surges.
- Store significant quantities of "blue carbon".
- Provide breeding and nursery habitats for fish and other aquatic species.
- Support feeding and roosting sites for resident and migratory birds.

NCBS Compiles India's Largest Tree-Inventory Meta-Dataset

What's the News?

Researchers led by the **National Centre for Biological Sciences (NCBS)** have compiled **INvenTree-meta**, the largest meta-dataset of tree-inventory studies conducted in India.

It consolidates geographically referenced information from **465 peer-reviewed studies**, covering over **4,650 hectares** across India's forest biomes. The initiative seeks to improve India's representation in global studies on forests, biodiversity, carbon storage and climate change.

INvenTree-meta?

INvenTree stands for the **India Tree Inventory Network**. It is a collaborative network that brings together tree-inventory information collected by researchers across India.

INvenTree-meta contains metadata on:

- Locations of forest-inventory plots
- Area and period of sampling
- Forest and vegetation types
- Tree-measurement methodologies
- Availability of the underlying datasets
- Institutions and researchers associated with the studies

It primarily covers **geolocated, plot-based inventories of multispecies tree communities** undertaken between **1991 and 2023**.

Findings

- **Studies compiled:** 465
- **Total sampled area:** Approximately **4,653.64 hectares**
- **Median area per study:** Around **2 hectares**
- **Studies without openly accessible data:** About **73.33%**
- **Share of sampled area represented by inaccessible data:** Approximately **83.43%**
- **Corresponding authors based in India:** Around **82.8%**

- **Studies having all authors affiliated with Indian institutions:**

Approximately **73.33%**

The findings indicate that India does not necessarily lack forest research. The principal constraint is the **limited accessibility and standardisation of existing data**.

Major Data Gaps

Despite extensive research in tropical moist and dry forests, several biodiversity-rich areas remain relatively under-sampled:

- Northern Western Ghats
- Northeastern India
- Western Himalayas
- Nicobar Islands

Parts of eastern and northeastern India experiencing rapid forest loss also lack adequate long-term ecological data. This limits the assessment of biodiversity decline, carbon-stock changes and ecosystem responses to climate change.

Why is it Significant?

Harmonising scattered datasets can help researchers:

- Estimate forest biomass and carbon-storage capacity
- Compare tree diversity across regions
- Study the effects of climate change and human activity
- Identify priority areas for ecological surveys
- Develop baselines for forest restoration
- Integrate Indian forests into regional and global ecological models
- Improve evidence-based forest and biodiversity management

Indian forest data are particularly important because the country contains diverse ecosystems with a long history of human-nature interaction.

Additional Info

- **National Centre for Biological Sciences**
 - Located in Bengaluru.
 - It is a research centre of the **Tata Institute of Fundamental Research**.
 - It undertakes fundamental and interdisciplinary biological research, including ecology and evolution.
- **FAIR Data Principles**
 - INvenTree promotes forest data that are:
 - Findable
 - Accessible
 - Interoperable
 - Reusable

- FAIR does not necessarily require unrestricted public access; it requires clearly documented, standardised and reusable data-management systems.
- **Meta-dataset**
 - A meta-dataset is a structured compilation containing information about several individual datasets.
 - INvenTree-meta maps existing studies and their characteristics; it does not automatically provide unrestricted access to every study's primary tree-level data.
- **Related Sustainable Development Goals**
 - **SDG 13:** Climate Action
 - **SDG 15:** Life on Land
- **Publication**
 - The research, titled **"Harmonizing Distributed Tree Inventory Datasets Across India Can Fill Critical Gaps in Tropical Ecology,"** was published in the journal *Biotropica*.

AAROH Report Highlights Scientific Closure of 42 Coal Mines

What's the News?

- The **Ministry of Coal** released **AAROH—Annual Report on Mine Closure**, India's first comprehensive documentation of scientific coal-mine closure and repurposing practices.
- Prepared by the **Coal Controller Organisation**, the report covers **42 scientifically closed coal mines**, including **33 closed during the preceding year**.
- It documents ecological restoration, land reclamation, post-mining land use and community-oriented development at the selected mines.
- The government aims to scientifically close **147 additional coal mines within the next two to three years**.

What is AAROH?

AAROH is intended to function as a national knowledge repository for future mine-closure projects.

Each mine profile contains:

- Major closure and reclamation interventions
- Post-mining land-use outcomes
- Before-and-after visual documentation
- QR code-linked documentary videos
- Community-development and livelihood interventions

The report seeks to shift mine closure from a regulatory formality to a planned process integrating environmental restoration, economic reuse and community welfare.

Scientific Mine Closure

Scientific mine closure is the planned decommissioning of a mine after mining becomes permanently uneconomic or its reserves are exhausted.

It generally includes:

- Securing shafts, pits and unstable slopes
- Backfilling and landform stabilisation
- Management of mine discharge and contaminated water
- Topsoil restoration and afforestation
- Removal or safe disposal of mining infrastructure
- Environmental monitoring
- Rehabilitation of affected communities
- Repurposing land for productive and sustainable uses

Reclaimed mine land may be used for **renewable-energy projects, agriculture, water conservation, eco-tourism, community infrastructure and livelihood generation**.

Mine-Closure Framework

The report highlights several initiatives of the Ministry of Coal:

- **RECLAIM Framework**
 - Supports structured reclamation and community engagement.
- **L.I.V.E.S. Framework**
 - Promotes stakeholder participation and sustainable mine closure and repurposing.
- **SUVIKALP**
 - An interactive decision-support tool for assessing suitable post-mining land-use options.
- **SUVIKALP Samvaad**
 - Facilitates stakeholder consultation, knowledge exchange and dialogue.
- **A.R.T.H.A. Framework**
 - Forms part of the broader ecosystem for sustainable and community-oriented mine closure.
- **Mine Closure Guidelines, 2025**
 - Place environmental sustainability, community needs and future land use at the centre of closure planning.
- **Mine Closure Advisory Committees**
 - District Collector-led bodies supporting local coordination and stakeholder participation.

Closure Funding

- The government has created a dedicated corpus exceeding **\$5 billion**, approximately **₹40,000 crore**, for scientific and progressive mine closure.
- For the first time, **25% of the approved mine-closure cost** has been earmarked for community development.
- This provision is expected to generate an investment potential of nearly **₹10,000 crore over the next decade** for mining-affected communities.

India-Germany Cooperation

The Ministry of Coal signed an implementation agreement with **Deutsche Gesellschaft für Internationale Zusammenarbeit**, or GIZ, for technical cooperation on mines scheduled for closure.

- Project volume: **€10 million**
- Duration: Four years
- Funding: Commissioned by Germany's Federal Ministry for Economic Cooperation and Development and co-financed by the European Union
- Cooperation period: Up to 2030
- Focus areas:
 - Scientific mine closure
 - Mine repurposing
 - Institutional capacity-building
 - Knowledge exchange
 - Adoption of international best practices

The partnership is linked to the broader concept of a **just transition**, under which workers and mining-dependent communities are supported during economic and environmental restructuring.

Coal NEER Initiative

Coal NEER plants established by subsidiaries of Coal India Limited convert treated mine-discharge water into safe drinking water.

Participating subsidiaries include:

- Bharat Coking Coal Limited
- Central Coalfields Limited
- Mahanadi Coalfields Limited
- South Eastern Coalfields Limited

The plants use technologies such as:

- Reverse osmosis
- Ultraviolet treatment
- Capacitive deionisation

Coal public-sector undertakings supply nearly **300 lakh kilolitres of treated mine water annually**, benefiting around **three lakh people**. The initiative also creates livelihood opportunities for local Self-Help Groups.

Additional Info

- **Progressive mine closure**

- Reclamation activities undertaken continuously while mining operations are still in progress.

- **Final mine closure**

- Closure activities undertaken after mining permanently ends.

- **Mine repurposing**

- Productive reuse of closed mine land and associated infrastructure for alternative economic, environmental or social purposes.

- **Circular economy**

- An economic model that minimises waste by reusing, restoring and recycling resources.
- Repurposing mine land and treating mine water reflect its "waste-to-wealth" principle.

Severe Monsoon Floods Hit Assam, Arunachal Pradesh and Gujarat

What's the News?

- Intense southwest monsoon rainfall triggered **riverine floods, flash floods, landslides and urban waterlogging** across Assam, Arunachal Pradesh and Gujarat.
- Assam's flood situation marginally improved, but nearly **6.55 lakh people remained affected across six districts**, while the cumulative death toll from the year's floods rose to **66**.
- In an earlier severe phase, floods affected **872 villages**, inundated **24,210.35 hectares of cropland** and affected over **5.64 lakh people** across 16 Assam districts.
- South Gujarat witnessed widespread flooding in Valsad, Navsari and Surat, while Ahmedabad and parts of Dadra and Nagar Haveli also required major rescue operations. The Army, NDRF, SDRF and local agencies were deployed.

Assam-Arunachal Flood Crisis

- Assam experienced successive flood waves caused by heavy rainfall within the state and in the upstream catchments of **Arunachal Pradesh and Nagaland**.
- The Brahmaputra and tributaries such as the **Dikhow, Disang and Dhansiri** crossed or approached severe flood levels in parts of Upper Assam.
- An initial spell affected **22,124 people across six Assam districts**, submerged 96 villages and damaged around **1,690 hectares of agricultural land**.

- Riverbank erosion destabilised a pier of a railway bridge in Dhemaji, forcing suspension of services on the affected route.
- Arunachal Pradesh also recorded rainfall-triggered flash floods and landslides that damaged settlements, roads and infrastructure.

Why is Assam Highly Flood-Prone?

Natural Factors

- **Brahmaputra river system**
 - The Brahmaputra is a braided river with multiple shifting channels.
 - It carries a large sediment load from the young and erosion-prone Himalayas.
 - Sediment deposition raises riverbeds and reduces channel capacity.
- **Orographic rainfall**
 - Moist southwesterly winds from the Bay of Bengal are forced upward by the Eastern Himalayas.
 - The rising air cools rapidly, producing intense rainfall in the Himalayan and sub-Himalayan catchments.
- **Short, steep tributaries**
 - Rivers descending from Arunachal Pradesh, Nagaland and Bhutan can carry large volumes of runoff into the Assam plains within a short period.
- Nearly **40% of Assam's geographical area** has been identified as flood-prone by the National Flood Commission.

Human-Induced Factors

- Encroachment and construction on natural floodplains
- Degradation of wetlands that previously stored excess water
- Riverbank erosion and inadequately maintained embankments
- Siltation of drainage channels
- Unplanned urbanisation and insufficient storm-water drainage
- Deforestation and land-use changes in upstream catchments

Climate change can increase the frequency and intensity of extreme rainfall, although attributing an individual flood solely to climate change requires a dedicated scientific attribution study.

Why Did Gujarat Receive Exceptional Rainfall?

The India Meteorological Department identified three major weather systems:

- A **low-pressure area over southeast Rajasthan**

- A monsoon trough positioned south of its normal location
 - An offshore trough extending from the Gujarat coast towards Karnataka
- These systems strengthened moisture convergence from the Arabian Sea. IMD recorded:

- **Exceptionally heavy rainfall of at least 30 cm** at isolated locations in the Gujarat region.
- **Extremely heavy rainfall of at least 21 cm** in Saurashtra and Kutch.
- Rapid flooding in low-lying areas of Valsad, Vapi, Navsari, Surat and adjoining districts.

Rescue and Relief Operations

Assam

- Relief operations involved the:
 - Indian Army
 - National Disaster Response Force
 - State Disaster Response Force
 - Fire and Emergency Services
 - Assam State Disaster Management Authority
- Relief camps provided food, drinking water, healthcare and temporary shelter.
- A central inter-ministerial team was sent to assess damage in severely affected areas.

Gujarat

- The Army initiated **Humanitarian Assistance and Disaster Relief operations** in coordination with civil authorities, NDRF and SDRF.
- Army deployment included:
 - Two columns in Navsari
 - One column in the Valsad-Vapi region
 - Three columns in Ahmedabad
 - One column in Silvassa
- Valsad additionally received three NDRF teams, five SDRF teams and additional rescue boats.

IMD Rainfall Classification

- **Heavy rainfall:** 64.5–115.5 mm in 24 hours
- **Very heavy rainfall:** 115.6–204.4 mm
- **Extremely heavy rainfall:** At least 204.5 mm
- **Exceptionally heavy rainfall:** Rainfall close to the highest amount recorded at or near a station for that month or season, subject to the prescribed minimum threshold.

Warning Colours

- **Green:** No warning
- **Yellow:** Watch and remain updated
- **Orange:** Be prepared
- **Red:** Take action

A red-coloured warning indicates the level of action required; it is not merely a description of rainfall intensity.

Additional Info

• Riverine flood

- Occurs when a river exceeds its carrying capacity and inundates adjoining floodplains.
- Usually develops over a relatively longer period.

• Flash flood

- Develops rapidly following intense rainfall, sudden runoff or failure of a natural or artificial barrier.
- Common in steep Himalayan and foothill catchments.

• Urban flood

- Results when intense rainfall exceeds a city's drainage capacity.
- Aggravated by concretisation, blocked drains and loss of wetlands.

• Cloudburst

- A highly concentrated, extremely intense rainfall event over a small area.
- Every flash flood is not necessarily caused by a cloudburst; regional meteorological officials stated that no formally recorded cloudburst preceded parts of the Assam-Arunachal flooding.

Malvi Camel Faces Critical Extinction Risk

What's the News?

The **Malvi camel**, a rare indigenous breed also known as the **white camel**, is facing a severe extinction threat. The **20th Livestock Census** recorded only **102 Malvi camels**, while breeds having fewer than 300 breeding females are considered at risk. The **ICAR-National Research Centre on Camel (NRCC)** has initiated a scientific conservation and pure-breeding programme. It has procured **12 Malvi camels—three males and nine females—to establish a breeding population and preserve the breed's genetic identity.**

Malvi Camel

- **Species:** *Camelus dromedarius*—single-humped camel.
- **Common name:** White camel.
- **Distinctive feature:** Predominantly white or light-coloured coat.
- **Size:** Regarded as India's smallest indigenous camel breed.

• Traditional uses:

- Transportation.
- Carrying agricultural and commercial loads.
- Milk production.

- Females are reported to produce around **4–5 kg of milk**, although the reports do not specify a standard reference period for this figure.

Distribution

The breed is primarily associated with the **Malwa region of Madhya Pradesh** and adjoining southeastern Rajasthan.

- **Madhya Pradesh:** Mandsaur, Neemuch, Ratlam and Gwalior.
- **Rajasthan:** Kota, Bundi, Jhalawar and Baran.

Its population has declined because of changing rural transport systems, reduced demand for draught camels, shrinking grazing resources and weakening economic incentives for camel rearers.

Conservation Programme

The programme is being implemented by the **ICAR-National Research Centre on Camel, Bikaner**, under a network project of the **ICAR-National Bureau of Animal Genetic Resources (NBAGR), Karnal.**

Major components include:

- Pure breeding to prevent genetic dilution.
- Expansion of the breeding population.
- Documentation of morphological, productive and adaptive traits.
- Participation of camel owners and livestock rearers.
- Awareness generation regarding the breed's economic value.
- Promotion of camel milk and other livelihood-based uses.

NRCC is an ICAR institution specialising in camel production, health, breeding and value-added camel products, while NBAGR is responsible for the identification, registration and conservation of India's indigenous animal genetic resources.

Risk Classification

Recent reports commonly describe the Malvi camel as **endangered**. However, an official government response based on the 2019 Livestock Census placed the **Malvi, Mewari and Mewati camel breeds in the "Critical" risk category.**

The Census recorded:

Camel breed	Population
Malvi	102
Mewati	92
Mewari	465

Thus, the figure of **102 is the 2019 Census count**, rather than a fresh population enumeration conducted in 2026.

Additional Info

- **India's registered indigenous camel breeds**
 - Bikaneri.
 - Jaisalmeri.
 - Kachchhi or Kutchi.
 - Jalori.
 - Marwari.
 - Kharai.
 - Mewari.
 - Mewati.
 - Malvi.
- **20th Livestock Census**
 - Conducted by the Department of Animal Husbandry and Dairying.
 - Enumerated approximately **2.52 lakh camels** in India.
 - Registered breeds accounted for about **60.4%** of the camel population.
 - Non-descript camels accounted for about **39.6%**.

Government Proposes Longer PUC Validity for BS-VI Vehicles

What's the News?

- The **Ministry of Road Transport and Highways (MoRTH)** has proposed an age- and emission-standard-based validity system for **Pollution Under Control Certificates (PUCs)**.
- Under the draft rules, PUC validity for newer **BS-VI private vehicles** may be extended from one year to **three years**.
- Older vehicles and vehicles complying with earlier Bharat Stage standards would require more frequent emission testing.
- The proposal is part of the **PUC 3.0 framework** and is not yet a final rule. Stakeholders can submit objections and suggestions during the consultation period.

Proposed PUC Validity

Vehicle category	Vehicle age	Proposed validity
BS-VI private vehicle	Up to 6 years	3 years
BS-VI private vehicle	More than 6 and up to 10 years	1 year
BS-VI private vehicle	More than 10 years	6 months

BS-VI transport/commercial vehicle	Up to 6 years	2 years from first registration
BS-IV vehicle	All ages	6 months
BS-I, BS-II and BS-III vehicles	All ages	3 months

The differentiated system gives longer validity to newer, cleaner vehicles while increasing scrutiny of older and more polluting vehicles.

Why Has the Change Been Proposed?

- **Reduced compliance burden:** Owners of newer BS-VI private vehicles would not need annual emission testing.
- **Risk-based monitoring:** Testing frequency would increase as vehicles age or when they comply with older emission standards.
- **Better pollution control:** Older vehicles are more likely to experience deterioration in engines and emission-control systems.
- **Discouraging old vehicles:** Shorter PUC validity may raise the cost and frequency of compliance for older, higher-emitting vehicles.

Pollution Under Control Certificate

A PUC is a statutory certificate issued after an authorised centre tests a vehicle's exhaust emissions.

The certificate records whether emissions such as the following remain within prescribed limits:

- Carbon monoxide
- Hydrocarbons
- Nitrogen oxides
- Particulate matter
- Smoke density

Vehicle owners can access PUC information through the centralised **Parivahan PUC system** administered under MoRTH.

Bharat Stage Emission Norms

- **Bharat Stage norms** regulate the permissible pollutants released by motor vehicles and fuels.
- They are broadly aligned with European emission standards.
- India moved directly from **BS-IV to BS-VI**, skipping BS-V.
- BS-VI norms became applicable nationwide for new vehicles in 2020.
- BS-VI vehicles use cleaner, low-sulphur fuel and advanced systems such as:
 - Diesel Particulate Filters
 - Selective Catalytic Reduction
 - Improved catalytic converters
 - On-board diagnostic systems

Additional Information

- **Responsible ministry**
 - Ministry of Road Transport and Highways
 - Responsible for national policies and rules concerning road transport, motor vehicles and national highways.
- **Legal framework**
 - **Motor Vehicles Act, 1988:** Principal legislation governing motor vehicles in India.
 - **Central Motor Vehicles Rules, 1989:** Prescribe emission standards, testing procedures and PUC requirements.
 - **Section 190(2):** Deals with vehicles violating prescribed road-safety, noise-control or air-pollution standards.
 - The penalty may extend to **₹10,000**.
 - The driver may also face disqualification from holding a driving licence for three months for the first offence.
- **Draft-rule process**
 - The proposed validity periods are not automatically enforceable.
 - Objections and suggestions may be submitted during the notified consultation period.
 - MoRTH will consider stakeholder responses before publishing the final rules.

ZSI Completes India's First Comprehensive Lepidoptera Catalogue

What's the News?

The Zoological Survey of India has completed India's first comprehensive national catalogue of Lepidoptera, covering butterflies and moths. The catalogue records **13,703 species** across **3,705 genera**, **240 subfamilies**, **102 families** and **31 superfamilies**, creating a standard taxonomic baseline for biodiversity research, ecological monitoring and conservation planning.

Lepidoptera Catalogue

- **Lepidoptera** is the insect order that includes butterflies and moths.
- The catalogue consolidates scattered taxonomic records collected over more than a century.
- It was prepared through:
 - field surveys,
 - museum studies,

- verification of scientific literature.

- The catalogue has been published in **22 volumes**, with the final volume appearing in **Zootaxa**.

Key Data

- **Total Lepidoptera species in India:** 13,703
- **Genera:** 3,705
- **Subfamilies:** 240
- **Families:** 102
- **Superfamilies:** 31
- **India's share of known global Lepidoptera species:** about 8.25%
- **Final volume coverage:** 1,689 species
- **Final volume outcome:** resolved classification of several previously unresolved families.

Geometroidea in India

- **Geometroidea** is a major moth superfamily covered in the project.
- India has **2,205 recorded Geometroidea species** across **479 genera**, **13 subfamilies** and **4 families**.
- It represents about **8.80% of the world's known species** in this group.
- Family-wise distribution:
 - **Geometridae:** 2,100 species
 - **Uraniidae:** 95 species
 - **Epicopeiidae:** 9 species
 - **Pseudobistonidae:** 1 species
- Within Geometridae:
 - **Ennominae:** 895 species
 - **Larentiinae:** 565 species
 - **Geometrinae:** 309 species

Additional Info

- **Zoological Survey of India**
 - Established: **1916**
 - Headquarters: **Kolkata**
 - Ministry: **Ministry of Environment, Forest and Climate Change**
 - Role: India's premier faunal survey and taxonomic research organisation.
- **Lepidoptera features**
 - Wings covered with microscopic scales.
 - Complete metamorphosis: egg-larva-pupa-adult.
 - Adults generally feed on nectar.
 - Larvae are mostly herbivorous.

Environmental Performance Index 2026: Estonia Tops, India Ranked 176th

What's the News?

The **Environmental Performance Index 2026** ranked **Estonia first** among **177 countries**, while **India ranked 176th**, ahead of only

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Laos. India scored **22.46**, compared with Estonia's **74.79**, reflecting concerns around air pollution, coal dependence, biodiversity protection and broader environmental governance.

Environmental Performance Index?

- The **Environmental Performance Index (EPI)** is a biennial global ranking that evaluates countries on environmental sustainability.
- It is prepared by:
 - **Yale Center for Environmental Law & Policy**
 - **Yale Center for Geospatial Solutions**
 - **Columbia University's Center for International Earth Science Information Network**
- It acts as a benchmarking tool for:
 - environmental health,
 - ecosystem vitality,
 - climate change mitigation,
 - sustainability policy assessment.

EPI 2026 Methodology

- Countries assessed: **177**
- Indicators used: **47**
- Issue categories: **12**
- Broad assessment pillars:
 - **Environmental Health**
 - **Ecosystem Vitality**
 - **Climate Change**
- Key categories include:
 - air quality,
 - water resources and sanitation,
 - biodiversity conservation,
 - forest management,
 - waste management,
 - sustainable agriculture,
 - fisheries,
 - greenhouse gas emissions,
 - environmental governance.

Global Ranking Highlights

- **Top 5 countries**
 - Estonia: Rank 1, Score 74.79
 - Luxembourg: Rank 2, Score 74.24
 - United Kingdom: Rank 3, Score 71.51
 - Finland: Rank 4, Score 71.04
 - Netherlands: Rank 5, Score 70.49
- **Bottom 3 countries**
 - Bangladesh: Rank 175, Score 23.46
 - India: Rank 176, Score 22.46
 - Laos: Rank 177, Score 21.78

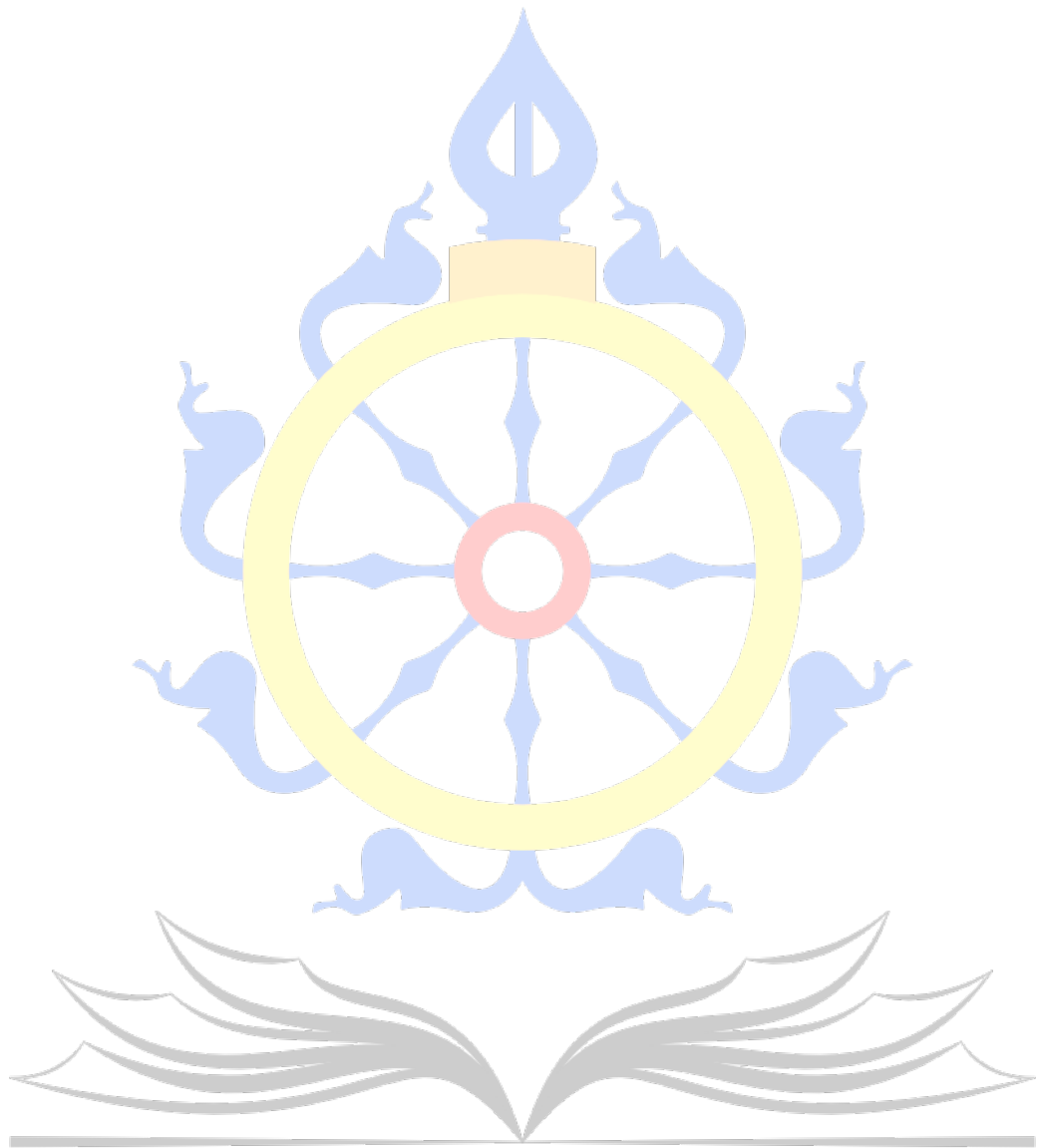
India's Performance

- **Rank:** 176 out of 177
- **Score:** 22.46
- **10-year change:** +7.47
- **Regional rank:** 8
- **Regional average:** 31.81
- India's low rank is linked to:

- poor air quality,
- biodiversity loss,
- continued reliance on coal-based power,
- forest and ecosystem pressures,
- waste management challenges,
- environmental health concerns.

Additional Info

- **India's official position on earlier EPI rankings**
 - India has previously questioned EPI methodology.
 - Concerns raised include:
 - reliance on assumptions,
 - extrapolated datasets,
 - insufficient reflection of India's developmental context,
 - limited recognition of policy intent and national circumstances.
- **Article 48A**
 - Directs the State to protect and improve the environment and safeguard forests and wildlife.
- **Article 51A(g)**
 - Makes it a fundamental duty of every citizen to protect and improve the natural environment.
- **Environment Protection Act, 1986**
 - Umbrella legislation for environmental protection in India.
 - Enacted after the Bhopal gas tragedy.
 - Empowers the Central Government to take measures for protecting and improving environmental quality.



Health & Pharma

Centre Brings Advanced Cell and Gene Therapies Under Central Licensing

What's the News?

The Centre has amended the **Drugs Rules, 1945** to bring **cell or stem cell-derived products, gene therapeutic products, and xenografts** under the **Centrally License Approving Authority (CLAA)** framework. The move aims to ensure uniform regulation of advanced therapies across India, strengthen patient safety, and align regulation with emerging medical technologies.

Drugs Rules Amendment

- The amendment expands the list of critical drugs and biological products requiring joint regulatory supervision by central and state authorities.
- Existing centrally regulated categories include:
 - **Vaccines**
 - **Large Volume Parenterals:** IV solutions above **100 ml**
 - **r-DNA-based medicines**
- Newly included categories:
 - Cell or stem cell-derived products
 - Gene therapeutic products
 - Xenografts

Advanced Cell and Gene Therapies

- **Cell or stem cell-derived products**
 - Include stem cell-based regenerative treatments.
 - Include **CAR-T cell therapies**, used in some blood cancers such as leukaemia and lymphoma.
- **Gene therapeutic products**
 - Include gene replacement and gene editing products.
 - Used in genetic disorders and certain cancers.
- **Xenografts**
 - Animal tissue-derived products transplanted into humans.
 - Examples include animal-derived heart valves used in cardiology and orthopaedics.

CLAA Framework

- **CLAA:** Centrally License Approving Authority.
- It functions within the **Central Drugs Standard Control Organisation (CDSCO)**.
- It grants approval for manufacture, sale, and import of specified drugs and biological products.
- The framework enables:
 - Centralised licensing oversight

- Uniform standards across states
- Higher scrutiny for complex biological products
- Better post-market safety monitoring

Additional Info

- **Parent law**
 - Drugs Rules, 1945 were framed under the **Drugs and Cosmetics Act, 1940**.
 - The Act regulates import, manufacture, distribution, and sale of drugs in India.
- **CDSCO**
 - National regulatory authority for drugs and medical devices.
 - Works under the Ministry of Health and Family Welfare.
 - Responsible for drug approval, clinical trials, medical device regulation, and quality standards.

India Launches Awiqli, the World's First Once-Weekly Basal Insulin

What's the News?

Novo Nordisk has launched **Awiqli**, or **insulin icodec**, in India. It is described as the world's first and only once-weekly basal insulin approved for clinical use. The prescription medicine is approved in India for adults with **Type 1 and Type 2 diabetes**. It reduces the basal-insulin injection burden from about **365 injections annually to 52**, potentially improving treatment adherence and reducing fear of daily injections.

What is Awiqli?

- **Generic name:** Insulin icodec
 - **Developer:** Novo Nordisk, a Denmark-based pharmaceutical company
 - **Category:** Long-acting or basal insulin analogue
 - **Administration:** One subcutaneous injection per week
 - **Delivery device:** Pre-filled **FlexTouch pen**
 - **Target group:** Adults requiring basal insulin for Type 1 or Type 2 diabetes
- Basal insulin provides continuous "background" insulin to control blood glucose between meals and during sleep. It is distinct from rapid-acting insulin used to manage meal-related glucose increases.

How Does It Work?

Insulin icodec binds strongly to **albumin**, the most abundant protein in blood plasma. This creates a circulating insulin reserve from which the medicine is released gradually.

Its prolonged pharmacological action allows a single dose to provide basal glucose control for approximately **seven days**.

Benefits and Pricing

- **Injection reduction:** 365 daily injections to 52 weekly injections annually.
- **Treatment adherence:** May reduce injection anxiety, treatment fatigue and delayed initiation of insulin therapy.
- **Available presentations:**
 - 700-unit, 1 ml pen: **₹2,611**
 - 2,100-unit, 3 ml pen: **₹7,833**
- **Indicative price:** Approximately **₹3.73 per unit**.
- At an illustrative dose of 70 units per week, the cost is approximately **₹261-263 weekly**.
- The manufacturer claims that its per-unit price is around **30-40% lower** than several existing daily insulin products; actual treatment cost will depend on the prescribed dose.

Clinical Evidence and Safety

Awicli was evaluated under the **ONWARDS clinical-trial programme**.

- In adults with Type 2 diabetes, the ONWARDS-1 study reported:
 - Greater reduction in **HbA1c** compared with once-daily insulin glargine U100.
 - Improved **time in range**, or the period during which glucose remains within the target range.
 - More participants achieving HbA1c below 7% without hypoglycaemia.
- Evidence from Type 1 diabetes trials indicated a comparatively higher risk of **clinically significant hypoglycaemia** in some patients.
- Weekly insulin therefore requires appropriate dose titration, glucose monitoring and medical supervision. It should not be treated as a direct, unsupervised replacement for existing insulin regimens.

Additional Info

- **HbA1c**
 - Glycated haemoglobin used to assess average blood-glucose control over the preceding few months.

Hypoglycaemia

- An abnormally low blood-glucose level and a major adverse risk associated with insulin therapy.

Indian initiatives

- **National Programme for Prevention and Control of Non-Communicable Diseases:** Covers prevention, screening, diagnosis, treatment and referral for diabetes and other major NCDs.
- Population-based screening under the programme targets people aged **30 years and above**.
- The **75/25 Initiative** sought to place 75 million people with diabetes and hypertension under standardised care through primary healthcare facilities.

FSSAI Issues Nine Notices to Swiggy Instamart Over Food-Safety Complaints

What's the News?

The Food Safety and Standards Authority of India (FSSAI) has issued **nine notices** to Swiggy Instamart following consumer complaints alleging the delivery of expired, spoiled, rotten, contaminated and otherwise unsafe food products.

The regulator has directed the food business operator to submit a documentary explanation and compliance report. Failure to provide a satisfactory response could result in legal action under the **Food Safety and Standards Act, 2006**. The notices represent the initiation of regulatory proceedings; no final determination of liability or penalty has yet been reported.

Major Complaints

The reported cases included:

- Whey protein and packaged snack products allegedly supplied after their expiry dates.
- Expired and rotten organic eggs showing signs of contamination.
- A spoiled paratha product emitting a foul smell.
- An infant-food formulation allegedly delivered in a deteriorated and contaminated condition and re-supplied after being returned.
- Contaminated eggs and milk, along with damaged packaged food.
- Eggs marketed under the **NOICE** brand without the relevant product category being covered by the existing FSSAI licence.

Compliance Deficiencies Flagged

FSSAI raised broader concerns relating to:

- Incorrect, invalid or non-existent FSSAI licence numbers.
- Sellers operating under names different from their registered FSSAI identities.
- Inadequate seller onboarding and licence verification.
- Weak product traceability and food-quality monitoring.
- Deficiencies in inventory management, stock rotation, hygiene, storage and handling.
- Failure to take corrective action after consumer complaints were escalated.
- Refunds being offered without addressing the underlying food-safety issue.

Corrective Action Required

Swiggy Instamart has been asked to provide:

- Details of its quality-assurance and food-safety monitoring systems.
- Documentary evidence explaining each alleged violation.
- **Root-cause analysis** of the incidents.
- **Corrective and Preventive Action (CAPA)** undertaken.
- Details of stock rotation, inventory control and storage practices.
- Consumer grievance-redressal procedures.
- Measures introduced to prevent recurrence.

The company stated that it was reviewing the flagged listings and engaging with the regulator.

FSSAI and the Legal Framework

- **Status:** FSSAI is India's statutory food regulator, functioning under the **Ministry of Health and Family Welfare**.
- **Parent legislation:** Food Safety and Standards Act, 2006.
- **Objective:** To prescribe science-based food standards and regulate food manufacture, storage, distribution, sale and import.
- **Section 26:** Every food business operator must ensure compliance at all stages under its control and cannot manufacture, store, sell or distribute unsafe, misbranded, substandard or improperly licensed food.
- **Section 31:** Food business operators are generally required to obtain an FSSAI licence or registration.

Relevant Penalties

- **Failure to follow a Food Safety Officer's direction:** Penalty of up to ₹2 lakh under Section 55.
- **Unsafe food causing no injury:** Up to six months' imprisonment and a fine of up to ₹1 lakh.
- **Non-grievous injury:** Up to one year's imprisonment and a fine of up to ₹3 lakh.
- **Grievous injury:** Up to six years' imprisonment and a fine of up to ₹5 lakh.
- **Death:** Imprisonment from seven years to life and a minimum fine of ₹10 lakh.

These punishments apply only where the statutory violation and its consequences are established through the prescribed proceedings.

Consumer Grievance Mechanism

Consumers can report concerns involving packaged food, food premises and online food aggregators through FSSAI's **Food Safety Connect** portal or mobile application. Complaints can also be tracked through the platform.

CDSCO Approves Wegovy for MASH Treatment

What's the News?

The Central Drugs Standard Control Organisation has approved **Wegovy**, Novo Nordisk's **semaglutide injection 2.4 mg**, for treatment of **noncirrhotic Metabolic Dysfunction-Associated Steatohepatitis** in adults with **moderate to advanced liver fibrosis**. The drug is to be used along with a **reduced-calorie diet** and **increased physical activity**.

Wegovy?

- Wegovy contains **semaglutide**, a **GLP-1 receptor agonist**.
- GLP-1 receptor agonists mimic a natural gut hormone and help in:
 - Regulating blood sugar.
 - Reducing appetite.
 - Slowing digestion.
 - Supporting weight management.
- Wegovy was already used for chronic weight management; the new approval expands its use to fatty liver disease treatment.

MASH?

- **MASH** stands for **Metabolic Dysfunction-Associated Steatohepatitis**.
- It is a serious form of fatty liver disease caused by excess fat build-up in the liver.
- It leads to:
 - Chronic liver inflammation.

- Liver cell injury.
- Fibrosis or scarring.
- Higher risk of serious liver complications.
- Risk factors include:
 - Obesity.
 - Type 2 diabetes.
 - High cholesterol or dyslipidaemia.
 - Other metabolic disorders.

Approval Basis

- The approval is based on the **ESSENCE clinical trial**.
- Trial outcomes:
 - **63%** of patients on Wegovy showed resolution of steatohepatitis.
 - **37%** showed reduction in liver fibrosis.
 - Nearly **33%** achieved both steatohepatitis resolution and fibrosis improvement.
- Reported liver benefits were not attributed only to weight loss, suggesting a broader impact on liver health.

India Relevance

- Fatty liver disease is increasingly important for India because estimates cited in reports suggest that **two in three Indians** may have fatty liver disease.
- MASH is often silent in early stages and may remain undetected until liver damage has progressed.
- The approval gives doctors another treatment option for patients with MASH linked to obesity, metabolic disease, and cardiovascular risk.

Additional Info

- **CDCO**
 - India's national drug regulatory authority.
 - Functions under the Ministry of Health and Family Welfare.
 - Regulates approval of new drugs, clinical trials, drug quality, and medical devices.
- **GLP-1 RA**
 - Full form: **Glucagon-Like Peptide-1 Receptor Agonist**.
 - Used mainly in diabetes, obesity, and metabolic disease management.
- **MASLD and MASH**
 - **MASLD**: Metabolic Dysfunction-Associated Steatotic Liver Disease.
 - **MASH**: More severe inflammatory form of MASLD.

- MASH can progress to fibrosis, cirrhosis, liver failure, or liver cancer if not managed.

• Noncirrhotic MASH

- Refers to MASH where cirrhosis has not yet developed.
- The approved indication covers adults with **moderate to advanced fibrosis**, but not cirrhosis.

ICMR Uses Drones to Speed Up TB Diagnosis in Telangana

What's the News?

The Indian Council of Medical Research conducted a drone-based study under its **i-DRONE initiative** to transport tuberculosis sputum samples in **Yadadri-Bhuvanagiri district, Telangana**. The study found that drone-enabled sample transport reduced the median TB diagnosis turnaround time from **15 days to 5 days** and cut average patient out-of-pocket expenditure from about **₹9,451 to ₹91**.

i-DRONE Initiative?

- **i-DRONE** refers to ICMR's use of drones for healthcare logistics.
- It is meant to transport:
 - Diagnostic samples.
 - Vaccines.
 - Medicines.
 - Blood products.
 - Other medical supplies.
- The TB study used drones to move sputum samples from peripheral health facilities to molecular diagnostic laboratories.
- It was conducted with **AIIMS Bibinagar** and the **District TB Office** under the **National TB Elimination Programme**.

Study Model and Coverage

- The study used a **hub-and-spoke model** for sample transport.
- Network covered:
 - **11 Primary Health Centres**.
 - **60 sub-centres**.
 - **4 TB Units**.
- Patients submitted sputum samples at nearby health facilities instead of travelling to distant diagnostic centres.
- The study enrolled **840 participants**.

Findings

- **Diagnosis time**
 - Median turnaround time fell from **15 days to 5 days**.
 - Faster diagnosis can support earlier treatment initiation and reduce community transmission risk.
- **Patient cost**

- Average out-of-pocket expenditure fell from about **₹9,451 to ₹91**.
- Median out-of-pocket expenditure during the drone-enabled phase was **zero** for many participants.
- **Main reasons for cost reduction**
 - Lower travel cost.
 - Reduced wage loss.
 - Sample collection closer to patients' homes.

Drone Logistics in TB Care

- Drone logistics can help in remote and underserved areas where road connectivity, transport availability and long distances delay access to diagnostic services.
- In this model, drones did not diagnose TB directly; they improved the **sample transport chain**.
- This is important because TB diagnosis depends on timely sputum collection, transport, molecular testing and clinical confirmation.

Additional Info

- **Tuberculosis**
 - Caused by **Mycobacterium tuberculosis**.
 - Commonly affects the lungs but can affect other organs.
 - Spreads through airborne droplets from infected persons.
- **National TB Elimination Programme**
 - India's main public health programme for TB prevention, diagnosis, treatment and surveillance.
 - Earlier known as the Revised National Tuberculosis Control Programme.
- **Primary Health Centre**
 - First-level institutional healthcare unit in rural areas.
 - Acts as an important access point for sample collection, referral and basic healthcare delivery.
- **Out-of-pocket expenditure**
 - Direct spending by patients for healthcare access.
 - In TB diagnosis, it may include transport cost, wage loss, food cost and other incidental expenses.

India Approves QDENG, Its First Dengue Vaccine

What's the News?

The Drug Controller General of India has granted market authorisation to **QDENG**, making it the first dengue vaccine

approved in India. Developed by Japan-based **Takeda Pharmaceutical Company**, the vaccine is approved for individuals aged **4-60 years**.

QDENG targets all four dengue virus serotypes and can be administered irrespective of previous dengue infection, eliminating the requirement for pre-vaccination testing. Initial availability in India is expected through private healthcare facilities in the first half of 2027.

What is QDENG?

- **Generic name:** Dengue Tetravalent Vaccine-Live, Attenuated
- **Development code:** TAK-003
- **Developer:** Takeda Pharmaceutical Company, Japan
- **Vaccine type:** Live-attenuated, tetravalent vaccine
- **Target serotypes:** DENV-1, DENV-2, DENV-3 and DENV-4
- **Approved age group in India:** 4-60 years
- **Dosage:** Two subcutaneous injections of **0.5 ml each**, administered three months apart
- **Prior dengue exposure:** Not mandatory; pre-vaccination serological screening is not required.

Clinical Evidence

India's approval was supported by Takeda's global clinical development programme comprising:

- **19 Phase I, II and III trials**
- More than **28,000 participants**
- The pivotal **TIDES or DEN-301 Phase III trial**, involving over 20,000 participants across eight countries
- The India-specific **DEN-302 Phase III trial**, which assessed safety and immune response among individuals aged 4-60 years

Reported Vaccine Efficacy

- **80.2%** against virologically confirmed dengue one year after the second dose
- **90.4%** against dengue-related hospitalisation after 18 months
- **84.1%** against dengue-related hospitalisation after 4.5 years

Long-term follow-up has indicated sustained protection and an acceptable safety profile.

Manufacturing and Availability

Takeda has partnered with Hyderabad-based **Biological E Limited** to expand vaccine production.

- Biological E is expected to manufacture up to **50 million doses annually**.
- Takeda aims to achieve a global manufacturing capacity of **100 million doses per year by 2030**.

- QDENGGA has received approval in more than **40 countries**, with over **32 million doses** distributed globally.
- Market authorisation does not automatically include the vaccine in India's **Universal Immunisation Programme**; public-programme inclusion would require a separate government policy decision.

Why is the Approval Significant?

- India has experienced an approximately **11-fold increase in reported dengue cases over the past two decades**.
- All four dengue serotypes co-circulate in several regions, complicating disease control and vaccine development.
- The vaccine may reduce symptomatic disease, severe illness and hospitalisation.
- Vaccination must complement—not replace—vector surveillance, mosquito control, early diagnosis and community participation.

Additional Information

Dengue

- Dengue is a viral disease caused by the **dengue virus**, belonging to the genus *Flavivirus*.
- It is transmitted primarily by infected female **Aedes aegypti** mosquitoes; *Aedes albopictus* can also transmit the virus.
- Four distinct serotypes exist:
 - DENV-1
 - DENV-2
 - DENV-3
 - DENV-4
- Infection with one serotype generally produces long-term immunity only against that serotype.
- A subsequent infection with another serotype may increase the risk of severe dengue through **antibody-dependent enhancement**.

Regulatory Bodies

- **Central Drugs Standard Control Organisation**
 - India's national regulatory authority for drugs, vaccines, medical devices and cosmetics.
 - Functions under the Ministry of Health and Family Welfare.
- **Drugs Controller General of India**
 - Heads the CDSCO.
 - Approves specified new drugs and vaccines and regulates clinical trials in India.

WHO Status

- QDENGGA is a **WHO-prequalified vaccine**, making it eligible for procurement by

UN agencies such as UNICEF and the Pan American Health Organization.

- It is the second dengue vaccine to receive WHO prequalification after Sanofi Pasteur's **Dengvaxia**.
- QDENGGA differs from Dengvaxia because it does not require confirmed previous dengue infection before administration.

ICMR Licenses SHetA2 Anti-HPV Drug Candidate for Further Development

What's the News?

- The **Indian Council of Medical Research (ICMR)** has licensed **SHetA2**, an investigational anti-HPV therapeutic candidate, to **Emcure Pharmaceuticals**.
- Emcure will undertake its further clinical development, manufacturing and potential commercialisation under ICMR's **Medical Innovations Patent Mitra** initiative.
- SHetA2 is being developed for **Cervical Intraepithelial Neoplasia (CIN)**—precancerous cervical-cell changes caused by persistent high-risk Human Papillomavirus infection.
- The technology transfer **does not constitute regulatory approval**. SHetA2 is not presently available as a routine treatment.

SHetA2?

- SHetA2 is a **first-in-class, small-molecule therapeutic candidate** intended to selectively target HPV-induced abnormal and cancerous cells while largely sparing normal cells.
- It was developed through collaboration between:
 - **ICMR-National Institute of Cancer Prevention and Research, Noida**
 - **Stephenson Cancer Center, University of Oklahoma, USA**
- It is being evaluated for:
 - HPV-induced cervical dysplasia or CIN
 - Cervical cancer
 - Other advanced or recurrent solid tumours in early-stage trials

ICMR has classified the technology at **Technology Readiness Level-5**, indicating validation in a relevant environment but not a market-ready product.

How Does It Work?

- High-risk HPV produces **E6 and E7 oncoproteins**, which interfere with the tumour-suppressor proteins **p53** and **retinoblastoma protein (Rb)**.

- This disruption allows infected cells to evade programmed cell death and multiply abnormally.
- SHetA2 targets heat-shock protein-70 family molecular chaperones, including:
 - **Mortalin**
 - **Hsc70**
 - **GRP78**
- It disrupts HSP70-HPV oncoprotein interactions, particularly the **HSP70-E7 complex**, thereby weakening survival pathways in HPV-driven abnormal cells.
- Laboratory and animal studies indicate antitumour activity with relatively low toxicity, but effectiveness in larger human populations remains unproven.

SHetA2 vs HPV Vaccine

Parameter	HPV Vaccine	SHetA2
Nature	Preventive	Therapeutic candidate
Purpose	Prevents infection by targeted HPV types	Targets cells already altered by HPV infection
Intended stage	Before exposure to HPV	Existing CIN or HPV-related disease
Availability	Approved and used in vaccination programmes	Investigational; not commercially available
Replacement relationship	–	Does not replace vaccination or screening

Vaccination remains the primary preventive measure, while SHetA2 could potentially provide a less-invasive treatment for existing precancerous lesions if clinical trials establish its safety and efficacy.

Clinical Status

- An active **Phase-I trial–NCT04928508–is evaluating oral SHetA2**, also called OK-1, in patients with advanced or recurrent solid tumours.
- The trial primarily examines:
 - Safety and dose-limiting toxicities
 - Suitable dosage for Phase-II trials
 - Pharmacokinetics
 - Preliminary indicators of tumour response

- Phase-I evaluation does not establish that the drug effectively treats CIN or cervical cancer.
- Larger disease-specific trials and regulatory review are required before routine clinical use.

Additional Info

Human Papillomavirus

- HPV belongs to the **Papillomaviridae** family and is a DNA virus.
- Most HPV infections resolve naturally; persistent infection with high-risk types can cause precancerous lesions.
- Almost all cervical cancers are associated with persistent high-risk HPV infection.
- Women living with HIV have approximately **six times greater risk** of developing cervical cancer than women without HIV.

Cervical Intraepithelial Neoplasia

- **CIN-1:** Mild or low-grade abnormal cell changes.
- **CIN-2:** Moderate abnormal changes with greater progression risk.
- **CIN-3:** Severe dysplasia or carcinoma in situ; considered a high-grade precancerous lesion.

Current management may involve surveillance, thermal ablation, cryotherapy or excisional procedures, depending on lesion grade and clinical circumstances.

India's HPV Vaccination Programme

- India's nationwide programme targets approximately **1.2 crore girls aged 14 years** across all States and Union Territories.
- The vaccine is provided free at designated government health facilities.
- The latest government update reported **52,10,302 vaccinated girls**.
- Coverage is recorded through the **U-WIN digital platform**.
- Cervical-cancer control also includes screening and early diagnosis through **Ayushman Arogya Mandirs** and treatment through **Day Care Cancer Centres**.

WHO's 90-70-90 Targets

Countries should achieve the following by 2030:

- **90%** of girls fully vaccinated against HPV by age 15.
- **70%** of women screened using a high-performance test by ages 35 and 45.
- **90%** of women with precancer treated and 90% of women with invasive cancer appropriately managed.

The elimination threshold is fewer than **4 cervical-cancer cases per 1 lakh women annually**.

WHO Lists First Diagnostic Test for Ebola Bundibugyo Virus

What's the News?

The **World Health Organization (WHO)** has added the first molecular diagnostic test for **Ebola Bundibugyo virus** to its **Emergency Use Listing (EUL)**. The test detects the virus by identifying genetic material in blood samples, enabling faster and more reliable confirmation during outbreak response. The listing is significant amid the ongoing outbreak in the Democratic Republic of the Congo and Uganda.

Ebola Bundibugyo Diagnostic Test

- The test is a **molecular diagnostic test**.
- It detects **Bundibugyo virus genetic material** in blood samples.
- It helps in:
 - Early case confirmation
 - Faster patient isolation and care
 - Disease surveillance
 - Outbreak control
 - Public health procurement decisions

Emergency Use Listing

- **EUL** is a WHO mechanism for assessing health products during public health emergencies.
- It reviews:
 - Quality
 - Safety
 - Performance
 - Evidence available during emergency conditions
- It helps governments and UN procurement agencies access reliable diagnostics, medicines, or vaccines in urgent situations.
- It is especially relevant for low- and middle-income countries where outbreak response capacity may be constrained.

Outbreak Context

- The current outbreak is described as the largest recorded outbreak caused by **Bundibugyo virus disease**.
- Reported figures from the Democratic Republic of the Congo include:
 - **1,406 laboratory-confirmed cases**
 - **438 deaths**
- Testing capacity expanded from about **200-400 tests per day** at limited sites to more than **2,000 tests per day** across **10 laboratories** in affected provinces.

Bundibugyo Virus Disease

- It is a severe disease caused by **Bundibugyo virus (BDBV)**.
- BDBV is one of the Ebola virus species known to cause large human outbreaks.
- Transmission may occur:
 - From animals to humans
 - From infected persons to others
 - Through infected bodily fluids
 - Through contaminated surfaces or materials

Additional Info

• Ebola virus disease

- Belongs to the filovirus disease group.
- Symptoms may include fever, weakness, vomiting, diarrhoea, bleeding, and multi-organ complications.
- Early detection and isolation are crucial for outbreak control.

• PHEIC

- Public Health Emergency of International Concern.
- Declared by WHO under the **International Health Regulations, 2005**.
- Used when an event poses international health risk and may require coordinated global response.

• Organisations involved

- WHO
- Africa CDC
- PATH
- FIND
- CHAI
- Unitaid

FDA Approves Vepdegestrant, First PROTAC Cancer Drug

What's the News?

The **U.S. Food and Drug Administration** has approved **vepdegestrant**, sold under the brand name **Veppanu**, for adults with **ER-positive, HER2-negative, ESR1-mutated advanced or metastatic breast cancer**. It is significant because it is the **first FDA-approved PROTAC drug**, marking a shift from conventional protein inhibition to targeted protein degradation.

Vepdegestrant?

- **Drug name:** Vepdegestrant
- **Brand name:** Veppanu
- **Developers:** Arvinas Operations, Inc. and Pfizer Inc.
- **Drug class:** Oral heterobifunctional protein degrader / PROTAC therapy
- **Approved for:**

- Adults with **estrogen receptor-positive** breast cancer.
- **HER2-negative** breast cancer.
- **ESR1-mutated** advanced or metastatic breast cancer.
- Disease progression after at least one line of endocrine therapy.
- **Companion diagnostic: Guardant360 CDx** test to detect ESR1 mutations and identify eligible patients.

PROTAC Technology

- **PROTAC** stands for **Proteolysis Targeting Chimera**.
- It is a targeted protein degradation technology.
- Traditional drugs often work by **blocking** disease-causing proteins.
- PROTAC drugs work by **tagging target proteins for destruction** through the cell's own protein-disposal system.
- This approach may help target proteins considered difficult to treat by conventional small-molecule inhibitors.

Clinical Trial Findings

- Approval was based on the **Phase 3 VERITAC-2 trial**.
- Trial design:
 - Randomised, open-label, active-controlled, multicentre trial.
 - Included **624 adults** with ER-positive, HER2-negative advanced or metastatic breast cancer.
 - **270 patients** had tumours carrying ESR1 mutations.
- In ESR1-mutated patients:
 - Median progression-free survival with vepdegestrant: **5 months**.
 - Median progression-free survival with fulvestrant: **2.1 months**.
 - Objective response rate with vepdegestrant: **19%**.
 - Objective response rate with fulvestrant: **4%**.

Dose and Safety

- Recommended dose: **200 mg orally once daily with food**.
- Continued until:
 - Disease progression, or
 - Unacceptable toxicity.
- Key warnings:
 - **QTc interval prolongation**.
 - **Embryo-fetal toxicity**.

Additional Info

- **ER-positive breast cancer**
 - Cancer cells grow in response to estrogen.
 - Endocrine therapy is commonly used to block hormone-driven growth.

- **HER2-negative breast cancer**
 - Cancer cells do not overexpress the HER2 protein.
 - Treatment differs from HER2-positive breast cancers, where HER2-targeted drugs are used.
- **ESR1 mutation**
 - Mutation in the gene coding for estrogen receptor alpha.
 - Often associated with resistance to endocrine therapy.
 - Important for precision oncology and targeted treatment selection.
- **Fulvestrant**
 - Existing endocrine therapy used in advanced breast cancer.
 - Given as an intramuscular injection.
 - Used as the comparator in the VERITAC-2 trial.
- **Precision Medicine**
 - Treatment is selected based on molecular markers such as gene mutations.
 - Companion diagnostics help identify patients likely to benefit from a therapy.

FDA Approves First Oral PCSK9 Inhibitor for High LDL Cholesterol

What's the News?

The U.S. Food and Drug Administration has approved **Lipfendra**, also known as **enlicitide**, as the first **oral PCSK9 inhibitor** for adults with high LDL cholesterol. It is approved as an add-on to **diet and exercise** for adults with **hypercholesterolemia**, including those with **heterozygous familial hypercholesterolemia**. Until now, PCSK9 inhibitors were available only as injectable therapies.

Lipfendra?

- Brand name: **Lipfendra**
- Generic name: **Enlicitide**
- Company: **Merck Sharp & Dohme LLC**
- Dosage form: **Once-daily oral tablet**
- Use: To reduce **low-density lipoprotein cholesterol**, commonly called **LDL-C** or "bad cholesterol".
- It is not a replacement for lifestyle measures; it is approved along with **diet and exercise**.

PCSK9 Inhibitors?

- **PCSK9** stands for **Proprotein Convertase Subtilisin/Kexin Type 9**.
- PCSK9 affects the number of **LDL receptors** available on liver cells.

- LDL receptors help remove LDL cholesterol from the blood.
- By inhibiting PCSK9, these medicines help the liver clear more LDL cholesterol.
- Earlier PCSK9 inhibitors, such as **Repatha** and **Praluent**, are injectable drugs.

Clinical Trial Evidence

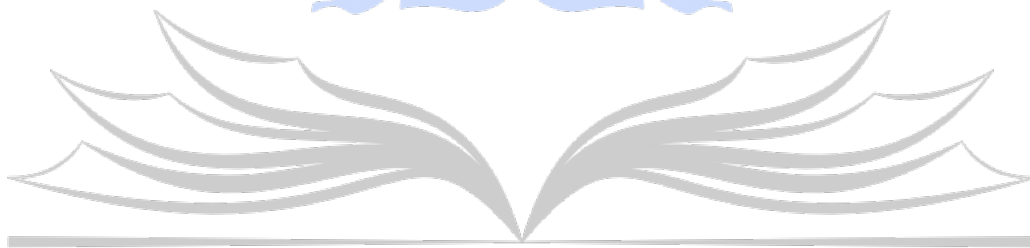
- FDA approval was based on **two randomized, double-blind, placebo-controlled trials** involving **3,207 adults**.
- In one trial involving adults with established or high risk of **atherosclerotic cardiovascular disease**, Lipfendra reduced LDL-C by an average of **56%** at Week 24.
- In another trial involving adults with **heterozygous familial hypercholesterolemia**, it reduced LDL-C by an average of **59%** at Week 24.
- Reported adverse reactions included **diarrhea** and **dizziness** in the familial hypercholesterolemia trial.

Why It Matters

- High LDL cholesterol contributes to plaque formation in arteries, increasing the risk of **heart attack** and **stroke**.
- An oral PCSK9 inhibitor may improve access and adherence for patients who are unwilling or unable to use injectable cholesterol-lowering therapies.
- It expands treatment options for people whose LDL cholesterol remains high despite statins or other standard therapy.

Additional Info

- **Hypercholesterolemia**
 - A condition in which cholesterol, especially LDL-C, is abnormally high in the blood.
 - Often asymptomatic and detected through blood tests.
- **Heterozygous Familial Hypercholesterolemia**
 - An inherited disorder causing high LDL cholesterol from birth.
 - Increases risk of early cardiovascular disease.
- **Statins**
 - First-line cholesterol-lowering drugs.
 - They reduce cholesterol synthesis in the liver.
- **Regulatory Bodies**
 - **FDA**: U.S. drug regulator.
 - **CDSCO**: India's national drug regulatory authority under the Ministry of Health and Family Welfare.



Education

AICTE Approves Progressive Closure of 58 Technical Colleges

What's the News?

The All India Council for Technical Education has approved the **progressive closure of 58 engineering and technical colleges** during the 2025–26 academic year. These institutions will not be allowed to admit new first-year students, but existing students can continue their courses until completion. Uttar Pradesh and Maharashtra reported the highest number of closures, with **12 institutions each**.

Progressive Closure

- **Meaning:** The institution is not shut down immediately.
- **Student protection:**
 - Existing students continue their studies.
 - Colleges remain operational only for currently enrolled batches.
- **Admission impact:**
 - No new first-year admissions are permitted in the affected institutions.
- **Difference from complete closure:**
 - In complete closure, programmes are discontinued and students may be shifted to other institutions.
 - In progressive closure, current students complete their courses in the same institution.

Why Are Colleges Being Closed?

- Major reasons include:
 - Low student enrolment.
 - Shortage of qualified faculty.
 - Non-compliance with AICTE academic and infrastructure norms.
 - Administrative or financial viability issues.
- The move reflects a shift in technical education policy from **institutional expansion** to **quality control, employability and regulatory compliance**.

Data

- **Total institutions under progressive closure:** 58.
- **Highest closures:** Uttar Pradesh and Maharashtra – 12 each.
- **Government-aided institutions:** 3.
- **Remaining institutions:** Privately managed/private self-financing colleges.
- **Courses discontinued:** More than 950 engineering and technical courses.

Additional Info

- **AICTE**
 - Full form: **All India Council for Technical Education**.
 - Type: Statutory body.
 - Administrative ministry: **Ministry of Education**.
 - Function:
 - Regulates technical education in India.
 - Covers engineering, management, pharmacy, architecture, applied arts and related technical institutions.
 - Grants approvals and monitors compliance with norms.

AISHE 2023–24: Higher Education Enrolment Reaches Record 4.5 Crore

What's the News?

India's higher education enrolment reached a record **4.50 crore** in the academic year 2023–24, according to the latest **All India Survey on Higher Education (AISHE)** reports.

Total enrolment increased by **31.5%** from 3.42 crore in 2014–15. Female enrolment, participation of disadvantaged social groups and enrolment in STEM disciplines also recorded substantial growth.

What is AISHE?

- **All India Survey on Higher Education** is an annual, web-based survey conducted by the Union Ministry of Education since 2010–11.
- It covers universities, colleges and standalone higher education institutions.
- It collects information on:
 - Student enrolment
 - Teachers and non-teaching staff
 - Courses and programmes
 - Examination results
 - Infrastructure and education finance
- It is the principal official source of higher education statistics used for policy formulation, planning and monitoring.
- In 2023–24, **59,533 of the 64,756 registered institutions** participated, resulting in a participation rate of over 90%.

Enrolment and GER

- **Total enrolment**

- 2014–15: 3.42 crore
- 2022–23: 4.46 crore
- 2023–24: 4.50 crore
- **Gross Enrolment Ratio**
 - Increased from **23.7** in 2014–15 to **30.0** in 2023–24.
- Undergraduate programmes accounted for approximately **76.8%** of total enrolment.

Gross Enrolment Ratio

GER is the number of students enrolled in higher education as a percentage of the estimated population in the **18–23 years age group**. The AISHE calculation uses population projections based on the 2011 Census.

Women's Participation

- Female enrolment increased from **1.57 crore** in 2014–15 to **2.24 crore** in 2023–24—a rise of **42.2%**.
- Female GER reached **31.2**, compared with a male GER of approximately **28.9**.
- The **Gender Parity Index stood at 1.08**.
- The GPI has remained above 1 for seven consecutive years, indicating a higher GER among women than men.
- Women constituted **44.9%** of India's higher education teaching workforce.

Social-Group Enrolment

Participation among historically disadvantaged communities increased significantly over the decade:

- **Scheduled Castes**
 - Enrolment: 69.72 lakh
 - Decadal increase: **51.4%**
 - GER: 27.8
- **Scheduled Tribes**
 - Enrolment: 28.83 lakh
 - Decadal increase: **75.7%**
 - GER: 22.8
- **Other Backward Classes**
 - Enrolment: 1.80 crore
 - Decadal increase: **60.2%**

STEM and Faculty Strength

- Enrolment in **Science, Technology, Engineering and Mathematics** increased from 91.5 lakh to **1.02 crore**.
- Women's share in STEM enrolment increased from **38.4% to 44%**.
- Total faculty strength reached **17.32 lakh**.
- Female faculty increased from 5.69 lakh to **7.78 lakh** over the decade.

Additional Info

- **Gender Parity Index**
 - Ratio of female GER to male GER.
 - A value of 1 indicates parity.
 - A value above 1 indicates a higher GER among women.
- **Constitutional provisions**

- **Article 15(4):** Enables special provisions for socially and educationally backward classes and SCs and STs.
- **Article 15(5):** Enables special provisions concerning admission to educational institutions, including private institutions, except minority educational institutions.
- **Article 46:** Directs the State to promote the educational and economic interests of weaker sections, particularly SCs and STs.
- **Concurrent List, Entry 25:** Covers education, including technical and medical education.
- **Union List, Entry 66:** Covers coordination and determination of standards in higher education and research.
- **Survey limitation**
 - AISHE participation is voluntary and its data are self-reported by institutions.
 - The Ministry applies built-in validation and scrutiny checks, but limitations associated with large-scale surveys may remain.

Uttarakhand Becomes India's Sixth Fully Literate State

What's the News?

Uttarakhand has been declared India's **sixth fully literate State** after its adult literacy rate crossed **98%**. The declaration followed fulfilment of the literacy standards prescribed by the Department of School Education and Literacy under the Union Ministry of Education.

The achievement was supported by the **ULLAS–New India Literacy Programme**, with participation from teachers, volunteer instructors, district administrations and local communities.

Full-Literacy Benchmark

- A State or Union Territory is considered fully literate when at least **95% of its population aged 15 years and above** is literate.
- Uttarakhand has reported literacy of more than **98%**, exceeding the national benchmark.
- The status relates to **adult and functional literacy**, not merely the ability to sign one's name.
- The five States preceding Uttarakhand were:
 - Mizoram
 - Goa

- Tripura
- Himachal Pradesh
- Sikkim

What is ULLAS?

ULLAS stands for **Understanding Lifelong Learning for All in Society**. It is also known as the **Nav Bharat Saaksharta Karyakram** or **New India Literacy Programme**.

- **Type:** Centrally Sponsored Scheme
- **Implementing ministry:** Ministry of Education
- **Target group:** Non-literate persons aged **15 years and above**
- **Implementation period:** 2022–27
- **Approach:** Volunteerism, community participation and digital learning
- **Financial outlay:** **₹1,037.90 crore**, including a Central share of ₹700 crore

Five Components

1. Foundational literacy and numeracy
2. Critical life skills, including digital and financial literacy
3. Basic education
4. Vocational skills
5. Continuing education

Additional Info

- **NEP 2020**
 - Treats adult education and lifelong learning as essential for achieving universal literacy.
 - Recommends technology-based learning, volunteer participation and accessible learning materials.
- **Foundational Literacy and Numeracy Assessment Test**
 - Commonly called **FLNAT**.
 - Assesses learners registered under ULLAS in reading, writing and numeracy.
 - Successful learners receive certification through the programme.
- **Constitutional linkages**
 - **Article 41:** Directs the State to make effective provision for the right to education, within its economic capacity.
 - **Article 46:** Requires promotion of the educational interests of weaker sections.
 - **Entry 25, Concurrent List:** Covers education, including technical and medical education.
 - **Article 21A:** Guarantees free and compulsory education to children aged 6–14; it does not directly cover adult literacy.

Tamil Nadu Records India's Highest Higher-Education GER

What's the News?

- Tamil Nadu recorded a **Gross Enrolment Ratio (GER) of 52.3%** in higher education, the highest among Indian states, according to the **All India Survey on Higher Education (AISHE) 2023–24**.
- The state crossed the 50% mark for the first time and remained well above the national average of **30%**.
- Of the state's **68.4 lakh** people in the 18–23 age group, around **35.8 lakh** were enrolled in degree, diploma or certificate programmes.

Tamil Nadu's GER Performance

- Higher-education GER in Tamil Nadu increased consistently:
 - **2021–22:** 47%
 - **2022–23:** 49.1%
 - **2023–24:** 52.3%
- The state's GER was approximately **75% higher** than the national average.
- Tamil Nadu had **2,983 colleges**, an increase of 70 over the preceding year.
- Undergraduate enrolment increased by around one lakh to **25.4 lakh students**.

Gender and Social Inclusion

- **Female GER:** 53.1%
- **Male GER:** 51.6%
- **Gender Parity Index:** 1.03, indicating slightly higher female participation than male participation.
- Female GER remained higher than male GER for three consecutive years.
- Social-group GER:
 - **Scheduled Castes:** 44.4%
 - **Scheduled Tribes:** 42.9%
- Among Scheduled Tribes, female GER was **38.2%**, compared with male GER of **47.6%**, highlighting a continuing participation gap among tribal women.
- Academicians linked improved female participation partly to Tamil Nadu's **Pudhumai Penn Scheme**, which provides financial assistance to eligible female students pursuing higher education.

Quality Challenge

- The high GER demonstrates broad access to colleges, including for students from rural areas and smaller towns.
- Education experts have, however, stressed the need to shift policy attention from institutional expansion to:
 - Filling faculty vacancies
 - Modernising curricula

- Improving employability and industry linkages
- Strengthening research, innovation and patents
- Upgrading institutional infrastructure
- Thus, a high GER measures participation but does not by itself indicate educational quality, learning outcomes or employability.

Additional Info

- **Gross Enrolment Ratio**
 - Total enrolment at a particular educational level expressed as a percentage of the population in its officially designated age group.
 - For higher education in India, the reference age group is **18–23 years**.
- **All India Survey on Higher Education**
 - Conducted by the Union Ministry of Education.
 - Collects data on:
 - Student enrolment
 - Teachers
 - Institutions
 - Programmes and disciplines
 - Gender and social-group participation
 - Examination results and infrastructure
- **National Education Policy, 2020**
 - Targets a higher-education GER of **50% by 2035**.
 - Tamil Nadu's 52.3% GER has already exceeded this national target at the state level.

India Wins Five Golds at International Physics Olympiad 2026

What's the News?

India secured a **joint World No. 1 rank** at the **56th International Physics Olympiad 2026** after all five Indian participants won **gold medals**. The event was held in **Bucaramanga, Colombia**, with participation from **381 students across 87 countries**. India shared the top position with **China, Kazakhstan, Russia, South Korea and Taiwan**.

International Physics Olympiad

- **IPhO** is an annual international competition in physics for **secondary school students**.
- It is one of the major **International Science Olympiads**.
- The competition generally includes:
 - **Theoretical examination**

- **Experimental examination**
- It tests advanced concepts in:
 - Mechanics
 - Electromagnetism
 - Thermodynamics
 - Optics
 - Modern physics

- The Olympiad began in **1967**.

India's Medal Winners

- **Kanishk Jain** – Pune, Maharashtra
- **Riddhesh Anant Bendale** – Indore, Madhya Pradesh
- **Rishit Garg** – Dwarka, New Delhi
- **Shreshth Suraiya** – Mumbai, Maharashtra
- **Svarit Joshi** – Ahmedabad, Gujarat

India's Olympiad Performance

- This was India's **27th participation** in the International Physics Olympiad.
- It was only the **second time after 2018** that all five Indian team members won gold medals.
- In the last decade, every Indian participant at IPhO has returned with either a **gold or silver medal**.
- India's performance reflects its strong school-level science training and international competitiveness in physics.

HBCSE and Training System

- The Indian team was trained through the **Physics Olympiad Cell** at the **Homi Bhabha Centre for Science Education**.
- **HBCSE** is a national centre of the **Tata Institute of Fundamental Research**.
- It functions under the **Department of Atomic Energy**.
- It manages India's National Olympiad Programme by:
 - Identifying talented students.
 - Conducting orientation and training camps.
 - Providing pre-departure preparation.
 - Mentoring students for international competitions.
- The Indian contingent was led by:
 - **Prof. Anwesh Mazumdar** – HBCSE-TIFR
 - **Dr. Leena Joshi** – St. Xavier's College, Mumbai

Additional Info

- **TIFR:**
 - Full form: Tata Institute of Fundamental Research.
 - Established as a premier research institution in basic sciences.
 - Works under the Department of Atomic Energy.
- **HBCSE:**



- Focuses on science and mathematics education research.
- Coordinates India's participation in international science Olympiads.

India Wins Eight Medals at Chemistry and Biology Olympiads

What's the News?

Indian students secured **five gold and three silver medals** across the International Chemistry Olympiad and International Biology Olympiad.

India achieved its best-ever performance at the Chemistry Olympiad, with all four participants winning gold medals and the country sharing the top position. At the Biology Olympiad, every member of the four-student Indian team won a medal—one gold and three silver.

International Chemistry Olympiad 2026

The **58th International Chemistry Olympiad (IChO)** was held in **Tashkent, Uzbekistan**.

India's Performance

- **Medal tally:** Four gold medals
- **Overall position:** Joint first
- **Joint toppers:** India, China, Vietnam and an Individual Participant from Russia
- **Participants:** 363 students from 93 countries
- **India's participation:** 27th appearance
- **Significance:** India's first all-gold haul and best-ever IChO performance

Gold-Medal Winners

- **Debadatta Priyadarshi** – Bhubaneswar, Odisha
 - **Harshit Singhal** – Mandi Gobindgarh, Punjab
 - **Kabeer Chhillar** – Delhi
 - **Sandeep Kuchi** – Hyderabad, Telangana
- The team was led by **Prof. Subhajit Bandyopadhyay** of IISER Kolkata and **Dr. Indrani Das Sen** of HBCSE-TIFR.

About IChO

- IChO is an annual international competition for secondary and higher-secondary school students.
- It evaluates both:
 - Theoretical understanding of chemistry
 - Practical laboratory skills
- The first IChO was organised in **1968**.
- India has participated in the competition since **1999**.
- Before the 2026 edition, India had won:
 - 31 gold medals
 - 55 silver medals
 - 18 bronze medals

International Biology Olympiad 2026

The **37th International Biology Olympiad (IBO)** was held in **Vilnius, Lithuania**.

India's Performance

- **Total medals:** Four
- **Gold medals:** One
- **Silver medals:** Three
- **Participants:** 307 students from 78 countries
- Every Indian team member secured a medal.

Indian Medal Winners

- **Bhavyaa Gunwal**, Mahendragarh, Haryana – Gold
- **Soumil Maity**, Howrah, West Bengal – Silver
- **Nishit Kalani**, Pali, Rajasthan – Silver
- **Anmol Kumar**, Mansa, Punjab – Silver

A total of **31 gold, 61 silver and 91 bronze medals** were awarded at the competition.

Assessment Pattern

Participants underwent:

- **Six-hour practical examination**
 - Molecular biology and biochemistry
 - Animal physiology
 - Animal morphology and systematics
 - Plant computational biology
- **Six-hour theoretical examination**
 - Research-oriented biological concepts
 - Analytical and problem-solving questions

India's Science Olympiad Programme

Homi Bhabha Centre for Science Education

- **HBCSE** is a national centre of the **Tata Institute of Fundamental Research**.
- It functions as India's nodal centre for Olympiad programmes in:

- Mathematics
- Physics
- Chemistry
- Biology
- Astronomy
- Junior Science

- It conducts the selection, orientation, training and mentoring of Indian teams.
- The national science Olympiad programme receives support from:
 - Department of Atomic Energy
 - Department of Science and Technology
 - Ministry of Education

Selection Stages

The broad selection pathway for international science Olympiads is:

1. **National Standard Examination**
2. **Indian National Olympiad**
3. **Orientation-cum-Selection Camp**

4. **Pre-departure training**
5. **Participation in the international Olympiad**

The programme identifies students through progressively advanced theoretical,

experimental and problem-solving assessments.

Cabinet Clears Tougher Anti-Paper Leak Bill

What's the News?

- The Union Cabinet has approved a draft Bill to strengthen the legal framework against question-paper leaks and organised examination fraud.
- The Bill reportedly proposes a **minimum imprisonment of five years**, extendable to **10 years**, along with a maximum fine of **₹10 crore** for serious and organised offences.
- It also proposes **fast-track courts** for faster disposal of paper-leak cases.
- Cabinet approval does not make the proposal a law. The Bill must be passed by both Houses of Parliament and receive Presidential assent.

Proposed Stricter Penalties

Provision	Existing 2024 Act	Reported Proposal
General offences involving unfair means	3-5 years' imprisonment and fine up to ₹10 lakh	Minimum imprisonment increased to 5 years; maximum up to 10 years
Organised examination crime	5-10 years' imprisonment and minimum fine of ₹1 crore	Maximum fine of up to ₹10 crore
Trial process	Regular criminal-justice process	Fast-track courts proposed

The exact applicability of the enhanced penalties will be confirmed when the Bill's official text is introduced in Parliament.

Public Examinations Act, 2024

The **Public Examinations (Prevention of Unfair Means) Act, 2024** is the existing central legislation against organised cheating and examination fraud.

- It identifies **15 forms of unfair means**, including:
 - Leakage of question papers or answer keys.
 - Unauthorised possession of examination material.
 - Tampering with OMR sheets, assessment records or computer systems.
 - Manipulation of examination centres, shifts or seating arrangements.
 - Creation of fake examination websites, admit cards or offer letters.
- Offences are **cognizable, non-bailable and non-compoundable**.
- Investigation must be conducted by an officer not below the rank of **Deputy Superintendent of Police or Assistant Commissioner of Police**.
- Property of an institution involved in organised crime may be attached and forfeited.

Examinations Covered

The Act covers examinations conducted by:

- Union Public Service Commission – UPSC.
- Staff Selection Commission – SSC.
- Railway Recruitment Boards – RRBs.
- Institute of Banking Personnel Selection – IBPS.
- Central ministries, departments and their subordinate offices.
- National Testing Agency – NTA.
- Any other authority notified by the Central Government.

Additional Info

- **Protection of candidates**
 - The central law primarily targets organised groups, institutions, service providers and persons facilitating examination fraud.
 - Candidates' individual misconduct continues to be dealt with under the administrative rules of the concerned examination authority.
- **Constitutional provisions**
 - **Article 315:** Provides for the UPSC and State Public Service Commissions.
 - **Article 107:** Deals with the introduction and passage of Bills in Parliament.
 - **Article 111:** Provides for Presidential assent to Bills.

• Bill versus Act

- A **Bill** is proposed legislation.
- It becomes an **Act** only after parliamentary passage and Presidential assent.
- Therefore, the enhanced punishments are proposed measures and are not yet enforceable.

Nandan Nilekani to Lead High-Powered Task Force on Examination Reforms

What's the News?

The Union government has constituted a **six-member high-powered task force**, chaired by technology expert and Infosys co-founder **Nandan Nilekani**, to recommend reforms in examinations conducted by the **National Testing Agency (NTA)**.

The panel will suggest measures to make the examination system more **reliable, transparent, secure and technology-driven**. The government will use its report to strengthen the credibility of upcoming examinations and address concerns arising from paper leaks and other examination irregularities.

Examination Reforms Task Force Composition

- **Nandan Nilekani – Chairperson**
 - Co-founder of Infosys.
 - Founding Chairman of the Unique Identification Authority of India.
- **S. Somanath**
 - Former Chairman of the Indian Space Research Organisation.
- **Tapan Deka**
 - Former Director of the Intelligence Bureau.
- **V. Kamakoti**
 - Director of IIT Madras.
- **Anita Karwal**
 - Former Union Education Secretary.
- **Amrit Lal Meena**
 - Public administrator and logistics expert.

The multidisciplinary composition combines expertise in digital infrastructure, systems engineering, intelligence, higher education administration and large-scale logistics.

Key Mandate

The task force will:

- Review the existing framework for conducting NTA examinations.
- Recommend **structural and administrative reforms**.
- Suggest the maximum use of technology to improve examination integrity.

- Strengthen transparency, accountability and operational reliability.
- Reduce vulnerabilities associated with paper leaks and organised examination fraud.
- Recommend measures for restoring public confidence in high-stakes examinations.

The panel has been asked to submit its recommendations at the earliest, although no fixed public deadline has been announced.

National Testing Agency

- The **NTA** was established in **2017** as an autonomous testing organisation under the Ministry of Education.
- It conducts major entrance and eligibility examinations, including:
 - Joint Entrance Examination–Main.
 - National Eligibility-cum-Entrance Test–Undergraduate.
 - Common University Entrance Test.
 - University Grants Commission–National Eligibility Test.
- Its primary function is to conduct standardised examinations for admission and fellowship in higher educational institutions.

Legal Framework Against Examination Malpractice

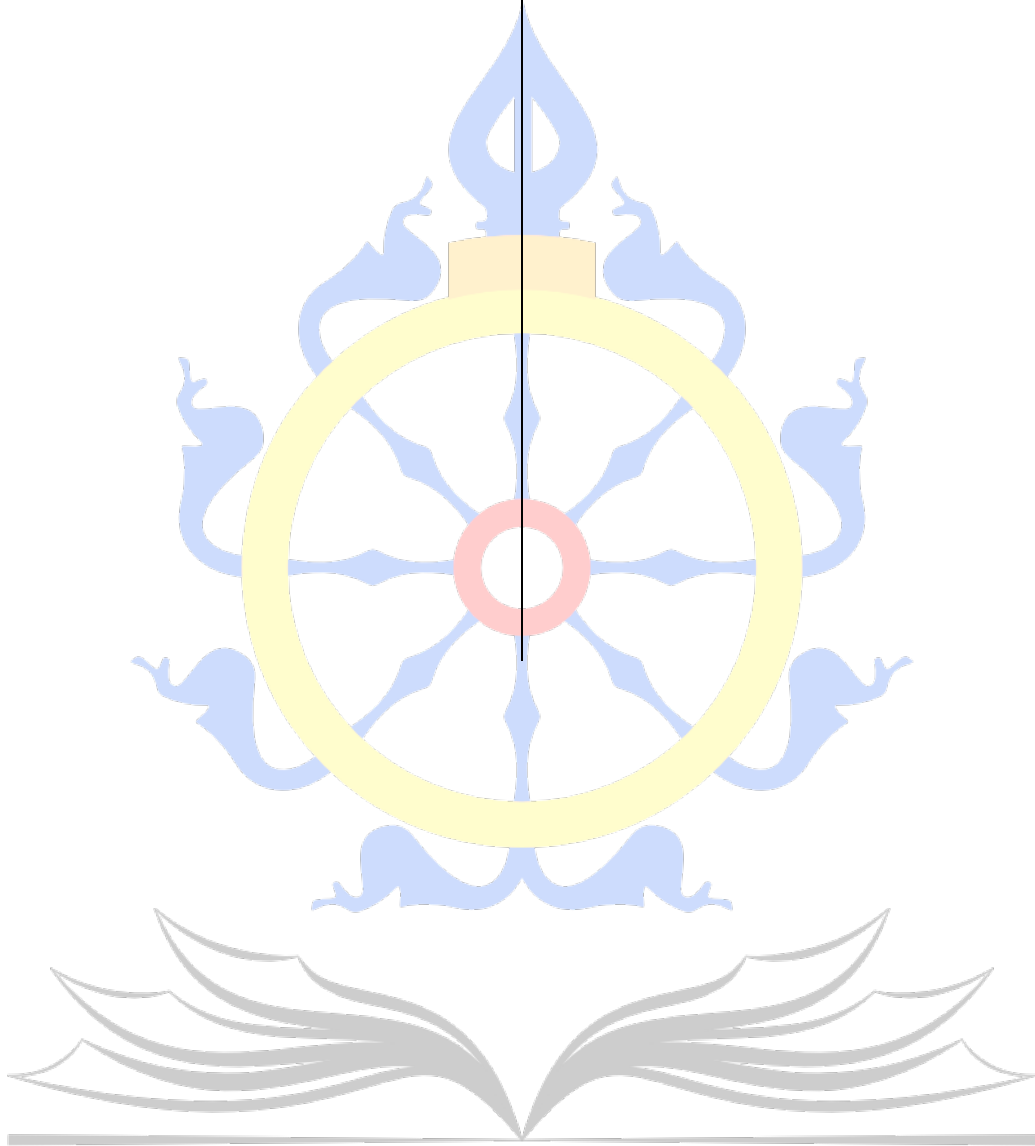
The reform initiative is linked with efforts to strengthen the **Public Examinations (Prevention of Unfair Means) Act, 2024**.

- The law targets unfair practices such as:
 - Leakage of question papers or answer keys.
 - Impersonation and organised cheating.
 - Unauthorised access to examination material.
 - Collusion involving examination authorities or service providers.
- A proposed amendment seeks:
 - Stronger punishments for examination fraud.
 - Time-bound investigations and trials.
 - Stricter action against complicit service providers.
 - Special fast-track courts for examination-related offences.

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Additional Info

- **Nandan Nilekani**
 - Played a central role in the development of **Aadhaar** as the founding Chairman of UIDAI.
 - Has experience in implementing population-scale digital public infrastructure.



Economy & Finance

IRDAI Moves to Curb Dark Patterns in Insurance

What's the News?

The **Insurance Regulatory and Development Authority of India (IRDAI)** has directed insurers and other regulated entities offering insurance products through digital platforms to curb **dark patterns**. The regulator has asked entities to comply with **Central Consumer Protection Authority (CCPA)** guidelines, undertake self-assessment, and submit compliance reports within **15 days**. Where non-compliance is found, entities must submit an action plan within **one month**.

Dark Patterns in Insurance

- Dark patterns are deceptive design practices used in websites or apps to manipulate user behaviour.
- In insurance, they may result in:
 - Mis-selling of policies
 - Forced data sharing
 - Hidden charges
 - Difficulty in cancelling policies
 - Misleading product comparisons
 - Spam calls or repeated nudges to buy products

IRDAI's Framework

- IRDAI has asked regulated entities to:
 - Review their digital sales interfaces.
 - Check compliance with CCPA dark-pattern guidelines.
 - Submit self-assessment reports.
 - Provide corrective action plans where violations are identified.
- The objective is to improve:
 - Transparency
 - Fair product discovery
 - Consumer trust
 - Digital insurance governance

Additional Info

- **IRDAI**
 - Statutory regulator for the insurance sector in India.
 - Established under the **IRDAI Act, 1999**.
 - Regulates insurers, intermediaries, insurance distribution, and policyholder protection.
- **CCPA**
 - Central Consumer Protection Authority.
 - Established under the **Consumer Protection Act, 2019**.

- Regulates unfair trade practices, misleading advertisements, and consumer-rights violations.

Examples of dark patterns

- **Forced action:** Requiring unnecessary personal data before showing product details.
- **Subscription trap:** Making cancellation difficult.
- **Hidden costs:** Revealing charges late in the purchase process.
- **Confirm-shaming:** Guilt-based prompts to influence decisions.
- **Interface interference:** Making one option visually dominant to manipulate choice.

India Launches First Greenfield Integrated Refinery-Cum-Petrochemical Complex in Rajasthan

What's the News?

Prime Minister Narendra Modi inaugurated India's **first greenfield integrated refinery-cum-petrochemical complex** at **Pachpadra, Balotra district, Rajasthan**. The project is expected to strengthen India's energy security, support petrochemical self-sufficiency, and promote downstream industries in Rajasthan.

Project Profile

- **Project location:** Pachpadra, Balotra district, Rajasthan.
- **Developer:** HPCL Rajasthan Refinery Limited.
- **Ownership structure:**
 - Hindustan Petroleum Corporation Limited: **74%**
 - Government of Rajasthan: **26%**
- **Investment:** Over **₹79,450 crore**.
- **Refining capacity:** **9 MMTPA**.
- **Petrochemical capacity:** **2.4 MMTPA**.
- **Nelson Complexity Index:** **17.0**.
- **Petrochemical yield:** More than **26%**.

Greenfield Refinery

- A **greenfield project** is built on undeveloped land, unlike a brownfield project that expands or modifies an existing facility.
- The Pachpadra complex integrates:
 - Crude oil refining.
 - Petrochemical production.
 - Downstream industrial development.

- It is positioned as an anchor project for a proposed **Petrochemical and Plastic Park** in the region.

Additional Info

- **HPCL**
 - Full form: **Hindustan Petroleum Corporation Limited**.
 - Status: Maharatna public sector undertaking.
 - Administrative ministry: **Ministry of Petroleum and Natural Gas**.
- **MMTPA**
 - Full form: **Million Metric Tonnes Per Annum**.
 - Used to measure annual refinery or production capacity.
- **Nelson Complexity Index**
 - Measures the sophistication of a refinery.
 - Higher value indicates greater ability to process complex crude and produce higher-value petroleum products.

Cooperative Life Insurer Announced; Bharat Taxi to Expand to 500 Cities

What's the News?

Union Home and Cooperation Minister Amit Shah announced a new **cooperative life insurance company** and the expansion of **Bharat Taxi**, a cooperative ride-hailing platform, to **500 cities within two years**. The announcements were made during the **fifth Foundation Day of the Ministry of Cooperation** in New Delhi, highlighting reforms aimed at making cooperatives more technology-driven, transparent, competitive and professionally managed.

Cooperative Life Insurance Company

- The proposed insurer aims to increase the cooperative sector's presence in the **insurance industry**.
- It will help diversify cooperatives beyond their traditional strength in:
 - Dairy
 - Sugar
 - Fertilisers
 - Banking
- It may support **financial inclusion** by expanding insurance access through cooperative networks.
- Existing reference point: **IFFCO-TOKIO** already represents cooperative-sector participation in insurance.

Bharat Taxi Expansion

- **Bharat Taxi** is a cooperative ride-hailing platform operated by **Sahakar Taxi Cooperative Ltd**.

- It follows a **driver-owned cooperative model**, where drivers are stakeholders rather than only service providers.
- Current scale:
 - **6.37 lakh registered drivers**
 - **35.77 lakh registered customers**
- Present operations:
 - Delhi-NCR
 - Gujarat
 - Lucknow
 - Chandigarh
 - Mumbai
 - Jaipur
 - Kanpur
- Planned new cities:
 - Ranchi
 - Patna
 - Guwahati
 - Bhopal
 - Kolkata
 - Indore
 - Nagpur
- Long-term target: availability in **500 cities** across India.

PACS and Cooperative Reforms

- **Primary Agricultural Credit Societies (PACS)** have been enabled to undertake **25+ business activities** through model bye-laws.
- New PACS-linked activities include:
 - Retail
 - Storage
 - Healthcare
 - Fuel distribution
 - Digital services
- Key data:
 - **394 PACS** applied to operate retail fuel outlets.
 - **3 PACS fuel outlets** have been commissioned.
 - **54,000+ PACS** are functioning as Common Service Centres.
 - **4,248 PACS** have been approved as Jan Aushadhi Kendras.
 - **50,000 PACS** are to be converted into e-PACS.

Additional Info

Ministry of Cooperation

- Focus areas:
 - Policy support for cooperatives
 - Digitisation and transparency
 - Professional management
 - Expansion of cooperative business models
- Cooperative sector scale:
 - Around **8.5 lakh cooperatives**
 - More than **30 crore members**
- **Tribhuvan Sahkari University**

- Being established in **Anand, Gujarat**.
- Objective: train professionals for cooperative sectors such as:
 - Banking
 - Dairy
 - Marketing
 - Agriculture
 - Fertilisers
- **Seed and Storage Initiatives**
 - A national cooperative for seed production has been set up.
 - Target: become India's largest non-governmental seed production organisation within three years.
 - Infrastructure announcements included:
 - Transfer of **135 grain storage godowns**
 - Combined capacity: **75,000 tonnes**
 - Inauguration of **85 godowns**
 - Foundation laying for **47 additional grain storage facilities**
 - **BBSL-ICAR MoU** signed to strengthen seed systems.

India Emerges as World's Largest Retail & FMCG GCC Hub

What's the News?

India has emerged as the world's largest hub for **Retail and FMCG Global Capability Centres**, with **180 GCCs** employing about **2.72 lakh professionals**. The development reflects India's growing role in global business operations, AI adoption, technology services, supply-chain management and customer-experience functions.

Retail & FMCG GCC Hub

- India hosts **180 retail and FMCG GCCs**.
- These centres employ around **2,72,300 professionals**.
- India's retail GCC market is reported to be **34% larger** than the combined retail GCC markets of **Poland, the Philippines, Mexico, Germany and Egypt**.
- Major companies operating retail/FMCG GCCs in India include:
 - Lowe's
 - Tesco
 - H&M
 - Walmart Global Tech
 - Target
 - L'Oréal
 - AB InBev

Major Indian GCC Locations

- **Bengaluru**
 - Largest retail GCC hub.

- Around **84,000 professionals**.
- Accounts for a major share of retail GCC AI talent.
- **Delhi NCR**
 - Over **66,000 professionals**.
- **Hyderabad**
 - Around **45,000 professionals**.
 - Emerging as an important secondary AI and retail GCC hub.
- Other locations include **Mumbai, Pune, Mangaluru** and select Tier-II/Tier-III cities.

AI and Hiring Trends

- AI penetration in India's retail GCC workforce is reported at **5-7%**.
- AI workforce penetration rose from **2.1% in 2022 to 4.8% in 2025**.
- It is projected to reach **7.2% by 2026**.
- Hiring demand across retail GCCs nearly doubled between **2024 and 2025**.
- More than **52,000 job opportunities** were generated in the sector.
- India has only about **320 professionals** with more than eight years of AI experience across retail GCCs, indicating a shortage of senior AI talent.

Workforce Structure

- Technology, customer success and supply-chain roles account for nearly **60%** of the retail GCC workforce.
- These functions are expected to generate more than **80%** of hiring demand by **2028**.
- Technology and engineering role demand is projected to rise from around **25,100 positions to 41,000 positions** by **2028**.
- AI and ML professionals with **3-6 years** of experience command a median annual salary of around **₹46 lakh**.

Additional Info

- **Global Capability Centres**
 - Also called **captive centres** or **offshore development centres**.
 - Set up by multinational companies to perform global business functions from India.
 - Key functions:
 - Technology and software development
 - Data analytics
 - Finance and accounting
 - Supply-chain management
 - Customer experience
 - AI and automation
- **FMCG**
 - Stands for **Fast-Moving Consumer Goods**.
 - Includes frequently purchased goods such as packaged food, beverages, toiletries, household

products and personal-care items.

• Why India is preferred

- Large skilled workforce.
- Strong technology and digital talent base.
- Lower infrastructure and operating costs.
- Expanding AI, analytics and engineering ecosystem.
- Government support and business-friendly policies.

Centre Waives Customs Duty on Key Electronics Manufacturing Inputs

What's the News?

The Union Government has waived **Basic Customs Duty (BCD)** on specified goods used to manufacture **display assemblies, lithium-ion cells and wireless-charging inductor coil modules**.

The Ministry of Finance issued **three separate customs notifications** to implement the relief. The exemptions are intended to lower input costs, deepen domestic value addition and reduce dependence on imported finished electronics. The concessions will remain available until **31 March 2029**.

What Has Been Exempted?

Lithium-ion Cell Manufacturing

- The list of eligible machinery has been expanded to **85 categories**, covering most stages of battery-cell production.
- Covered equipment includes machinery for:
 - Powder preparation and slurry mixing
 - Electrode coating, calendaring and slitting
 - Electrode stacking and winding
 - Electrolyte filling and laser welding
 - Cell formation, ageing, testing and packaging
- Supporting systems such as solvent-recovery units, dust collectors, heat-recovery equipment and effluent-treatment plants are also covered.
- Customs tariff classifications have been assigned to the machinery categories to reduce classification disputes at ports.

Display Assemblies

The relief covers five key inputs used in display assemblies

- Display cells
- Flexible Printed Circuit Assemblies or **FPCAs**

- Backlight units
- Frames
- Anisotropic Conductive Film or **ACF**

The concession primarily supports displays used in **automotive, medical and industrial electronics**. Display assemblies for mobile phones, smartwatches, televisions, smart meters and interactive flat-panel displays are excluded from this particular exemption.

Wireless-Charging Modules

Specified components used to manufacture inductor coil modules for wireless charging in mobile phones have received duty relief. These include:

- Nano-crystalline assemblies
- Electromagnetic shields
- PET liners
- Polycarbonate shims
- Main and NFC coils
- Neodymium-Iron-Boron or **NdFeB magnets**

Why Is the Measure Important?

- **Lower production costs:** Duty-free or concessional imports of specialised inputs and machinery can reduce capital and manufacturing costs.
- **Domestic value addition:** It encourages manufacturers to produce components in India instead of merely assembling imported modules.
- **Battery ecosystem:** Lithium-ion batteries constitute a significant portion of the cost of electric vehicles and portable electronic devices.
- **Supply-chain resilience:** Domestic component production can reduce exposure to international supply disruptions.
- **Sectoral benefits:** The measure can support smartphones, laptops, electric vehicles, drones, medical electronics, renewable-energy systems and Battery Energy Storage Systems.
- **Export competitiveness:** Lower input costs may help Indian manufacturers compete in global electronics and battery supply chains.

Basic Customs Duty

- **BCD** is a tariff imposed on goods imported into India.
- It is principally levied under the **Customs Act, 1962**, while tariff rates are specified through the **Customs Tariff Act, 1975**.
- Customs duties serve two major purposes:
 - Generating government revenue
 - Protecting domestic industries from comparatively cheaper imports

- Selective duty exemptions can also be used to make imported raw materials and capital goods cheaper when adequate domestic alternatives are unavailable.

Additional Info

- **Production Linked Incentive Scheme for Large-Scale Electronics Manufacturing**
 - Provides incentives based on incremental sales of eligible manufactured goods.
 - Seeks to attract investment and integrate India into global electronics value chains.
- **Electronics Components Manufacturing Scheme**
 - Focuses on developing component-level manufacturing capabilities.
 - Complements finished-product manufacturing by supporting sub-assemblies, components and capital equipment.
- **India Semiconductor Mission**
 - Promotes semiconductor fabrication, display fabrication, chip design, assembly, testing, marking and packaging.
 - Implemented through the Ministry of Electronics and Information Technology.

ONGC Approves Expansion of India's Strategic Crude Oil Reserves

What's the News?

- The board of **Oil and Natural Gas Corporation (ONGC)** has approved the creation of an additional **1.75 million metric tonnes (MMT)** of strategic crude oil storage capacity at **Mangalore, Karnataka**.
- The project will include associated infrastructure developed according to directions from the **Ministry of Petroleum and Natural Gas**.
- The additional reserve will be managed by **Indian Strategic Petroleum Reserves Limited (ISPRL)**.
- ONGC has not disclosed the project's estimated cost or completion timeline.
- It is the first government-owned energy company to fund strategic crude storage infrastructure from its own resources.

Strategic Reserve Expansion

- India currently has **5.33 MMT** of strategic crude storage capacity in underground rock caverns at:
 - Visakhapatnam, Andhra Pradesh
 - Mangalore, Karnataka

- Padur, Karnataka
- The Mangalore project will increase this capacity to **7.08 MMT**, representing an expansion of approximately **32.8%**.
- Two additional strategic storage projects are under development, with a combined proposed capacity of **6.5 MMT**.
- The existing 5.33 MMT reserve is estimated to cover approximately **9.5 days of crude oil requirements**, based on 2019–20 consumption levels.

ONGC-MRPL Link

- **Mangalore Refinery and Petrochemicals Limited (MRPL)** is an ONGC subsidiary.
- MRPL operates a refinery of approximately **300,000 barrels per day** in Karnataka.
- ONGC may integrate the new storage caverns with MRPL's existing refinery and pipeline infrastructure.
- The existing Mangalore reserve also follows a commercial model under which foreign companies, including the UAE's **Abu Dhabi National Oil Company**, have leased storage space.

Additional Info

- **Strategic Petroleum Reserve**
 - An emergency stockpile of crude oil maintained to address severe supply disruptions.
 - It differs from commercial stocks held by refineries for regular business operations.
- **Indian Strategic Petroleum Reserves Limited**
 - Government-owned entity responsible for developing and operating India's strategic crude reserves.
 - Functions as the custodian of sovereign crude oil stocks.
 - Coordinates the release and replenishment of reserves through an Empowered Committee of the Government of India.
- **Strait of Hormuz**
 - A narrow maritime passage connecting the Persian Gulf with the Gulf of Oman and the Arabian Sea.
 - It is a critical global chokepoint for crude oil and liquefied natural gas shipments.
 - Instability around the strait can affect India's energy supply, freight costs and domestic inflation.

World Bank Approves \$890 Million for India's Rooftop Solar Programme

What's the News?

- The **World Bank Board of Executive Directors** has approved a **\$890 million financing package** to accelerate residential rooftop-solar installations under **PM Surya Ghar: Muft Bijli Yojana**.
- The assistance seeks to expand clean-energy access, lower household electricity expenditure and strengthen the rooftop-solar ecosystem.
- The programme targets solar installations across **10 million rural and urban households**.
- It is expected to mobilise **\$4.2 billion in additional private financing** and support approximately **1.7 million employment opportunities** across solar manufacturing, installation and services.

Financing Structure

The \$890 million package comprises:

- **\$820 million:** Loan from the **International Bank for Reconstruction and Development**
- **\$60 million:** Concessional loan from the **Clean Technology Fund**
- **\$10 million:** Grant from the **Livable Planet Fund**

The financing follows a **Program-for-Results** model, under which disbursements are linked to the achievement of specified outcomes.

PM Surya Ghar: Muft Bijli Yojana

- **Type:** Central Sector Scheme
- **Nodal Ministry:** Ministry of New and Renewable Energy
- **Total outlay:** ₹75,021 crore
- **Target:** Rooftop-solar systems for **one crore households**
- **Household benefit:** Generation of up to **300 units of electricity per month**
- **Major objectives:**
 - Reduce household electricity bills
 - Promote decentralised renewable-energy generation
 - Encourage domestic manufacturing of solar equipment
 - Develop skilled employment in the renewable-energy sector

By mid-2026, the scheme had:

- Solarised approximately **4.09 million households**
- Received around **7.03 million applications**

- Disbursed more than **₹22,900 crore** in subsidies

Programme Implementation

- The programme will support the **Ministry of New and Renewable Energy** and **REC Limited**, the national-level implementing agency.
- It will strengthen the capacity of:
 - Electricity distribution companies
 - Public-sector banks
 - Solar vendors and installers
 - Training and certification institutions
- It will also promote:
 - Collateral-free household loans
 - Digitised loan processing
 - Reliable vendor networks
 - Rooftop-solar adoption by low-electricity-consumption households

Additional Info

- **International Bank for Reconstruction and Development**
 - Lending arm of the World Bank Group.
 - Provides loans and development assistance mainly to middle-income and creditworthy lower-income countries.
- **Clean Technology Fund**
 - A multilateral climate-finance mechanism under the **Climate Investment Funds**.
 - Supports the deployment of low-carbon technologies in developing countries.
- **Rooftop Solar**
 - Electricity is generated near the point of consumption.
 - Surplus electricity may be supplied to the grid through **net metering**.
 - It reduces transmission losses and pressure on centralised power infrastructure.
- **World Bank's Previous Support**
 - The World Bank has mobilised more than **\$2 billion** for India's rooftop-solar sector over the past decade.
 - India's installed rooftop-solar capacity increased from approximately **500 MW to over 27 GW** during this period.

ICAI Launches Global Orbit Summit 2026 to Strengthen India's GCC Ecosystem

What's the News?

The Institute of Chartered Accountants of India inaugurated the first edition of the **ICAI Global Orbit Summit 2026** in New Delhi to support India's growing **Global Capability Centre** ecosystem. The summit was organised by ICAI's **Global Trade & Services Committee** and hosted by the **Northern India Regional Council**. It aims to prepare Indian Chartered Accountants for global leadership roles in finance, accounting, taxation, analytics, compliance and digitally enabled professional services.

Global Orbit Summit 2026

- **Theme:** *ICAI Global Orbit: From GCCs to Global Leadership*
- **Organiser:** Global Trade & Services Committee of ICAI
- **Host:** Northern India Regional Council of ICAI
- **Venue:** The Grand New Delhi, Vasant Kunj
- **Objective:**
 - Promote India as a global hub for high-value services.
 - Build capacity among Chartered Accountants for GCC-related roles.
 - Enable dialogue among policymakers, industry, academia and finance professionals.
- **Major focus areas:**
 - Finance innovation
 - AI and automation
 - Cybersecurity
 - ESG reporting
 - Data privacy
 - Global taxation
 - Ethics and governance
 - Talent development

Global Capability Centres

- **Meaning:** GCCs are offshore units established by multinational companies to provide specialised services to their global operations.
- **Also called:**
 - Global In-house Centres
 - Captive Centres
- **Key services:**
 - Finance and accounting
 - IT and digital services
 - Research and development
 - Artificial intelligence and analytics
 - Human resources
 - Customer support
 - Engineering services

India's GCC ecosystem:

- More than **2,100 GCCs**
- Nearly **2.36 million professionals employed**
- Around **USD 100 billion annual revenue**

ICAI's Role

- ICAI seeks to align Indian Chartered Accountants with global business and regulatory standards.
- It is focusing on:
 - Digital and analytical skills
 - Cross-border financial competencies
 - Professional mobility
 - Global compliance and governance expertise
- The initiative supports India's ambition to become a trusted global hub for accounting, assurance, taxation and advisory services.

Additional Info

- **ICAI:**
 - Full form: Institute of Chartered Accountants of India
 - Statutory basis: Chartered Accountants Act, 1949
 - Function: Regulates the chartered accountancy profession in India.

India Releases First Trial Index of Services Production

What's the News?

The **Ministry of Statistics and Programme Implementation (MoSPI)** has released India's first trial **Index of Services Production (ISP)**, covering 19 formal service sub-sectors.

The first release, with **2024-25 as the base year**, measures service-sector activity for April 2026. Of the 19 sub-sectors, **14 recorded double-digit year-on-year growth**. The covered sub-sectors represent around **60% of India's services sector**.

Index of Services Production?

The ISP is a high-frequency statistical indicator that measures changes in the **volume or real output of service-producing industries** relative to a base period. It is the services-sector counterpart of the **Index of Industrial Production (IIP)**:

Indicator	Measures
ISP	Short-term changes in services output
IIP	Short-term changes in industrial output
GDP/GVA estimates	Broader quarterly or annual economic activity

Services PMI	Business conditions based on a private-sector survey
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The ISP measures production using administrative and transaction data; it is not a survey of business sentiment.

First Release Highlights

Sub-sector	Year-on-year growth
Accommodation and food services	37.2%
Retail trade	30.8%
Administrative and support services	28.7%
Real estate	27.7%
Telecommunications	22.8%
Repair services	19.2%
Road transport	18.5%
Warehousing and transport support	18.2%

Two sub-sectors contracted:

- **Air transport:** -13.9%
- **Railway transport:** -0.4%

Water transport, postal and courier services, and information and broadcasting registered positive but single-digit growth.

Coverage and Methodology

The trial ISP covers formal enterprises classified under the services-related sections of the **National Industrial Classification, 2025**.

Its principal data sources are:

- **GST data**
 - Used for trade, hotels and restaurants, road transport, telecommunications, real estate, information technology and several professional services.
- **Administrative data**
 - Used for railways, air transport, water freight transport, banking and insurance.
- **Annual Survey of Incorporated Services Sector Enterprises**
 - Used to determine sub-sectoral weights.
 - Expected to facilitate the future inclusion of health and education services.

Monetary values are converted into real-output measures using suitable price deflators, including the **Wholesale Price Index** and different components of the **Consumer Price Index**.

What Is Excluded?

The current series does not comprehensively cover:

- Informal-sector service providers
- Public administration and defence
- Government-provided health and education

- Activities of private households employing workers
- Membership organisations and several personal services
- Gambling and betting activities
- Financial services other than banking and insurance

Thus, the ISP should not be interpreted as measuring the entire services economy.

Why Is the ISP Important?

- **High-frequency monitoring:** Provides monthly information on a sector contributing more than half of India's Gross Value Added.
- **Policy formulation:** Helps identify slowdowns or acceleration before quarterly national accounts are released.
- **Economic forecasting:** Supports business-cycle analysis and short-term GDP or GVA projections.
- **Sectoral assessment:** Enables comparison of production trends across transport, trade, finance, information technology and other services.
- **Statistical reform:** Fills a major data gap because India previously had a monthly production index for industry but not for services.

Additional Info

- **Trial status**
 - The current indices are experimental.
 - MoSPI will study their data quality, stability and resilience before issuing a regular series.
 - An aggregate or overall ISP has not yet been released.
- **Release schedule**
 - Subsequent trial indices will normally be published on the **29th of each month**.
 - Data will be released with a lag of approximately **60 days**.
- **Technical Advisory Committee**
 - Constituted to develop the ISP's conceptual and methodological framework.
 - Chaired by **Debjani Ghosh**, Distinguished Fellow at NITI Aayog.
 - Includes representatives from government departments, academia and industry associations.

CTIL-CII Launch Guidebook to Help MSMEs Enter Global Markets

What's the News?

The Centre for Trade and Investment Law at IIFT, in collaboration with the Confederation of Indian Industry, has launched “**Going Global: A Practical Guide for Indian MSMEs**” in New Delhi. The guidebook aims to improve export readiness of Indian MSMEs by helping them identify export opportunities, understand market access rules, use trade intelligence tools, meet global standards, and integrate into global value chains.

Going Global Guidebook?

- Designed as a **one-stop practical resource** for Micro, Small and Medium Enterprises.
- Focus areas:
 - Export opportunity identification.
 - Market access requirements.
 - International standards and certifications.
 - Sustainability compliance.
 - Buyer identification.
 - Use of freely available trade intelligence tools.
- It seeks to reduce the cost of export market research for smaller firms.

MSME Export Challenges Addressed

- Market intelligence gap:** Limited access to reliable export-market information.
- Buyer discovery:** Difficulty identifying credible overseas buyers.
- Compliance burden:** Challenges in meeting standards, certifications, and sustainability norms.
- Price competitiveness:** Difficulty competing in global markets due to scale and cost constraints.

FTA and Rules of Origin Link

- The launch included a panel discussion on how MSMEs can use India's **Free Trade Agreements** more effectively.
- Rules of Origin** are important because they decide whether a product qualifies for preferential tariff treatment under an FTA.
- For MSMEs, this can improve market access if they can comply with origin, documentation, and certification requirements.

Trade Remedies Advisory Cell

- The event also highlighted the **Trade Remedies Advisory Cell**, which supports domestic industry on trade remedy issues.
- Relevant trade remedies:

- Anti-dumping duty:** Used against dumped imports.
- Countervailing duty:** Used against subsidised imports.
- Safeguard measures:** Used against sudden import surges causing injury to domestic industry.

Additional Info

MSME classification in India

- Based on investment and turnover criteria.
- Current broad thresholds:
 - Micro:** Investment up to ₹2.5 crore; turnover up to ₹10 crore.
 - Small:** Investment up to ₹25 crore; turnover up to ₹100 crore.
 - Medium:** Investment up to ₹125 crore; turnover up to ₹500 crore.

RBI Financial Stability Report Highlights Strong Banking Resilience

What's the News?

The Reserve Bank of India's latest **Financial Stability Report (FSR)** has assessed India's financial system as resilient, supported by stronger bank and non-bank balance sheets, adequate capital and liquidity buffers, improving asset quality and stable profitability. However, it has flagged risks from geopolitical tensions, supply-chain disruptions, volatile energy prices, elevated global public debt, stretched asset valuations and leveraged non-bank financial intermediaries.

Banking Sector Performance

Scheduled Commercial Banks recorded broad-based improvement:

- Credit growth:** 14.5% year-on-year
- Gross NPA ratio:** 1.8%, a multi-decadal low
- Annual slippage ratio:** 1.2%
- Provisioning Coverage Ratio:** 75.6%
- Profit after tax:** ₹4,05,268 crore
- CRAR:** 17.7%, a multi-decadal high
- CET1 ratio:** 15.3%
- Liquidity Coverage Ratio:** 124.2%
- Net Stable Funding Ratio:** 122.1%

Public-sector banks continued to record faster credit growth than private-sector banks. Agriculture had the highest sectoral GNPA ratio at **5.1%** and accounted for **37.2% of total bank GNPA's**.

Stress-Test Results

RBI's macro stress tests covered 46 major Scheduled Commercial Banks.

• **Baseline scenario**

- CRAR may decline from 17.5% to 15.6%.
- GNPA ratio may rise from 1.8% to 1.9%.
- No bank is projected to breach the minimum CRAR requirement.

• **More adverse scenario**

- Aggregate CRAR may decline to 13%.
- GNPA ratio may increase to 4.1%.
- Two banks may fall below the minimum CRAR requirement of 9%.

All banks are expected to maintain their CET1 ratios above the regulatory minimum of 5.5% under the tested macroeconomic scenarios.

NBFC Sector

Non-Banking Financial Companies remained financially sound, with healthy capitalisation, profitability and improving asset quality.

- Aggregate NBFC credit growth moderated to **16.6%**.
- Profit after tax grew by **11.8%**.
- Retail credit growth was led mainly by **gold loans and other retail loans**.
- Under the baseline stress scenario:
 - GNPA ratio may rise from 2.4% to 2.8%.
 - CRAR may decline from 22.3% to 20.8%.
 - Seven NBFCs may fall below the minimum capital requirement of 15%.

The concentration of NBFC lending and their dependence on banks and financial markets remain important channels for transmitting financial shocks.

Major Risks Identified

- **Geopolitical risks:** Conflicts can raise crude-oil prices, disrupt supply chains and increase exchange-rate volatility.
- **Global public debt:** High refinancing requirements and rising bond yields may create instability.
- **Stretched asset valuations:** An abrupt correction in AI-related and other highly valued equities may spill over into Indian markets.
- **Non-bank financial intermediaries:** High leverage and interconnectedness can amplify market shocks.
- **Gold-loan growth:** Rapid expansion requires monitoring of collateral valuation, loan-to-value ratios and borrower repayment capacity.
- **Financial interconnectedness:** Increasing bilateral exposure among

banks, NBFCs, mutual funds and insurers may create contagion channels.

Financial Stability Report

- It is a **half-yearly publication** of the RBI, generally issued in June and December.
- It incorporates inputs from all major financial-sector regulators.
- It assesses:
 - Macrofinancial risks
 - Banking and NBFC resilience
 - Asset quality and capital adequacy
 - Liquidity and profitability
 - Stress-test outcomes
 - Financial-market interconnectedness
 - Regulatory developments
- It represents the collective assessment of the **FSDC Sub-Committee** on risks to India's financial system.

Additional Info

- **Financial Stability and Development Council**
 - Established in 2010.
 - Apex, non-statutory body under the Ministry of Finance.
 - Chaired by the Union Finance Minister.
 - Members include:
 - RBI Governor
 - Heads of SEBI, IRDAI, PFRDA and IBBI
 - Finance Ministry officials
 - Chief Economic Adviser
 - Functions:
 - Financial stability
 - Inter-regulatory coordination
 - Macroprudential supervision
 - Financial inclusion and literacy
 - Financial-sector development
- **FSDC Sub-Committee**
 - Chaired by the RBI Governor.
 - Reviews systemic risks and coordinates among financial regulators.
 - Provides inputs for the Financial Stability Report.
- **Key Terms**
 - **GNPA ratio:** Gross non-performing assets as a percentage of gross advances.
 - **CRAR:** Capital available with a bank relative to its risk-weighted assets.

- **CET1:** Highest-quality regulatory capital, primarily equity and disclosed reserves.
- **LCR:** Ability to meet short-term liquidity stress using high-quality liquid assets.
- **NSFR:** Availability of stable funding for longer-term assets and activities.
- **PCR:** Provisions maintained as a proportion of gross NPAs.

Government Approves Field Trials of ₹10 and ₹20 Polymer Banknotes

What's the News?

- The Union Government has approved the **Reserve Bank of India's proposal to conduct field trials of polymer banknotes** in ₹10 and ₹20 denominations.
- RBI proposes to introduce **one billion notes of each denomination**, amounting to a total trial batch of **two billion banknotes**.
- Regular issuance will begin only after the successful completion of field trials.
- Polymer notes will circulate alongside existing paper-substrate notes. There is presently **no proposal to replace paper currency completely**.
- The decision was disclosed by Minister of State for Finance **Pankaj Chaudhary** in a written reply in the Lok Sabha.

Polymer Banknotes?

Polymer banknotes are printed on a thin, non-fibrous synthetic substrate rather than the cotton-based paper used for conventional Indian banknotes.

Key characteristics include:

- Greater resistance to moisture, dirt and tearing
- Longer circulation life
- Easier cleaning and reduced absorption of contaminants
- Scope for advanced security features, including transparent windows
- Potential reduction in the frequency of printing, transportation and destruction of soiled notes

International experience indicates that polymer notes may last **two to six times longer** than comparable paper notes, depending on the denomination and circulation conditions.

Why ₹10 and ₹20 Notes?

- Lower-denomination notes are handled frequently and tend to become soiled or damaged faster.

- Longer-lasting notes can reduce RBI's replacement and currency-management costs.
- The two denominations are extensively used in retail trade, public transport and other small-value cash transactions.
- Their high circulation makes them suitable for testing durability under varied climatic and handling conditions.

Field-Trial Framework

The trials are expected to evaluate:

- Durability under Indian climatic conditions
- Public acceptance and ease of handling
- Compatibility with counting, sorting and vending machines
- Printing and security-feature performance
- Cost over the note's complete lifecycle
- Collection, destruction and recycling arrangements

The initiative remains at a **preliminary stage**. Polymer notes will enter regular circulation only after RBI evaluates the trial results.

Legal Framework

• Section 22, RBI Act, 1934

- Grants RBI the sole right to issue banknotes in India.
- The ₹1 note is issued by the Government of India, while its distribution is managed through RBI.

• Section 25, RBI Act, 1934

- Provides that the design, form and material of banknotes must be approved by the Central Government.
- Approval is granted after considering the recommendations of RBI's Central Board.
- Government approval was therefore required because polymer changes the material used for banknotes.

• Section 26, RBI Act, 1934

- Provides legal-tender status to RBI banknotes, subject to the Act's provisions.

Currency-Printing Arrangement

• Bharatiya Reserve Bank Note Mudran Private Limited

- A currency-printing subsidiary of RBI.
- Operates banknote presses at Mysuru in Karnataka and Salboni in West Bengal.
- Issued a global Expression of Interest for supplying **opacified**

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polymer-substrate sheets with security features suitable for Indian banknotes.

- **Security Printing and Minting Corporation of India Limited**

- A Government of India company under the Ministry of Finance.
- Operates currency presses, security presses, paper mills and mints.

Additional Information

- **Earlier Indian proposal**

- India had previously planned a field trial involving **one billion ₹10 polymer notes**.
- Kochi, Mysuru, Jaipur, Shimla and Bhubaneswar were selected for their diverse geographical and climatic conditions.
- The earlier proposal did not progress to full implementation.

- **Global use**

- Australia pioneered polymer banknotes for general circulation.
- Countries including Canada, New Zealand and the United Kingdom have subsequently shifted all or substantial parts of their banknote series to polymer substrates.

India Becomes World's Second-Largest Supplier of Seafarers

What's the News?

- India has emerged as the **world's second-largest supplier of seafarers**, behind the Philippines, according to the **BIMCO-ICS Seafarer Workforce Report 2026**.
- India contributes **3,11,936 maritime professionals**, constituting **12.16% of the global seafaring workforce**.
- India has moved ahead of China, the Russian Federation and Indonesia.
- The achievement strengthens India's position as a global maritime-skilling hub and a major supplier of personnel for international merchant shipping.

India's Seafarer Workforce

Category	Indian personnel	Share of global workforce
Officers	1,40,718	13.41%
Ratings	1,71,218	11.29%
Total	3,11,936	12.16%

- **Officers** perform command, navigation, engineering and ship-management functions.

- **Ratings** undertake operational, technical, maintenance and support duties aboard ships.

Global Ranking

The five largest seafarer-supplying countries are:

1. Philippines
2. India
3. China
4. Russian Federation
5. Indonesia

India's reported global share increased from **5.2% in 2015** and **6% in 2021** to **12.16% in 2026**, raising its position from fifth to second. However, comparisons with 2015 require caution because the report notes changes in methodology and definitions.

Global Workforce Situation

- Estimated global seafarer supply: **25,65,580**
- Estimated global demand: **25,47,790**
- Officer shortage: **39,100**
- Ratings surplus: **56,890**
- World merchant fleet covered by the report: **85,148 ships**
- To meet projected demand by 2030, around **22,747 additional officers** must enter the workforce annually.

The shortage is particularly significant for qualified deck and engineering officers, creating additional employment opportunities for internationally certified Indian personnel.

Mission 20%

The government has announced **Mission 20%**, which seeks to increase India's share of the global seafaring workforce from **12.16% to 20%**—equivalent to one in every five seafarers worldwide being Indian.

Its major components include:

- Expansion of maritime-training capacity;
- More shipboard-training berths;
- Stronger industry-academia partnerships;
- Digitisation of certification and regulatory services;
- Greater participation of women; and
- Internationally benchmarked training and competency standards.

Additional Info

BIMCO-ICS Seafarer Workforce Report

- Jointly prepared by:
 - **Baltic and International Maritime Council (BIMCO)**
 - **International Chamber of Shipping (ICS)**
- Published generally once every **five years**.
- Assesses:
 - Supply and demand for seafarers;

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- Nationality and rank composition;
- Age and gender profile;
- Maritime education and training; and
- Future manpower requirements.
- It primarily covers personnel certified under the **STCW Convention**.

STCW Convention

- Full name: **International Convention on Standards of Training, Certification and Watchkeeping for Seafarers**.
- Adopted under the **International Maritime Organization**.
- Establishes minimum international standards for:
 - Seafarer training;
 - Certification;
 - Medical fitness; and
 - Watchkeeping competence.

Maritime Administration in India

- **Nodal ministry:** Ministry of Ports, Shipping and Waterways.
- **Regulatory authority:** Directorate General of Shipping.
- Major functions include:
 - Certification of seafarers;
 - Regulation of maritime-training institutes;
 - Implementation of international maritime conventions;
 - Seafarer welfare and grievance handling; and
 - Regulation of recruitment and placement agencies.

Related Policy Frameworks

- **Maritime India Vision 2030:** Medium-term roadmap for port-led development, shipping, logistics and maritime skills.
- **Maritime Amrit Kaal Vision 2047:** Long-term strategy for developing India as a major global maritime power.
- India's maritime-skilling expansion supports the broader objectives of the **Blue Economy**, overseas employment and services exports.

Banks Collect ₹7,086 Crore in Minimum-Balance Charges

What's the News?

- Indian banks collected **₹7,086.63 crore** in FY26 from customers who failed to maintain the prescribed **Minimum Average Balance (MAB)** in savings and current accounts.
- **Private-sector banks** collected ₹4,948.71 crore—nearly **70%** of the total—while **Public Sector Banks (PSBs)** collected ₹2,137.92 crore.

- The figures were provided by Minister of State for Finance **Pankaj Chaudhary** in a written reply to the Rajya Sabha.
- Of India's 12 PSBs, **10 have discontinued minimum-balance penalties on savings accounts**. The remaining two have rationalised their charges under board-approved policies.
- FY26 figures for private-sector banks are provisional.

Bank-Wise Collection

Private-Sector Banks

Bank	Charges collected
HDFC Bank	₹1,798.14 crore
Axis Bank	₹1,081.33 crore
ICICI Bank	₹353.50 crore
Kotak Mahindra Bank	₹290.65 crore
Yes Bank	₹195.05 crore
IDBI Bank	₹175.15 crore

- HDFC Bank and Axis Bank together accounted for nearly **58% of the amount collected by private-sector banks**.
- Private banks collected more than twice the amount collected by PSBs.

Public Sector Banks

Bank	Charges collected
State Bank of India	₹477.27 crore
Bank of Baroda	₹394.10 crore
Indian Bank	₹299.17 crore

- SBI's collection related to **current accounts**, as it had removed minimum-balance penalties from savings accounts.
- Banks collected more than **₹26,170 crore** in minimum-balance charges cumulatively between FY23 and FY26.

Minimum Average Balance?

- MAB is the average balance that a customer must maintain in a bank account during a specified period, generally a month.
- The required balance may vary according to:
 - Type of account;
 - Location of the branch;
 - Services attached to the account; and
 - Individual bank policy.
- Banks may impose charges when the account balance falls below the agreed requirement, subject to RBI safeguards.

RBI Rules on Penal Charges

Banks levying charges for non-maintenance of minimum balance must:

- Clearly disclose the minimum-balance requirement and applicable charges while opening the account.

- Notify the customer through SMS, email, letter or another appropriate mode when a shortfall occurs.
- Allow at least **one month** from the notice to restore the required balance.
- Make the charge directly proportionate to the amount of the shortfall.
- Ensure that charges are reasonable and broadly aligned with the cost of providing banking services.
- Prevent an account from becoming negative solely because of minimum-balance charges.
- Avoid imposing such penalties on **inoperative accounts**.

Zero-Balance Accounts

Basic Savings Bank Deposit Account

A **Basic Savings Bank Deposit Account (BSBDA)**:

- Does not require an initial deposit or minimum balance.
- Is available as a normal banking service to all eligible individuals, not only economically weaker sections.
- Provides basic services without charge, including:
 - Cash deposits and withdrawals;
 - Receipt of money through electronic channels;
 - ATM or debit-card facilities; and
 - Passbook facility.
- Permits an individual to maintain only one BSBDA in the same bank.

Pradhan Mantri Jan Dhan Yojana

- Accounts opened under the **Pradhan Mantri Jan Dhan Yojana (PMJDY)** are generally structured as BSBDA.
- They do not require customers to maintain a minimum balance.
- Around **73 crore BSBDA**s, including PMJDY accounts, were reported to be exempt from minimum-balance penalties.

Additional Info

Public Sector Banks

- A PSB is a bank in which the Central Government or another government entity holds a majority stake.
- India currently has **12 PSBs**.
- They are regulated by the Reserve Bank of India and governed principally by:
 - Banking Regulation Act, 1949;
 - Reserve Bank of India Act, 1934;
 - State Bank of India Act, 1955; and
 - Banking Companies (Acquisition and Transfer of Undertakings) Acts.

Financial Inclusion Significance

Zero-balance accounts support financial inclusion by:

- Expanding formal banking access;

- Facilitating Direct Benefit Transfers;
- Reducing dependence on cash;
- Providing access to insurance, pensions and credit; and
- Protecting low-income customers from balance-maintenance charges.

India Climbs 25 Places in Global Pro-Competition Reform Ranking

What's the News?

India improved its position from **82nd in 2010 to 57th in 2023**, advancing **25 places** in the Competere Foundation's assessment of structural and pro-competitive reforms.

The report, titled "**India's Next Growth Frontier: Reducing Anti-Competitive Market Distortions to Build on India's 2010-2023 Reform Progress**," attributes the improvement mainly to reduced domestic market distortions, stronger competition and a more integrated business environment. It was presented at an event organised by the **Centre for Trade and Investment Law (CTIL)**, **Indian Institute of Foreign Trade (IIFT)**.

Market Distortions Performance Index

The **Market Distortions Performance Index (MDPI)** examines government-imposed or government-tolerated measures that interfere with voluntary exchange and competition.

It assesses economies through three pillars:

- **Domestic Competition:** Conditions governing market entry, business operations, investment and asset reallocation.
- **Property Rights Protection:** Contract enforcement, intellectual property rights and legal safeguards.
- **International Competition:** Customs procedures, cross-border trade and foreign participation.

India's pillar scores changed as follows:

Pillar	2010	2023
Domestic Competition	3.567	4.595
Property Rights Protection	3.892	4.318
International Competition	4.067	4.078

The largest improvement occurred in **domestic competition**, while progress in international competition remained limited.

Reform Drivers

- **Goods and Services Tax:** Reduced internal fiscal fragmentation and created a more unified national market.

- **Insolvency and Bankruptcy Code:** Improved insolvency resolution, capital reallocation and exit mechanisms for unviable firms.
- **Regulatory reforms:** Simplified business entry and operational procedures.
- **Trade facilitation modernisation:**
 - Indian Customs Electronic Gateway–**ICEGATE**
 - Single Window Interface for Facilitating Trade–**SWIFT**
 - Authorised Economic Operator programme
 - Direct Port Delivery and Direct Port Entry
 - Risk Management System

The report estimates that reforms reduced the projected five-year GDP-per-capita loss associated with market distortions by **11 percentage points**, equivalent in its model to approximately **1% additional GDP per capita annually** during the study period.

Remaining Market Distortions

The report identifies the following constraints:

- Sector-specific foreign investment caps and government approval routes.
- Sourcing, investment and ownership conditions.
- Restrictions on permissible retail and e-commerce business models.
- Regulatory uncertainty in digital competition policy.
- External sanitary, phytosanitary and technical barriers faced by Indian exporters.
- Relatively weak progress in international competition and customs-related indicators.

It estimates that foreign-investment restrictions and competition-policy distortions could impose a combined economic loss of approximately **\$173.6 billion over five years**, or about **4.2% of GDP**:

- **Foreign-investment restrictions:** \$127.2 billion.
- **Competition-policy distortions:** \$46.4 billion.

These are estimates produced by the report's economic model, not official government loss calculations.

Suggested Reform Priorities

- Review sectoral investment restrictions according to their impact on productivity, entry and consumer welfare.

- Adopt the **least competition-restrictive regulation** required to protect legitimate public interests.
- Keep competition enforcement evidence-based, proportionate and linked to demonstrable market harm.
- Promote science-based standards, mutual recognition and regulatory equivalence in international trade.
- Address non-tariff barriers that limit effective market access for Indian exporters.

Additional Info

• Competere Foundation

- A non-governmental research organisation working on competition policy, open trade, property rights and anti-competitive market distortions.
- The MDPI should not be confused with the IMD World Competitiveness Ranking or earlier World Economic Forum indices.

• Centre for Trade and Investment Law

- Established by the Ministry of Commerce and Industry at IIFT.
- Provides research and legal inputs on international trade, investment negotiations and dispute settlement.

• GST constitutional provisions

- Introduced through the **101st Constitutional Amendment Act, 2016**.
- **Article 246A:** Legislative powers concerning GST.
- **Article 279A:** Establishment of the GST Council.

• Competition framework

- The **Competition Act, 2002** seeks to prevent practices adversely affecting competition.
- The **Competition Commission of India** is the principal statutory competition regulator.

India Launches Sovereign-Backed Maritime Liability Insurance What's the News?

India has launched its first sovereign-backed **Protection and Indemnity (P&I) insurance product** under the **Bharat Maritime Insurance Pool (BMIP)**. The product was designed by **The New India Assurance Company Limited** and the first policy was handed over to the **Shipping Corporation of India Limited** by the **Department of Financial Services, Ministry of Finance**. The move aims to

strengthen India's domestic maritime insurance capacity and reduce dependence on overseas insurers.

Protection and Indemnity Insurance

- **P&I insurance** is a marine liability insurance cover for shipowners and operators.
- It protects against third-party liabilities arising from vessel operations.
- Major coverages include:
 - crew liability,
 - cargo liability,
 - marine pollution liability,
 - wreck removal,
 - operational liabilities linked to shipping,
 - access to a **24x7 global port correspondent network**.
- Under BMIP, the P&I cover provides an indemnity limit of up to **USD 1.5 billion** through the combined capacity of the pool.

Bharat Maritime Insurance Pool

- **BMIP** is a sovereign-backed domestic maritime insurance mechanism.
- It was created to ensure continuous maritime insurance coverage during geopolitical disruptions.
- It covers major maritime risks such as:
 - Hull and Machinery,
 - Cargo,
 - Protection and Indemnity,
 - War Risk.
- The pool is backed by a sovereign guarantee of **₹12,980 crore**.
- It covers vessels carrying cargo from any international origin to Indian ports and vice versa, including routes passing through volatile maritime corridors.

Key Outcomes

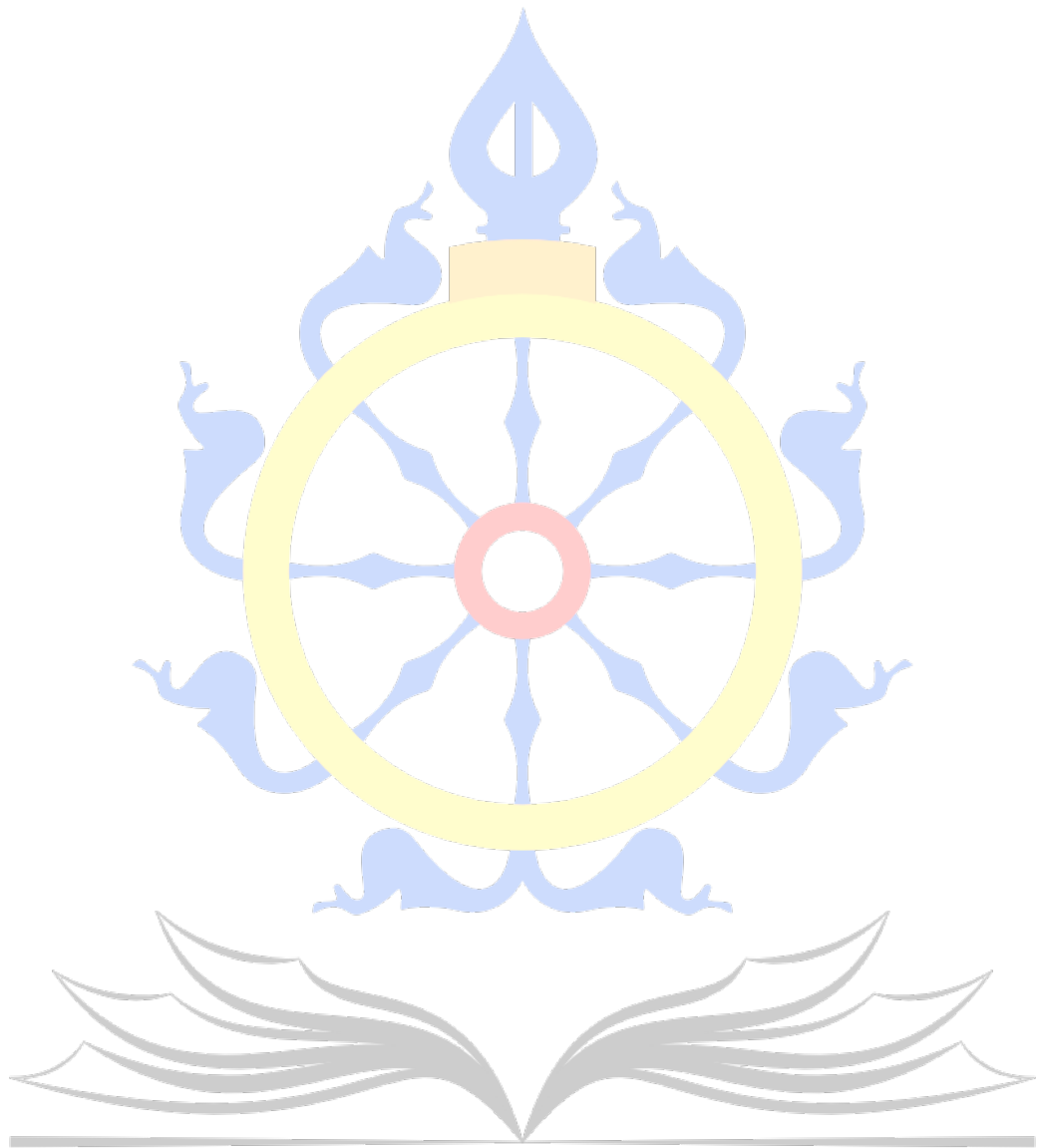
- BMIP has issued **1,608 policies** covering cargo war risks and hull war risks.
- War-risk premium rates have declined by around **35–40%** from peak levels seen during the West Asia conflict.
- The mechanism has helped ensure uninterrupted war-risk insurance capacity for Indian maritime stakeholders.
- It supports domestic underwriting capacity and specialised claims-management expertise in India.

Additional Info

- **Department of Financial Services**
 - Works under the **Ministry of Finance**.
 - Responsible for policy issues related to banking, insurance,

financial institutions and pension reforms.

- **New India Assurance Company Limited**
 - A public sector general insurance company.
 - Designed and issued the first sovereign-backed P&I product under BMIP.
- **Shipping Corporation of India Limited**
 - India's major public sector shipping company.
 - Received the first P&I insurance policy under BMIP.
- **Maritime insurance categories**
 - **Hull and Machinery Insurance:** Covers physical damage to vessel structure and machinery.
 - **Cargo Insurance:** Covers loss or damage to goods transported by sea.
 - **War Risk Insurance:** Covers risks arising from war, conflict, piracy or hostile acts.
 - **P&I Insurance:** Covers third-party liabilities of shipowners and operators.



Science & Technology

GAGAN: India's Indigenous Satellite-Based Augmentation System

What's the News?

The **Directorate General of Civil Aviation (DGCA)** successfully conducted **India's first satellite-based landing system (SLS) approach on a commercial jet aircraft** using the indigenous **GAGAN (GPS Aided GEO Augmented Navigation)** system. An **IndiGo Airbus A320** executed the approach at **Udaipur Airport**, marking a major milestone in India's aviation navigation capabilities and expanding the operational use of GAGAN for commercial aviation.

GAGAN

What is GAGAN?

- **GAGAN (GPS Aided GEO Augmented Navigation)** is India's indigenous **Satellite-Based Augmentation System (SBAS)**.
- It has been jointly developed by:
 - **Indian Space Research Organisation (ISRO)**
 - **Airports Authority of India (AAI)**
- It augments GPS signals by providing:
 - Position correction
 - Integrity information (alerts users when GPS signals are unreliable)
 - Improved navigation accuracy for aircraft.

Need for GAGAN

- Standard GPS signals are affected by:
 - Ionospheric disturbances
 - Atmospheric errors
 - Satellite clock and orbital errors
- GAGAN provides real-time corrections, enabling highly accurate aircraft navigation and precision approaches.

How GAGAN Works

Components

Ground Segment

- 15 Indian Reference Stations (INRES)
- Indian Master Control Centres (INMCC)
- Indian Land Uplink Stations (INLUS)

Space Segment

- GAGAN payloads onboard:
 - GSAT-8
 - GSAT-10
 - GSAT-15 (backup)

Working

1. Reference stations receive GPS signals.
2. Errors are calculated at the Master Control Centres.

3. Correction messages are transmitted to geostationary satellites.
4. Satellites broadcast corrected navigation signals to aircraft.

Features

- Operational since **2015**.
- Provides positioning accuracy of around **1-3 metres**.
- Certified according to **International Civil Aviation Organization (ICAO)** standards.
- **First Satellite-Based Augmentation System certified for the equatorial region**.
- India is among the few countries operating an indigenous SBAS.

Aviation Applications

- Satellite-based precision landing approaches.
- Improved navigation in poor visibility.
- Reduced dependence on expensive ground-based Instrument Landing Systems (ILS).
- Enhanced flight safety and operational efficiency.
- Supports **LPV (Localizer Performance with Vertical Guidance)** procedures.
- As of **May 2026, 23 LPV procedures** had been published, with plans to expand beyond **40**.

Applications Beyond Aviation

- Marine navigation
- Railways
- Road transport
- Disaster management
- Defence
- Telecommunications
- Geospatial mapping
- Search and Rescue operations

GAGAN vs NavIC

Feature	GAGAN	NavIC
Full Form	GPS Aided GEO Augmented Navigation	Navigation with Indian Constellation
Type	Satellite-Based Augmentation System (SBAS)	Regional Navigation Satellite System (RNSS)
Purpose	Improves GPS accuracy	Provides independent positioning and navigation
Developed by	ISRO & AAI	ISRO

Primary Users	Aviation	Civilian and strategic users
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Additional Info

Satellite-Based Augmentation System (SBAS)

- SBAS improves **Global Navigation Satellite Systems (GNSS)** by transmitting correction and integrity information.
- Major SBAS systems worldwide:
 - **GAGAN** – India
 - **WAAS** – United States
 - **EGNOS** – European Union
 - **MSAS** – Japan

Organisations

- **ISRO**
 - Ministry of Space.
 - Responsible for development of India's space technology and satellite systems.
- **Airports Authority of India (AAI)**
 - Statutory body under the Ministry of Civil Aviation.
 - Manages civil aviation infrastructure and air navigation services.
- **DGCA**
 - India's aviation safety regulator.
 - Functions under the Ministry of Civil Aviation.

ISRO Clears CE20 Cryogenic Engine for LVM3-M7 Mission

What's the News?

- ISRO successfully conducted the **flight-acceptance hot test** of the indigenous **CE20 cryogenic engine** designated for the **LVM3-M7 mission**.
- The test was performed at the **Main Engine and Stage Test Facility** of the ISRO Propulsion Complex, Mahendragiri.
- Both the engine and the newly developed **Nozzle Protection System (NPS)** performed satisfactorily.
- The engine will now be refurbished and integrated with the **C32 cryogenic flight stage** of the LVM3-M7 launch vehicle.
- ISRO has not announced the mission's launch schedule.

Flight-Acceptance Test

During the test, the CE20 engine operated at:

- **19.5-tonne thrust:** 45 seconds
- **22-tonne thrust:** 25 seconds
- **Total test duration:** 70 seconds

A flight-acceptance test verifies that an individual engine manufactured for a

specific mission conforms to prescribed performance and safety parameters. It differs from a qualification test, which validates the overall engine design.

Nozzle Protection System

- The NPS enables the CE20 engine's **full area-ratio 100 nozzle** to be tested under sea-level conditions.
- Cryogenic upper-stage engines normally operate in the near-vacuum environment of space, making full-nozzle testing at sea level technically difficult.
- Earlier, such testing required complex **High-Altitude Test facilities**.
- The NPS:
 - Simplifies testing arrangements
 - Reduces resource requirements
 - Permits longer test durations
- It had previously undergone multiple validation tests but was used in a flight-acceptance test for the first time.

CE20 Cryogenic Engine

- **Developer:** Liquid Propulsion Systems Centre, ISRO
- **Propellants:** Liquid hydrogen and liquid oxygen
- **Thrust range:** 19–22 tonnes
- **Function:** Powers the cryogenic upper stage of LVM3
- **Flight record:** Successfully operated in eight consecutive LVM3 missions, including:
 - Chandrayaan-2
 - Chandrayaan-3
 - Three commercial missions
- The engine has completed the human-rating qualification requirements for its use in the **Gaganyaan programme**.

LVM3 Launch Vehicle

- **Full form:** Launch Vehicle Mark-3
- **Former name:** GSLV Mk III
- **Status:** India's heaviest operational launch vehicle
- **Major stages:**
 - Two S200 solid strap-on boosters
 - L110 liquid core stage
 - CE20-powered cryogenic upper stage
- **Payload capability:**
 - Approximately **4,000 kg** to Geosynchronous Transfer Orbit
 - Approximately **8,000 kg** to Low Earth Orbit
- The upgraded **C32 stage** uses increased propellant loading and the higher 22-tonne thrust capability of the CE20 to improve LVM3's payload performance.

Additional Info

- **Cryogenic propulsion**

- Uses fuels maintained at extremely low temperatures.
- Liquid oxygen liquefies at approximately **-183°C**, while liquid hydrogen liquefies at approximately **-253°C**.
- The propellant combination provides high specific impulse and is suitable for carrying heavy payloads into higher orbits.
- **ISRO Propulsion Complex**
 - Located at Mahendragiri in Tamil Nadu.
 - Conducts assembly, integration and testing of liquid and cryogenic propulsion systems.
- **Gaganyaan connection**
 - A human-rated version of LVM3 will launch India's crewed missions.
 - Four CE20 engines underwent **39 hot-firing tests** for a cumulative **8,810 seconds** to satisfy human-rating requirements.

GSI Identifies Thorium-Bearing Monazite Deposits in Karnataka

What's the News?

- The **Geological Survey of India (GSI)** has identified thorium-bearing mineral deposits in **Gundlupet taluk of Chamarajanagar district, Karnataka**.
- The mineralised zone extends across nearly **700 acres** around **Koothanur, Managalli, Vijayapura** and adjoining areas.
- About **20 acres** have been identified as a core area for further exploration and preparation of the mineral block.
- The survey detected **monazite**, a rare-earth phosphate mineral that commonly contains thorium and uranium.
- The exact quantity and grade of the mineral resource will be determined through detailed exploration. Therefore, the finding should not yet be treated as a fully established mineable reserve.

Thorium?

- **Symbol:** Th
- **Atomic number:** 90
- **Category:** Radioactive actinide metal
- Thorium-232 is **fertile but not fissile**. It cannot sustain a nuclear chain reaction directly.
- Inside a reactor, Thorium-232 can absorb a neutron and eventually transform into **Uranium-233**, which is a fissile nuclear fuel.

- Thorium is mainly obtained from minerals such as:
 - Monazite
 - Thorite
 - Thorianite

Monazite?

- Monazite is a reddish-brown **phosphate mineral** containing:
 - Rare-earth elements
 - Thorium
 - Small quantities of uranium
- In India, major monazite concentrations occur in coastal placer sands along:
 - Kerala
 - Tamil Nadu
 - Odisha
 - Andhra Pradesh
- The Gundlupet finding is significant because it involves an inland mineralised zone rather than the better-known coastal deposits.

India's Three-Stage Nuclear Programme

- **Stage I – Pressurised Heavy Water Reactors**
 - Use natural uranium as fuel.
 - Produce electricity and plutonium-239 in spent fuel.
- **Stage II – Fast Breeder Reactors**
 - Use plutonium-based fuel.
 - Convert uranium-238 into additional plutonium.
 - Can also breed Uranium-233 from Thorium-232.
- **Stage III – Thorium-Based Reactors**
 - Envisages large-scale utilisation of the **Thorium-Uranium-233 fuel cycle**.
 - Seeks to utilise India's substantial thorium resources and reduce dependence on imported uranium.

Why Is the Discovery Important?

- It may expand India's inventory of domestic atomic-mineral resources.
- It supports long-term research into thorium-based nuclear power.
- Monazite can also contain strategically important rare-earth elements.
- Domestic resources can improve:
 - Nuclear-fuel security
 - Strategic-mineral availability
 - Advanced-material research
 - Long-term low-carbon electricity generation

However, commercial use requires detailed resource assessment, environmental clearance, radiological safeguards and specialised processing technology.

Additional Info

- **Geological Survey of India**
 - Established in **1851**.
 - Functions as an attached office of the **Ministry of Mines**.
 - Undertakes geological mapping, mineral exploration, geohazard studies and geoscientific research.
- **Atomic Minerals Directorate for Exploration and Research**
 - Functions under the **Department of Atomic Energy**.
 - Specialises in the exploration and assessment of uranium, thorium and other atomic minerals.
- **Regulatory framework**
 - Thorium-bearing monazite is regulated as an atomic mineral.
 - Its exploration, extraction and processing are governed by central laws and rules, including:
 - **Atomic Energy Act, 1962**
 - **Atomic Minerals Concession Rules, 2016**
- **Previous exploration**
 - Thorium-bearing minerals had earlier been identified around the **Chikkamathayi Hills** in Gundlupet taluk.

MeitY Releases Digital Threat Report 2025-26 for India's BFSI Sector

What's the News?

The Ministry of Electronics and Information Technology (MeitY), in collaboration with the **Indian Computer Emergency Response Team (CERT-In)**, **CSIRT-Fin** and **SISA**, released the second edition of the **Digital Threat Report 2025-26**. The report assesses emerging cyber risks affecting the **Banking, Financial Services and Insurance (BFSI)** and digital payments ecosystem. It identifies **AI-enabled attacks, identity compromise, supply-chain vulnerabilities and cloud exploitation** as major threats and proposes an **18-month cybersecurity roadmap** for financial institutions.

Digital Threat Report 2025-26

- It is an executive cybersecurity assessment intended for:
 - Banks and financial institutions
 - Insurance companies
 - Payment service providers
 - Regulators

- Cybersecurity and technology leaders
- Its findings are based on:
 - Digital Forensics and Incident Response research
 - CERT-In and CSIRT-Fin observations
 - Cyber-threat intelligence
 - Vulnerability and exploitation trends
 - Research on adversarial artificial intelligence
- **Six of the seven** threat predictions made in the previous edition have already become operational realities.
- The period between the emergence and exploitation of a cyber threat has contracted from **years to months or even weeks**.

AI Asymmetry

AI asymmetry refers to a situation in which attackers can use artificial intelligence to develop and execute sophisticated attacks faster and more cheaply than institutions can build corresponding defences.

Activities that earlier required specialist teams, substantial resources and weeks of preparation can now be undertaken at machine speed by relatively low-resource attackers.

Major AI-related risks include:

- Deepfake impersonation
- Synthetic content and AI-assisted fraud
- AI-generated phishing
- Abuse of large language models
- Automated discovery and exploitation of vulnerabilities

Three Major Threat Shifts

1. AI and Human Deception

- Deepfakes, impersonation and synthetic communication increasingly target human trust.

1. Software and Systems

- Malicious software libraries, compromised supply chains, insecure APIs and embedded devices expose technology infrastructure.

1. Infrastructure and Economy

- Cloud systems, cryptocurrency, payment rails and digital financial infrastructure are becoming part of attackers' operational models.

Anatomy of Cyber Failure

The report introduces a **four-layer Gap Archetype Framework**, showing that major breaches generally result from several weaknesses operating together rather than a single control failure.

- **Design Gaps:** Systems are designed for normal functionality but not for adversarial conditions.
- **Enforcement Gaps:** Security controls exist but fail during real-world attacks.
- **Signal Gaps:** Relevant warning signals are not generated, integrated or correctly interpreted.
- **Response Gaps:** Warning signals are available, but containment or remedial action fails.

The framework helps institutions identify systemic vulnerabilities and direct cybersecurity investment towards the areas of greatest potential impact.

18-Month Cybersecurity Roadmap

- **0–6 months – Stabilise**
 - Strengthen identity controls
 - Conduct adversarial security testing
 - Improve secrets and credential management
 - Develop rapid containment capabilities
- **6–12 months – Operationalise**
 - Introduce continuous session assurance
 - Strengthen transaction monitoring
 - Improve cloud Identity and Access Management visibility
 - Continuously monitor the effectiveness of security controls
- **12–18 months – Adapt**
 - Establish identity-centric access systems
 - Secure AI supply chains
 - Improve third-party risk visibility
 - Introduce runtime attestation
 - Begin post-quantum cryptography planning
 - Shift from periodic compliance to continuous assurance

Additional Information

- **CERT-In**
 - India's national nodal agency for responding to cybersecurity incidents.
 - Functions under **Section 70B of the Information Technology Act, 2000**.
 - Its responsibilities include cyber-incident analysis, alerts, emergency response coordination and issuance of security advisories.
- **CSIRT-Fin**

- Sectoral Computer Security Incident Response Team for the financial sector.
- Covers banking, securities-market infrastructure, insurance and pension entities.
- Coordinates prevention, reporting and response to financial-sector cyber incidents.

- **Related policy:** The **National Cyber Security Policy, 2013** provides the umbrella framework for protecting India's information systems and building a secure and resilient cyberspace.

Cabinet Approves Semicon 2.0 and Mobile Phone Manufacturing Scheme

What's the News?

The Union Cabinet has approved **Semicon 2.0** with an outlay of **₹1,27,500 crore** to strengthen India's semiconductor design and manufacturing ecosystem. It also approved the **Mobile Phone Manufacturing Scheme** with an outlay of **₹62,500 crore** to scale up domestic mobile production, deepen value addition, and strengthen electronics supply chains.

Semicon 2.0?

- It is the second phase of India's semiconductor push, building on **India Semiconductor Mission 1.0**.
- **Objective:** develop a full semiconductor ecosystem covering design, materials, fabrication, packaging, R&D, and skilled manpower.
- **Total outlay: ₹1,27,500 crore.**
- It aims to reduce import dependence and position India as a semiconductor design, manufacturing, and innovation hub.

Six Pillars of Semicon 2.0

- **Chip Design**
 - Focus on semiconductor IP, chip designs, and systems.
 - **105 startups/MSMEs** have already started developing chips with access to EDA tools.
- **Machines and Materials**
 - Incentives for companies making semiconductor equipment, chemicals, gases, and materials.
- **More Fabs**
 - Push for silicon fabs, compound semiconductor fabs, discrete component fabs, and display fabs.
 - India's first fab is scheduled for commissioning in **2028**.
- **ATMP/OSAT**

- Strengthening assembly, testing, marking, packaging, and outsourced semiconductor assembly and test facilities.
- **R&D**
 - Focus on moving beyond **28nm–110nm** technology nodes towards more advanced nodes.
- **Talent Development**
 - **315 universities** are training students in chip design.
 - Around **68,000 students** have already been trained.

Mobile Phone Manufacturing Scheme

- Outlay: **₹62,500 crore**.
- Tenure: **FY 2026–27 to FY 2030–31**.
- Incentives:
 - **2.25% to 5%** on eligible sales of mobile phones manufactured in India.
 - Up to **1.5% additional incentive** for domestic sourcing of key components/sub-assemblies.
 - **3% additional incentive** for design and R&D by Indian brands.
- Expected outcomes:
 - Around **₹39 lakh crore** cumulative mobile phone production.
 - Significant increase in exports.
 - Around **60,000 direct jobs**.

Progress Under Semicon 1.0

- **12 manufacturing units** approved with cumulative investment of over **₹1.64 lakh crore**.
- Includes:
 - One silicon fab.
 - One silicon carbide fab.
 - One integrated gallium nitride Micro LED display fab.
 - Nine packaging units.
- **Micron, Kaynes, and CG Semi** have started commercial production.
- **24 semiconductor design projects** from startups and MSMEs have received financial support.

Additional Info

- **India Semiconductor Mission**
 - Launched as a dedicated institutional framework for semiconductor and display manufacturing.
 - Implemented under the Ministry of Electronics and Information Technology.
- **Key terms**
 - **Fab:** Facility where semiconductor chips are fabricated on wafers.
 - **ATMP:** Assembly, Testing, Marking and Packaging.

- **OSAT:** Outsourced Semiconductor Assembly and Test.
- **EDA tools:** Electronic Design Automation tools used for chip design.

India Launches Its First Hydrogen-Powered Train

What's the News?

Prime Minister Narendra Modi flagged off India's first hydrogen-powered passenger train from Jind, Haryana. The indigenously developed train will operate on the **Jind–Sonipat section of Northern Railway**.

The launch places India among a small group of countries operating hydrogen-powered trains and demonstrates the technology's potential for clean rail transport, particularly on non-electrified or low-density routes. Commercial operations are to commence separately after an announcement by Northern Railway.

Hydrogen Train: Key Features

- **Route:** Jind–Sonipat, Haryana
- **Distance:** 89 km
- **Travel time:** Around two hours
- **Configuration:** 10 coaches
 - Eight passenger coaches
 - Two driving power cars
- **Passenger capacity:** Up to 2,600
- **Propulsion:** 3,200 horsepower, equivalent to approximately 2,400 kW
- **Operational speed:** 75 kmph
- **Design speed:** 110 kmph
- **Service plan:** Two round trips covering about 356 km daily
- **Hydrogen consumption:** Around 300 kg per day
- **Stops:** 14 intermediate halts, or 16 stations including Jind and Sonipat terminals.

How Does a Hydrogen Train Work?

The train uses **hydrogen fuel cells** instead of diesel combustion or continuous electricity from overhead wires.

- Hydrogen stored onboard reacts electrochemically with oxygen from the atmosphere.
- The fuel cell produces electricity that powers the traction motors.
- Batteries store surplus electricity and provide additional power during acceleration.
- The direct by-products are **water vapour and heat**, with no tailpipe carbon-dioxide emissions.

The train does not require continuous overhead electrification because electricity is generated onboard.

However, its overall lifecycle emissions depend on how the hydrogen is produced; renewable-energy-based green hydrogen provides the maximum climate benefit.

Storage and Safety System

The train carries **440 kg of hydrogen at 350-bar pressure**, divided equally between its two driving power cars.

- **Refuelling time:** Around four hours
- **Jind storage facility:** Capacity of approximately 3,000 kg
- **Onboard safety equipment:**
 - 15 hydrogen-leak detectors
 - Seven heat detectors
 - Three flame detectors
 - Automatic shutdown during a detected leak
 - Ventilation fans and CCTV surveillance

Hydrogen is highly flammable; therefore, storage, ventilation, leak detection and emergency isolation systems are central to safe operation.

Indigenous Development

The train was designed, engineered and integrated in India using indigenous technology.

- Developed by the **Integral Coach Factory, Chennai**.
- Created by replacing the diesel propulsion system of a Diesel Electric Multiple Unit with a hydrogen-electric propulsion system.
- Supports the objectives of **Make in India** and **Atmanirbhar Bharat**.
- Each driving power car has a **1,200-kW fuel-cell propulsion system**.

Hydrogen for Heritage

The project is associated with Indian Railways' **Hydrogen for Heritage** initiative.

- It seeks to introduce hydrogen-fuel-cell trains, particularly on heritage and environmentally sensitive routes.
- Indian Railways has provided for **35 hydrogen train-set rakes comprising 210 coaches**.
- The estimated provision is **₹80 crore per rake**, amounting to approximately **₹2,800 crore** for the trainsets.
- Hydrogen trains can replace diesel traction on routes where full electrification is technically difficult or economically inefficient.

Additional Info

- **National Green Hydrogen Mission**
 - Nodal ministry: Ministry of New and Renewable Energy.
 - Approved with an outlay of **₹19,744 crore**.

- **Target:** At least **5 million metric tonnes of green-hydrogen production annually by 2030**.
- Associated renewable-energy capacity: Approximately **125 GW**.
- Expected outcomes:
 - More than ₹8 lakh crore in investment.
 - Over six lakh jobs.
 - Nearly 50 million metric tonnes of annual greenhouse-gas abatement.

Green Hydrogen

- Produced through water electrolysis using renewable electricity.
- It is an **energy carrier**, not a primary source of energy.
- Its environmental advantage depends on renewable electricity, water availability, efficient storage and transport infrastructure.

Vikram-1 Becomes India's First Privately Developed Orbital Rocket

What's the News?

Skyroot Aerospace successfully launched **Vikram-1**, India's first privately developed orbital-class rocket, from the **Satish Dhawan Space Centre, Sriharikota**. Under **Mission Aagaman**, the launch vehicle placed multiple domestic and international technology-demonstration payloads into a nearly **450-km Low Earth Orbit**. The achievement made India the **third country, after the United States and China, to demonstrate private-sector orbital launch capability**.

Vikram-1?

Vikram-1 is a small-satellite launch vehicle developed by Hyderabad-based **Skyroot Aerospace**.

- **Configuration:** Four-stage launch vehicle
- **Propulsion:**
 - Three solid-fuel stages
 - One liquid-fuel orbital adjustment module
- **Payload capacity:** Up to **350 kg to Low Earth Orbit**
- **Target orbit:** Around **450 km altitude at 60° inclination**
- **Structure:** All-carbon composite construction
- **Technology:** 3D-printed liquid engine
- **Purpose:** Rapid, customised and on-demand deployment of small satellites

- **Name:** Honours **Dr Vikram Sarabhai**, regarded as the father of India's space programme.

Mission Aagaman

Mission Aagaman was the maiden orbital test flight of Vikram-1.

It validated critical systems such as:

- Propulsion and stage separation
- Avionics and telemetry
- Guidance, navigation and control
- In-flight structural performance
- Payload separation and orbital injection

The rocket injected its payloads into orbit within approximately **15-20 minutes of liftoff**.

Major Payloads

- **SCOPE:** Skyroot's in-house satellite.
- **SOLARAS S3:** Technology-demonstration satellite of Grahaa Space.
- **DCUBED payload:** Demonstration of space technologies.
- **Embrace:** Cosmoserve Space's robotic arm designed to capture orbital debris.
- **Symbolic payloads:**
 - *Cosmic Bloom* micro-art installation.
 - An 18-karat gold miniature rocket depicting C.V. Raman, Vikram Sarabhai and A.P.J. Abdul Kalam.
 - A handwritten "Vande Mataram" postcard from the Prime Minister.

Why Is It Significant?

- **Private orbital capability:** Indian private companies can now develop vehicles capable of placing satellites in stable Earth orbit.
- **Small-satellite market:** Vikram-1 targets the expanding demand for dedicated launches of small satellites.
- **Reduced dependence:** Domestic startups will not have to depend entirely on ISRO or foreign launch providers.
- **Responsive launches:** On-demand services can reduce waiting periods associated with rideshare missions.
- **Commercial competitiveness:** It strengthens India's position in the global commercial launch-services market.
- **Strategic capability:** Indigenous launch systems support communication, Earth observation, navigation, disaster management and national security applications.
- **Technology validation:** The mission demonstrated private-sector capability in advanced materials, propulsion, avionics and precision orbital deployment.

Vikram-1 vs Vikram-S

• Vikram-S

- Skyroot's first rocket.
- Undertook a suborbital technology-demonstration mission called **Mission Prarambh**.
- Crossed the boundary of space but was not designed to place satellites in orbit.

• Vikram-1

- An orbital-class launch vehicle.
- Accelerates payloads to sufficient horizontal velocity to remain in a stable Earth orbit.
- Can undertake commercial satellite-launch missions.

Space-Sector Reforms

The launch reflects the implementation of the **Indian Space Policy, 2023**, which permits non-government entities to undertake end-to-end activities across the space value chain.

Institutional Roles

• IN-SPACE

- Single-window agency for promoting, authorising and supervising private space activities.
- Facilitates private access to ISRO infrastructure and technical facilities.

• ISRO

- India's national space agency.
- Primarily focuses on research, advanced technologies and strategic or scientific missions.

• NewSpace India Limited

- Central Public Sector Enterprise under the Department of Space.
- Commercialises ISRO-developed technologies, products and launch services.

• Department of Space

- Formulates space policy and oversees India's institutional space ecosystem.

Additional Info

• Orbital launch

- Places a payload into a stable trajectory around Earth.
- Requires sufficient horizontal velocity to prevent the payload from falling back immediately.

• Suborbital launch

- Reaches space but does not achieve the velocity required for orbit.
- The vehicle or payload subsequently returns to Earth.

- **Low Earth Orbit**
 - Generally extends up to about **2,000 km above Earth**.
 - Commonly used for Earth-observation, communication, scientific and technology-demonstration satellites.
- **Satish Dhawan Space Centre**
 - Located at Sriharikota in Andhra Pradesh.
 - India's principal operational spaceport.

India Commissions First Geothermal Wells in Puga Valley

What's the News?

India commissioned its **first and deepest twin geothermal wells** at Puga Valley in eastern Ladakh. The two wells, executed by the **ONGC Energy Centre**, have each been drilled to a depth of **1,000 metres** at an altitude exceeding **14,000 feet**.

The wells will support reservoir assessment and the development of India's first **1 MW demonstration-scale geothermal power project**. The power plant itself is yet to become operational.

Puga Geothermal Project?

- **Location:** Puga Valley, eastern Ladakh
- **Implementing agency:** ONGC Energy Centre
- **Number of wells:** Two
- **Depth:** 1,000 metres each
- **Project altitude:** More than 14,000 feet
- **Recorded temperature:** 135°C at a depth of 400 metres
- **Proposed plant:** 1 MW pilot geothermal power project
- **Purpose of the wells:**
 - Evaluate the geothermal reservoir.
 - Measure temperature and fluid-flow characteristics.
 - Finalise power-plant design.
 - Assess the feasibility of larger commercial projects.

The second well was completed in just over a month despite high-altitude weather, intense geothermal activity and complex subsurface conditions. Further testing is underway to evaluate temperatures and reservoir performance at greater depths.

Project Partnership

The project is based on a tripartite agreement involving:

- Ladakh Administration
- Ladakh Autonomous Hill Development Council–Leh
- ONGC Energy Centre

Work had slowed after the earlier Memorandum of Understanding expired. The agreement was subsequently renewed for another **five years**, allowing drilling and project-development activities to resume.

How Does Geothermal Power Work?

Geothermal energy uses heat stored beneath the Earth's surface.

- Surface water, rain or snowmelt enters fractures in underground rocks.
- The water is heated by hot rocks and geothermal reservoirs.
- Hot water or steam is brought to the surface through a production well.
- Its heat drives a turbine directly or heats a secondary fluid with a lower boiling point.
- The cooled geothermal fluid can be reinjected underground to maintain reservoir pressure and reduce environmental impact.

Common geothermal power technologies include:

- **Dry-steam plants:** Steam directly rotates the turbine.
- **Flash-steam plants:** High-pressure hot water is converted into steam.
- **Binary-cycle plants:** Geothermal water heats a secondary working fluid, which powers the turbine.

Why Puga Valley?

Puga Valley lies within the tectonically active **Himalayan geothermal province**. Its hot springs, sulphur deposits, steam vents and high subsurface temperatures indicate significant geothermal activity.

The movement and collision of the Indian and Eurasian plates have created faults and fractures through which heated underground fluids can circulate.

Additional Info

• Geothermal Potential in India

- The Geological Survey of India has identified several geothermal provinces.
- India's tentative theoretical geothermal potential is estimated at approximately **10 GW**.
- Important geothermal locations include:

- Puga and Chumathang–Ladakh
- Manikaran–Himachal Pradesh
- Tapovan–Uttarakhand
- Tattapani–Chhattisgarh
- Cambay Basin–Gujarat
- Bakreswar–West Bengal
- Andaman and Nicobar Islands

• National Policy on Geothermal Energy

- Issued by the Ministry of New and Renewable Energy.

- Seeks to create a framework for:
 - Geothermal resource assessment and mapping.
 - Electricity generation and direct-heat applications.
 - Research, pilot projects and technology development.
 - Private-sector investment and international cooperation.

• Advantages

- Available throughout the day and year.
- Requires relatively limited surface land.
- Can provide both electricity and direct heat.
- Generally has a high capacity-utilisation factor.

• Limitations

- High initial exploration and drilling costs.
- Geographically site-specific.
- Risk of corrosive geothermal fluids and mineral scaling.
- Possible release of underground gases.
- Poorly managed extraction may induce minor seismicity or deplete local reservoir pressure.

Indian Railways Becomes World's Second-Most Electrified Major Rail Network

What's the News?

- Indian Railways has electrified **99.6% of its Broad Gauge network**, giving India the second-highest electrification share among major railway systems after Switzerland.
- Railway Minister **Ashwini Vaishnaw** informed the Lok Sabha that the remaining Broad Gauge routes have been taken up for electrification.
- The programme aims to reduce diesel dependence, improve operational efficiency, lower emissions and support greater use of renewable electricity.

Electrification Milestone

- **48,072 route kilometres (RKM)** were electrified during 2014–26.
- In comparison, **21,801 RKM** were electrified during approximately six decades before 2014.
- All new railway-line and multi-tracking projects are now sanctioned and constructed with electrification.

Global Comparison

Country	Railway-network electrification
Switzerland	100%
India	99.6%
China	82%
Spain	67%
Japan	64%
France	60%
United Kingdom	39%

The comparison is based on an **International Union of Railways**, or UIC, report. India's figure specifically relates to its Broad Gauge network.

Operational and Economic Impact

- Electric locomotives provide higher haulage capacity and can support higher speeds, improving freight and passenger operations.
- Reduced dependence on diesel lowers exposure to imported petroleum and saves foreign exchange.
- Diesel consumption for railway traction declined from **293 crore litres in 2015–16** to **108 crore litres in 2024–25**.
- This represents a reduction of **185 crore litres**, or approximately **63%**.

Environmental Impact

For transporting one tonne of freight over one kilometre:

- **Road transport:** 101 grams of CO₂.
- **Rail transport:** 11.5 grams of CO₂.
- Rail therefore emits approximately **89% less CO₂** than road-based freight transport.

Shifting freight from roads to electrified railways can consequently reduce transport-sector emissions, congestion and fossil-fuel consumption.

Renewable-Energy Integration

Indian Railways is progressively integrating renewable power into its electric-traction system.

- Solar capacity commissioned: approximately **1,161 MW**.
- Wind-power capacity commissioned: approximately **103 MW**.
- Combined commissioned solar and wind capacity: approximately **1,264 MW**.

Electrification permits traction energy to be sourced from solar, wind and hybrid systems. However, complete decarbonisation also depends on the share of clean energy in the electricity supplied to the railway network.

Remaining Work

- **15 of the 19 railway zones** have achieved complete electrification.

- Electrification levels in the remaining zones include:
 - North Western Railway: **99.8%**
 - Northeast Frontier Railway: **98.7%**
 - Southern Railway: **98.7%**
 - South Western Railway: **96.1%**
- A Project Monitoring Group portal, assured funding and enhanced financial powers for field units are being used to resolve implementation bottlenecks.

Additional Info

- **Broad Gauge**
 - India's principal railway gauge.
 - The distance between the two rails is **1,676 millimetres**.
- **Route Kilometre**
 - Measures the length of a railway route, irrespective of whether it has single, double or multiple tracks.
 - It differs from track kilometres, which count each parallel track separately.
- **International Union of Railways**
 - Commonly known by its French abbreviation, **UIC**.
 - A global railway-sector organisation headquartered in Paris.
 - Facilitates technical cooperation, standards and exchange of railway data.
- **Mission 100% Electrification**
 - Seeks to electrify the complete Broad Gauge railway network.
 - Supports Indian Railways' objective of becoming a **net-zero carbon emitter by 2030**.
 - Electrification alone does not ensure zero emissions; the electricity must increasingly come from non-fossil sources.

Made-in-Bharat Chips to Power Indian Space Rockets

What's the News?

- Union Minister for Electronics and Information Technology **Ashwini Vaishnaw** announced that domestically manufactured semiconductor chips will soon be used in Indian space launch vehicles.
- The announcement followed his interaction with **Skyroot Aerospace**, whose **Vikram-1** became India's first privately developed orbital-class rocket to successfully reach orbit.
- Vikram-1 placed its payloads in a nearly **450-km Low Earth Orbit (LEO)**.

It can carry payloads of up to **350 kg to LEO**.

- Skyroot stated that it intends to integrate India-built chips into its rockets. However, the specific processor, rocket mission and implementation timeline have not yet been disclosed.

Why Are Space-Grade Chips Important?

Semiconductors form the core of a launch vehicle's electronic systems, including:

- Navigation, guidance and flight control
- Onboard computers
- Telemetry and communication
- Propulsion monitoring
- Data acquisition and mission management

Space-grade chips must operate reliably under extreme vibration, radiation, vacuum and temperature variations. Domestic production can reduce dependence on imported strategic components and improve supply-chain security.

Indigenous Space Processors

VIKRAM3201

- India's first fully indigenous **32-bit microprocessor qualified for launch-vehicle applications**.
- Designed and developed by ISRO's **Vikram Sarabhai Space Centre**, in collaboration with the **Semi-Conductor Laboratory, Chandigarh**.
- Fabricated using SCL's **180-nanometre CMOS process**.
- Supports floating-point computation and the **Ada programming language**, commonly used in high-reliability systems.
- Successfully validated aboard the **PSLV Orbital Experimental Module-4 (POEM-4)** carried by the PSLV-C60 mission.
- It is the advanced version of the 16-bit **VIKRAM1601**, which has been used in ISRO launch vehicles since 2009.

KALPANA3201

- A **32-bit SPARC V8 RISC microprocessor**.
- Based on the IEEE 1754 Instruction Set Architecture.
- Compatible with open-source software toolsets and tested using flight software.

IRIS Space Controller

- **IRIS** stands for *Indigenous RISC-V Controller for Space Applications*.
- Jointly developed by **ISRO and IIT Madras** using the indigenous **SHAKTI processor** platform.
- It is a **64-bit RISC-V-based controller** intended for command-and-control

systems, sensors and other critical space applications.

- Its design, fabrication, packaging, circuit-board production, assembly and software development were completed within India.
- The chip was fabricated at SCL, packaged by Tata Advanced Systems and successfully booted at IIT Madras.

Additional Information

• Skyroot Aerospace

- Hyderabad-based private space company founded by former ISRO scientists **Pawan Kumar Chandana and Naga Bharath Daka**.
- Vikram-1 is approximately **22 metres tall** and uses an all-carbon-composite structure.
- Its Orbital Adjustment Module is powered by a **fully 3D-printed liquid engine**.

• IN-SPACE

- Full form: **Indian National Space Promotion and Authorisation Centre**.
- An autonomous organisation under the Department of Space.
- Acts as the single-window agency for authorising and promoting private-sector space activities.

• Indian Space Policy, 2023

- Allows non-government entities to undertake end-to-end space activities.
- Permits private companies to manufacture and operate launch vehicles, satellites, ground stations and launch infrastructure.
- Separates the roles of:
 - **ISRO:** Research and development.
 - **IN-SPACE:** Promotion and authorisation.
 - **NewSpace India Limited:** Commercialisation of space technologies and services.

• India Semiconductor Mission

- Operates under the Ministry of Electronics and Information Technology.
- Supports semiconductor fabrication, chip design, packaging, research, skills and modernisation of SCL.
- The original semiconductor and display manufacturing programme was approved with an outlay of **₹76,000 crore**.

Hayabusa2 Performs Flyby of Asteroid Torifune

What's the News?

Japan's asteroid explorer **Hayabusa2** successfully performed a close flyby of **asteroid Torifune**, capturing images of the near-Earth asteroid during its extended mission. The flyby helps scientists study asteroid shape, surface features and movement, while also testing technologies useful for **planetary defence**.

Asteroid Torifune

- **Official designation: (98943) Torifune**
- **Earlier designation: 2001 CC21**
- **Type:** Near-Earth asteroid
- **Estimated size:** Roughly **450 metres** wide, based on current reports.
- **Shape:**
 - Images show a **peanut-like or two-lobed structure**.
 - Such bodies are often called **contact binaries**, formed when two smaller bodies are joined together.
- **Distance during observation:**
 - Around **100 million km** from Earth.

Hayabusa2 Extended Mission

- **Agency:** Japan Aerospace Exploration Agency.
- **Original mission:**
 - Studied asteroid **Ryugu**.
 - Collected samples.
 - Returned samples to Earth in **2020**.
- **Extended mission name: Hayabusa2#**
 - Pronounced **Hayabusa2 Sharp**.
 - SHARP stands for **Small Hazardous Asteroid Reconnaissance Probe**.
- **Current objective:**
 - Study small near-Earth asteroids.
 - Demonstrate long-duration spacecraft operations.
 - Improve asteroid reconnaissance capability.
- **Next major target:**
 - Asteroid **1998 KY26**, expected to be reached in **2031**.

Planetary Defence Relevance

- Near-Earth asteroids are important for planetary defence because their orbits may bring them close to Earth.
- The Torifune flyby helps test:
 - High-speed asteroid approach techniques.
 - Optical navigation.
 - Rapid imaging during close flybys.
 - Reconnaissance methods for potentially hazardous asteroids.

- Such missions support future efforts to assess asteroid size, shape, spin, structure and impact risk.

Additional Info

- **JAXA**
 - Full form: **Japan Aerospace Exploration Agency**.
 - Role: Japan's national space agency.
 - Areas of work:
 - Space science.
 - Planetary exploration.
 - Earth observation.
 - Launch vehicles and space technology.
- **Asteroid Sample Return**
 - Hayabusa2 returned material from **Ryugu**, a carbon-rich asteroid.
 - Such samples help study:
 - Early Solar System formation.
 - Organic molecules.
 - Water-bearing minerals.
 - Origin of planetary material.
- **Related missions**
 - **Hayabusa**: Japan's first asteroid sample-return mission; returned samples from asteroid Itokawa.
 - **OSIRIS-REx**: NASA mission that returned samples from asteroid Bennu.
 - **DART**: NASA planetary defence mission that tested asteroid deflection.

AI Reveals Complex Structure in Sperm Whale Communication

What's the News?

- Scientists have used **artificial intelligence and computational analysis** to identify complex structural patterns in sperm whale communication.
- Sperm whales communicate socially through short sequences of clicks called **codas**.
- Researchers identified combinations of rhythm, tempo and click variations that constitute a possible **"sperm whale phonetic alphabet."**
- A separate study found distinct regional dialects among sperm whales in the eastern and western Mediterranean Sea.
- The findings improve understanding of animal culture and may support acoustic monitoring and marine-conservation programmes.

Sperm Whale Phonetic Alphabet?

Researchers analysed **8,719 codas** recorded from the Eastern Caribbean sperm whale clan near Dominica. The dataset included calls from at least **60 individual whales** belonging to a clan of approximately 400 individuals.

Four principal components were identified:

- **Rhythm**: Pattern of intervals between clicks
- **Tempo**: Overall speed of a coda
- **Rubato**: Gradual variation in timing during consecutive codas
- **Ornamentation**: Addition of an extra click to a recognised pattern

The study identified:

- **18 rhythm categories**
- **5 tempo categories**
- At least **143 frequently occurring combinations**

These features can be combined to produce a much larger communication repertoire than previously recognised.

Mediterranean Dialects

- Researchers analysed **5,291 codas** recorded over **112 observation days** in the eastern and western Mediterranean.
- Recordings were collected near:
 - **Balearic Islands, Spain**: Western Mediterranean
 - **Hellenic Trench, Greece**: Eastern Mediterranean
- Western whales mainly used a slower **3+1 coda**:
 - Three regularly spaced clicks
 - A longer pause
 - One final click
- Eastern whales commonly produced a faster variation of the same general pattern.
- Eastern whales occasionally used the western pattern, suggesting limited vocal flexibility or **code-switching**.
- The differences indicate that partial geographic and social isolation can generate culturally transmitted dialects.

Has Whale Language Been Decoded?

- Scientists have identified the **structure** of the communication system but have not established the precise meaning of individual codas.
- The term "phonetic alphabet" is an analogy describing how basic acoustic features combine; it does not prove that sperm whales possess language equivalent to human speech.
- Further research must connect particular codas with behaviour such as:

- Foraging
- Parenting
- Group coordination
- Distress
- Social identification
- Controlled playback experiments would be required to determine whether particular patterns convey specific meanings.

Conservation Relevance

Understanding sperm whale vocalisations can assist in:

- Identifying whale populations and vocal clans
- Tracking migration and habitat use through hydrophones
- Detecting behavioural responses to underwater noise
- Designing safer shipping routes to reduce vessel collisions
- Protecting culturally distinct whale groups
- Monitoring the impact of fishing activity and climate-driven ecosystem changes

Additional Info

- **Sperm whale**
 - Scientific name: *Physeter macrocephalus*
 - Largest toothed whale
 - Uses echolocation clicks to locate prey during deep dives
 - Social groups are generally matrilineal, consisting mainly of females and young whales
 - IUCN conservation status: **Vulnerable**
- **Project CETI**
 - Full form: **Cetacean Translation Initiative**
 - International non-profit research initiative
 - Uses artificial intelligence, robotics, linguistics and marine biology to study sperm whale communication
 - Principal field-research base: **Dominica in the Eastern Caribbean**
- **Vocal clan**
 - A collection of sperm whale social units sharing a distinctive repertoire of codas.
 - Vocal patterns are socially learned and transmitted across generations.

UN Releases First Scientific Assessment Report on Artificial Intelligence

What's the News?

The **United Nations** has released its first scientific assessment on **Artificial Intelligence**, titled "**Preliminary Report of the Independent International Scientific Panel on AI.**" The report was prepared by a **40-member independent panel** co-chaired by **Yoshua Bengio**, Turing Award winner, and **Maria Ressa**, Nobel Peace Prize winner. It warns that AI capabilities are advancing faster than existing governance, safety and oversight systems.

UN Scientific Panel on AI

- The panel provides **independent, evidence-based scientific assessments** on AI.
- It does **not prescribe policy**, but supplies scientific evidence for governments and international forums.
- Its work feeds into the **Global Dialogue on AI Governance**.
- The preliminary report is the first in a series of periodic assessments.
- A more comprehensive assessment is expected for the next phase of global AI governance discussions.

Findings

- AI has major potential in:
 - Healthcare
 - Education
 - Agriculture
 - Science
 - Accessibility
 - Public services
- Major concerns flagged:
 - Weak safety guardrails
 - Fragmented governance mechanisms
 - Lack of independent risk assessment
 - Misinformation and cyber misuse
 - Bias and exclusion of linguistic and cultural diversity
 - Environmental impact of AI infrastructure
 - Risks from autonomous or "agentic" AI systems
- The report says policymakers face an **evidence dilemma**:
 - Waiting for complete evidence may delay regulation until harms have already occurred.
 - Acting too early without enough evidence may lead to weak or poorly targeted rules.

Compute Divide

- **Compute** means the hardware and infrastructure needed to train and run advanced AI models.
- It includes:
 - Advanced semiconductors
 - Data centres
 - Cloud infrastructure
 - High-performance computing systems
- The report notes a sharp concentration of global AI computing capacity:
 - United States: about **75%**
 - China: about **15%**
 - Rest of the world: about **10%**
- This creates a **compute divide**, where countries without sufficient infrastructure risk becoming AI consumers rather than AI creators.

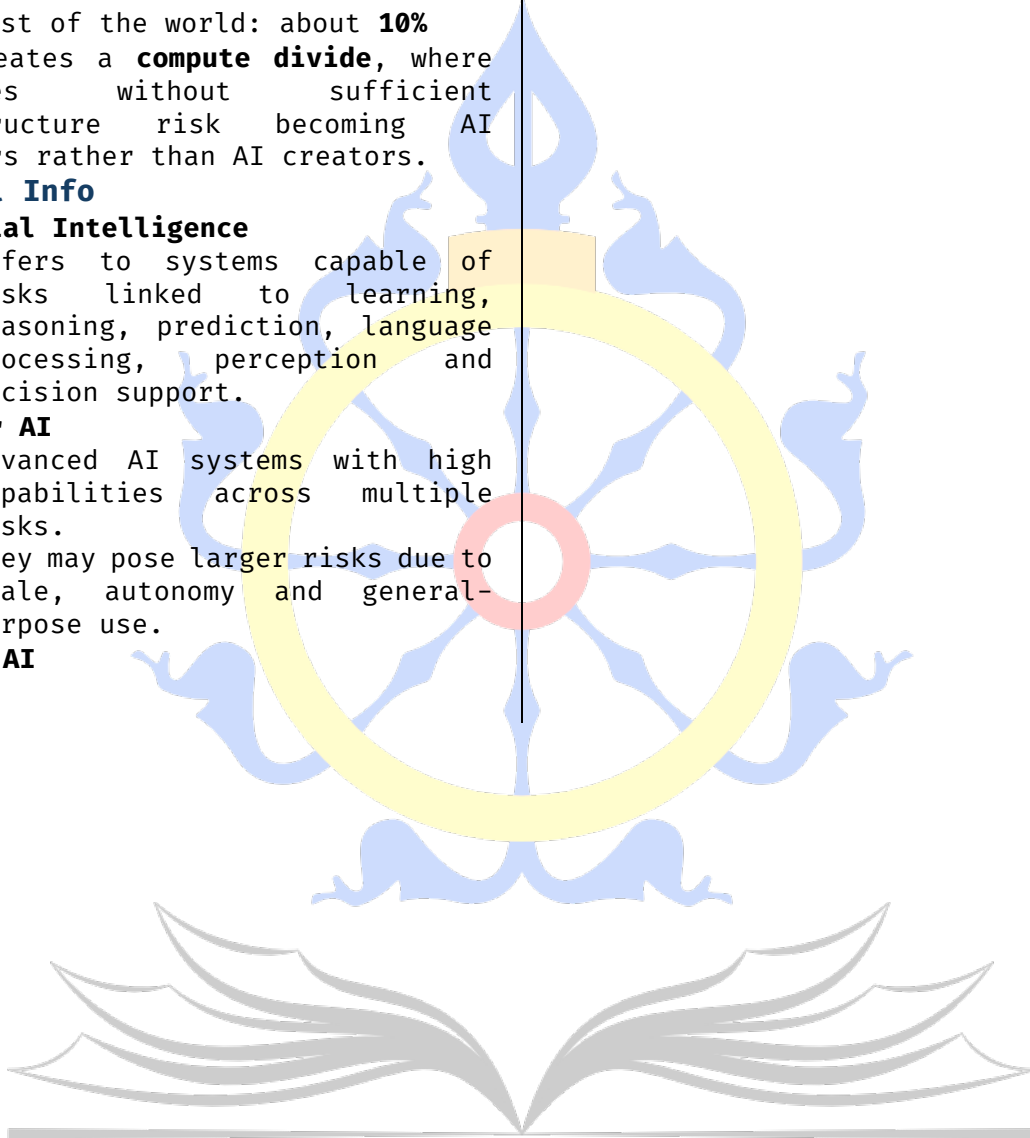
Additional Info

- **Artificial Intelligence**
 - Refers to systems capable of tasks linked to learning, reasoning, prediction, language processing, perception and decision support.
- **Frontier AI**
 - Advanced AI systems with high capabilities across multiple tasks.
 - They may pose larger risks due to scale, autonomy and general-purpose use.
- **Agentic AI**

- AI systems that can plan and perform tasks with limited human intervention.
- Relevant risks include loss of control, misuse and weak accountability.

- **Global Digital Compact**

- Adopted under the UN framework to promote inclusive and responsible digital governance.
- It is linked to discussions on AI governance, digital public goods, data governance and capacity building.



Agriculture

Odisha Approves Deep Sea Fishing Mission

What's the News?

The Odisha Cabinet has approved the **Odisha Deep Sea Fishing Mission**, a flagship programme with an estimated outlay of **₹2,295.45 crore** to be implemented over **2026–2036**. The mission aims to transform Odisha into a major marine fisheries and seafood export hub by promoting sustainable deep-sea fishing, modernising fisheries infrastructure, and strengthening the livelihoods of marine fishing communities through technology, institutional finance, and public-private partnerships.

Odisha Deep Sea Fishing Mission

Objective

- Harness Odisha's vast offshore marine fishery resources.
- Shift fishing activity from overexploited near-shore waters to deep-sea waters.
- Promote sustainable utilisation of marine resources.
- Increase fishermen's income and generate employment.
- Accelerate Blue Economy-led growth in the state.

Implementation

- **Duration:** 2026–2036 (10 years).
- **Estimated Outlay:** ₹2,295.45 crore.
- **Implementing Department:** Fisheries & Animal Resources Development Department, Government of Odisha.
- **Funding Pattern:**
 - Central Government schemes.
 - State Government support.
 - Beneficiary contribution.
 - Institutional finance.
 - Public-Private Partnership (PPP).

Targets

- Annual marine fish production of around **2 lakh metric tonnes**.
- Creation of over **50,000 employment opportunities**.
- Increase marine seafood exports to around **₹5,000 crore by 2036**.
- Development of modern fishing harbours, landing centres, cold-chain infrastructure, processing facilities and logistics.
- Promotion of advanced deep-sea fishing vessels and modern fishing technologies.

Blue Economy

The **Blue Economy** refers to the sustainable use of ocean and marine resources for economic growth, improved livelihoods and employment while ensuring the long-term health of marine ecosystems.

Major sectors

- Fisheries and aquaculture
- Marine biotechnology
- Ports and shipping
- Coastal tourism
- Offshore renewable energy
- Marine minerals

Additional Info

Odisha Fisheries Snapshot

- Odisha has a coastline of about **480 km** along the Bay of Bengal.
- The state possesses significant untapped offshore fisheries potential.
- Marine fisheries constitute an important source of livelihood for thousands of coastal households.

Related Government Initiatives

- **Pradhan Mantri Matsya Sampada Yojana (PMMSY)**
 - Flagship fisheries development scheme.
 - Focuses on sustainable fisheries, infrastructure, value addition and exports.
- **Blue Revolution Scheme**
 - Aims to enhance fish production and productivity.
- **Sagarmala Programme**
 - Promotes port-led development and coastal economic growth.

Odisha Approves Farmer-Centric Agricultural Marketing Reform

What's the News?

The Odisha Cabinet, chaired by Chief Minister **Mohan Charan Majhi**, has approved a proposal to repeal the **Odisha Agricultural Produce Markets (OAPM) Act, 1956** and introduce a modern agricultural marketing law.

The proposed framework seeks to convert Odisha into a **single unified agricultural market**, expand farmers' selling options and encourage transparent, competitive and technology-enabled trade. The proposal was moved by the state's **Cooperation Department**.

Marketing Reforms

- **Unified state market:** Geographical restrictions on the sale and purchase

of agricultural produce and livestock will be removed.

- **Single trading licence:** One licence will permit eligible traders to operate across Odisha.
- **Single-point market fee:** Market fees will be collected at only one specified stage, reducing multiple levies.
- **Alternative marketing channels:** Direct marketing, electronic trading and e-auctions will be promoted.
- **Inter-state trade:** The law will facilitate agricultural trade with markets outside Odisha.
- **Private participation:** Private market yards, processors, exporters and bulk buyers will be encouraged.
- **Market sub-yards:** Warehouses, cold storages and silos may be notified as market sub-yards.
- **Farmer aggregation:** Small and marginal farmers will be connected to markets through FPOs, cooperatives, SHGs and other aggregators.

Why Replace the OAPM Act?

The OAPM Act came into force in **1957** to protect farmers from exploitation and support fair price discovery.

According to the state government, the framework subsequently became restrictive and monopolistic, resulting in:

- Limited market competition and private investment
- Inadequate marketing and storage infrastructure
- Dependence on intermediaries
- Higher transaction costs
- A wide difference between prices received by farmers and prices paid by consumers

Model Agricultural Marketing Law

The proposed Odisha law is aligned with the Union Government's **Model Agricultural Produce and Livestock Marketing (Promotion and Facilitation) Act, 2017**.

The Model Act encourages states to establish:

- A unified market area
- State-wide licensing
- Electronic trading and transparent auctions
- Direct farmer-buyer transactions
- Private markets and farmer-consumer markets
- Integration of warehouses and storage facilities with agricultural markets

The law also proposes separating the **regulatory** and **developmental** functions of agricultural market institutions and strengthening democratic governance of market committees.

Additional Info

- **Constitutional position**
 - Agricultural markets are primarily regulated by states under **Article 246**, read with **Entry 28 of the State List**: "Markets and fairs."
 - Trade and commerce within a state is covered by **Entry 26 of the State List**, subject to relevant provisions of the Concurrent List.
- **e-NAM linkage**
 - The **National Agriculture Market (e-NAM)** is a pan-India electronic portal that networks existing APMC mandis.
 - It facilitates electronic bidding, improved price discovery and wider market access.
 - The **Small Farmers' Agribusiness Consortium (SFAC)** is its lead implementing agency under the Ministry of Agriculture and Farmers' Welfare.
- **Farmer Producer Organisation**
 - An **FPO** is a collective of agricultural producers formed to aggregate produce, obtain inputs, undertake processing and negotiate better market prices.
 - FPO participation can reduce the disadvantages faced by small farmers because of low individual marketable surplus.

Cabinet Approves National Investment Policy for Urea-2026

What's the News?

The Cabinet Committee on Economic Affairs has approved the **National Investment Policy for Urea-2026 for Atmanirbhar Bharat**, or **NIPU-2026**, to attract fresh investment in gas-based urea manufacturing. The policy aims to increase domestic urea production, reduce import dependence, and support fertiliser availability for Indian agriculture.

NIPU-2026?

- A sector-specific investment policy for setting up new **gas-based urea manufacturing units**.
- Implementing department: **Department of Fertilizers**, Ministry of Chemicals and Fertilizers.
- Main objective: move India closer to **self-sufficiency in urea**.
- It replaces the earlier investment framework under **New Investment Policy-**

2012, whose investment window ended in October 2019.

Features

- **Fixed and variable cost separation**
 - Cost components will be separated for greater transparency in subsidy and pricing calculations.
- **Return on Equity band**
 - Floor: **12%**
 - Ceiling: **16%**
 - Purpose: provide investment certainty while limiting excessive returns.
- **Foreign exchange risk mitigation**
 - Fixed cost will be converted into Indian rupees after four years based on prevailing exchange rates.
- **Fiscal saving**
 - Estimated saving of **over ₹250 crore per plant** compared with plants under NIP-2012.

Capacity Addition Target

- The policy is expected to support **8–9 new gas-based urea plants**.
- Targeted fresh capacity addition: about **10 million tonnes**.
- Each standard plant may have around **1.27 million tonnes per annum** capacity.
- The capacity push is meant to bridge the gap between domestic production and demand.

Why India Needs It

- India has **33 operational urea manufacturing units**.
- Total reassessed/installed capacity: **269.42 lakh metric tonnes**.
- Domestic demand is higher than indigenous production, so imports are used to meet the shortfall.
- Reducing urea imports is important for:
 - Fertiliser security.
 - Food security.
 - Lower external vulnerability due to global price and supply shocks.
 - More predictable fertiliser subsidy management.

Previous Policy: NIP-2012

- The earlier policy was framed to attract investment in:
 - Revamp projects.
 - Expansion projects.
 - Revival or brownfield projects.
 - Greenfield urea projects.
- Under NIP-2012, **six new urea units** were set up:
 - **Four** through joint venture companies of nominated PSUs.
 - **Two** by private companies.

- Its investment eligibility period ended in **October 2019**, creating the need for a new framework.

Additional Info

- **Urea**
 - A nitrogenous fertiliser widely used in Indian agriculture.
 - Nitrogen content: about **46%**, making it one of the most concentrated solid nitrogen fertilisers.
- **CCEA**
 - Full form: **Cabinet Committee on Economic Affairs**.
 - It takes major decisions on economic policy, investment, infrastructure, industrial policy and related matters.
- **Gas-based urea plants**
 - Natural gas is used as feedstock for ammonia production, which is then converted into urea.
 - Gas availability and pricing remain crucial for the commercial viability of such plants.

India Permits Anhydrous Ammonia as Agricultural Fertiliser

What's the News?

The Union government has notified **anhydrous ammonia** as a fertiliser under the **Fertiliser (Inorganic, Organic or Mixed) (Control) Order, 1985**.

The approval permits eligible units to manufacture and market it for an initial period of **three years**, subject to prescribed quality standards. The measure seeks to diversify India's nitrogen-fertiliser options and potentially reduce dependence on imported urea.

Anhydrous Ammonia?

- **Chemical formula:** NH_3
- **Meaning of anhydrous:** Ammonia containing virtually no water.
- **Minimum nitrogen content:** **82% by weight**.
- **Urea nitrogen content:** Around **46% by weight**.
- It is stored as a liquefied gas under pressure and injected below the soil surface using specialised equipment.
- After entering moist soil, ammonia is converted into ammonium, which supplies nitrogen to crops.

Its higher nitrogen concentration means that a smaller quantity is required to provide the same amount of nitrogen compared with urea.

Regulatory Framework

The specifications were notified under **Clause 20A** of the Fertiliser Control Order.

- Clause 20A authorises the Central Government to provisionally notify specifications for new fertilisers.
- The approval remains valid for three years from its publication in the Official Gazette.
- It establishes quality standards and a legal pathway for manufacture and sale.
- It does **not itself create a subsidy, procurement programme or compulsory-use requirement**.

The Fertiliser Control Order is issued under **Section 3 of the Essential Commodities Act, 1955** and regulates fertiliser quality, manufacture, distribution and sale.

Why is it Significant?

Reducing Urea Dependence

India reportedly:

- Produces approximately **30 million tonnes of urea annually**.
- Imports nearly **10 million tonnes** to meet domestic demand.

Direct agricultural use of ammonia could utilise part of the ammonia supply before its conversion into urea, thereby expanding domestic fertiliser availability and reducing exposure to international urea prices and supply disruptions.

Higher Nutrient Concentration

Fertiliser	Approximate nitrogen content
Anhydrous ammonia	82%
Urea	46%
Ammonium sulphate	21%

Higher concentration can reduce the volume required for transporting and storing an equivalent amount of nitrogen. However, these potential savings depend on specialised infrastructure and safe field application.

Implementation Challenges

- **Specialised machinery:** It cannot be spread like granular urea and must be injected into the soil.

- **Pressurised storage:** Dedicated tanks and leak-proof transport systems are required.
- **Safety risks:** Direct exposure can cause severe skin and eye burns and respiratory injury.
- **Volatilisation:** Improper injection can allow ammonia to escape into the atmosphere, causing nitrogen loss.
- **Training requirements:** Operators require technical training and protective equipment.
- **Uneven application:** Initial agricultural trials reportedly found that non-uniform injection could produce uneven crop growth.

Link with Green Fertilisers

The measure complements India's efforts to develop **green ammonia and green urea**.

- **Green ammonia:** Produced using green hydrogen derived from renewable electricity rather than fossil-fuel-based hydrogen.
- **Green urea:** Manufactured using green ammonia and a carbon source.
- The **National Green Hydrogen Mission** supports the development of green hydrogen and its derivatives.
- A **150-tonne-per-day green urea pilot plant** is being developed at Pudimadaka in Andhra Pradesh by **NETRA**, the research and development arm of NTPC.

Additional Info

- **Fertiliser Control Order, 1985**
 - Administered by the Department of Agriculture and Farmers Welfare.
 - Prescribes product specifications, sampling procedures, licensing requirements and quality-control mechanisms.
- **ICAR**
 - The Indian Council of Agricultural Research has conducted preliminary trials involving green ammonia in rice cultivation.
 - Large-scale adoption requires standardisation of dosage, soil-injection depth and application machinery.

Important Days

International Day of Cooperatives 2026 Observed with "Cooperatives for a Peaceful World" Theme

What's the News?

The **International Day of Cooperatives 2026** was observed on **4 July 2026** under the theme **"Cooperatives for a Peaceful World."** The day highlights the role of cooperatives in promoting **inclusive development, democratic participation, social justice, sustainable livelihoods and peaceful communities.**

The theme underlines that peace is not only the absence of conflict, but also the presence of **trust, equality, participation and shared economic opportunity.**

International Day of Cooperatives

The International Day of Cooperatives is an annual global observance dedicated to recognising the contribution of cooperative enterprises to social and economic development.

- **Observed on:** First Saturday of July every year.
- **2026 date:** 4 July 2026.
- **2026 theme:** Cooperatives for a Peaceful World.
- **First celebrated by cooperative movement:** 1923.
- **UN recognition:** 1995.
- **2026 marks:**
 - 104th International Cooperative Day.
 - 32nd UN International Day of Cooperatives.

Cooperatives for a Peaceful World

The 2026 theme focuses on the link between cooperatives and peacebuilding.

Why cooperatives matter for peace

- They bring people together through collective ownership.
- They reduce social and economic inequalities.
- They promote democratic decision-making.
- They create livelihood opportunities at the local level.
- They strengthen trust among members and communities.
- They support vulnerable groups through shared resources and mutual support.

Wider significance

Cooperatives are considered people-centred institutions because they are based on participation, shared responsibility and community welfare rather than only profit maximisation.

They are especially relevant in areas affected by poverty, inequality, unemployment, conflict or social exclusion because they help people organise around common needs.

What are Cooperatives?

A cooperative is an autonomous association of people who voluntarily come together to meet common **economic, social and cultural needs** through a jointly owned and democratically controlled enterprise.

Main features

- Voluntary membership.
- Democratic control by members.
- One member, one vote principle.
- Shared ownership.
- Mutual benefit.
- Community-oriented functioning.
- Surplus used for members' welfare or cooperative development.

Common types

- Agricultural cooperatives.
- Dairy cooperatives.
- Credit cooperatives.
- Housing cooperatives.
- Consumer cooperatives.
- Labour cooperatives.
- Marketing cooperatives.
- Fisheries cooperatives.

Cooperative Principles

Cooperatives follow globally recognised principles linked to democratic and community-based functioning.

Seven principles

- Voluntary and open membership.
- Democratic member control.
- Member economic participation.
- Autonomy and independence.
- Education, training and information.
- Cooperation among cooperatives.
- Concern for community.

These principles make cooperatives different from conventional private enterprises because they combine economic activity with social responsibility.

Cooperatives in India

India has one of the world's largest cooperative networks. Cooperatives are important in sectors such as agriculture, dairy, credit, fertilisers, housing, handloom, fisheries and rural development.

Important examples

- **AMUL**
 - Dairy cooperative model from Gujarat.
 - Linked to India's White Revolution.

- **IFFCO**
 - Fertiliser cooperative.
 - Plays a major role in agricultural input supply.
- **Primary Agricultural Credit Societies**
 - Grassroots rural credit institutions.
 - Provide short-term credit and allied services to farmers.

Importance for India

- Support small and marginal farmers.
- Improve rural credit access.
- Strengthen dairy and agricultural marketing.
- Reduce dependence on informal moneylenders.
- Promote women's participation through self-help and cooperative models.
- Support inclusive and decentralised economic development.

Constitutional Provisions

Cooperative societies have constitutional recognition in India.

Important provisions

- **Article 19(1)(c)**
 - Gives citizens the right to form associations, unions or cooperative societies.
- **Article 43B**
 - Directs the State to promote voluntary formation, autonomous functioning, democratic control and professional management of cooperative societies.
- **Part IXB**
 - Deals with cooperative societies.
 - Contains Articles 243ZH to 243ZT.

97th Constitutional Amendment Act, 2011

- Gave constitutional status to cooperative societies.
- Added the words "cooperative societies" to Article 19(1)(c).
- Inserted Article 43B in the Directive Principles of State Policy.
- Added Part IXB to the Constitution.

Additional Info

Important organisations

- **International Cooperative Alliance**
 - Global representative body of cooperatives.
 - Established in 1895.
 - Promotes cooperative values, principles and global cooperation.
- **Committee for the Promotion and Advancement of Cooperatives**
 - Known as COPAC.
 - Multi-stakeholder partnership that promotes cooperatives.

- Works with the UN system and cooperative movement.

Government initiatives in India

- **Ministry of Cooperation**
 - Established in 2021.
 - Created to strengthen the cooperative movement in India.
- **Sahkar Se Samridhhi**
 - Vision to promote prosperity through cooperation.
- **Computerisation of PACS**
 - Aims to modernise Primary Agricultural Credit Societies.
 - Helps improve transparency, efficiency and service delivery.
- **National Cooperative Database**
 - Developed to map cooperative societies across sectors and regions.
- **Multi-State Cooperative Societies Amendment Act, 2023**
 - Strengthens governance, transparency and accountability in multi-state cooperatives.

World Zoonoses Day Observed to Promote One Health Approach

What's the News?

World Zoonoses Day is observed on **July 6** to raise awareness about diseases transmitted between animals and humans. The observance highlights the importance of prevention, surveillance, early detection and the **One Health approach**, which integrates human, animal and environmental health systems. Union Health Minister J. P. Nadda highlighted India's focus on One Health as a key pillar of public health strategy.

World Zoonoses Day

- **Observed on:** July 6 every year.
- **Purpose:**
 - Raise awareness about zoonotic diseases.
 - Promote preventive healthcare and disease surveillance.
 - Encourage coordination among doctors, veterinarians, environmental experts and public health authorities.
- **Historical link:**
 - The day commemorates Louis Pasteur's successful administration of the first rabies vaccine on **July 6, 1885**.

Zoonotic Diseases

- **Meaning:** Diseases that can naturally spread between animals and humans.
- **Causative agents:**
 - Viruses

- Bacteria
- Parasites
- Fungi
- **Examples:**
 - Rabies
 - Avian influenza
 - Ebola
 - Brucellosis
 - Leptospirosis
 - Anthrax
 - Ringworm
- **Key data:**
 - Nearly **60% of known human infectious diseases** originate from animals.
 - Around **75% of emerging infectious diseases** are zoonotic in nature.

One Health Approach

- **Meaning:** An integrated approach recognising that human health, animal health and environmental health are interconnected.
- **Focus areas:**
 - Joint disease surveillance.
 - Early warning systems.
 - Outbreak prevention and response.
 - Veterinary-public health coordination.
 - Monitoring of antimicrobial resistance.
- **India's institutional link:**
 - The **Centre for One Health** under the **National Centre for Disease Control** plays a key role in addressing zoonotic disease risks through integrated surveillance, prevention and response.

Prevention Measures

- Vaccination of animals against preventable diseases.
- Safe handling of livestock and pets.
- Hand hygiene and sanitation.
- Safe food preparation and proper cooking.
- Control of vectors such as mosquitoes and ticks.
- Strengthening veterinary and public health services.
- Reducing unsafe human-wildlife contact.

Additional Info

- **National Centre for Disease Control**
 - Works under the **Ministry of Health and Family Welfare.**
 - Functions include disease surveillance, outbreak investigation, laboratory support and public health capacity-building.

World Population Day 2026 Focuses on Young People's Aspirations

What's the News?

World Population Day was observed globally on **11 July 2026** under the theme **"Realizing the hopes and aspirations of young people – today and for the future."**

The theme calls for policies that enable young people to pursue their preferred education, employment, relationships and family choices through access to healthcare, reproductive rights, financial security and equal opportunities.

2026 Theme?

The theme is based on the findings of UNFPA's **Demographic Futures Survey**, which examined the partnership, reproductive and life aspirations of young people.

- **Coverage:** More than 100,000 respondents
- **Age group:** 18–39 years
- **Countries covered:** 73
- **Key concern:** Many young people want relationships and families but face barriers such as insecure employment, housing costs, financial pressures, inequality and uncertainty about the future.

The theme therefore shifts the population debate from controlling demographic numbers to protecting people's **rights, choices and aspirations.**

History of World Population Day

- **Day of Five Billion:** Observed on 11 July 1987, when the global population was estimated to have reached five billion.
- **Established:** The Governing Council of the United Nations Development Programme instituted World Population Day in 1989.
- **First observance:** Marked on 11 July 1990 in more than 90 countries.
- **UN recognition:** UN General Assembly Resolution **45/216** supported the continued observance of the day to highlight the relationship between population, development and the environment.

Major Objectives

World Population Day seeks to promote awareness regarding:

- Sexual and reproductive health and rights.
- Voluntary and informed family planning.
- Maternal health and prevention of adolescent pregnancies.

- Gender equality and women's empowerment.
- Population ageing, migration and urbanisation.
- Youth education, employment and skill development.
- Sustainable use of natural resources.

India's Demographic Context

UNFPA estimated India's population at approximately **146.39 crore in 2025**, making it the world's most populous country. India's total fertility rate was estimated at **1.9 children per woman**, below the replacement level of about **2.1**.

India faces differing demographic challenges:

- Some states continue to record relatively high fertility and population momentum.
- Several states have below-replacement fertility and rapidly ageing populations.
- The large working-age population offers a demographic dividend only when supported by education, healthcare, skills and employment.
- Population policy must address regional variations rather than relying on a uniform approach.

Additional Info

United Nations Population Fund

- **Abbreviation:** UNFPA
- **Headquarters:** New York
- **Role:** UN agency for sexual and reproductive health.
- **Core goals:**
 - End unmet need for family planning.
 - End preventable maternal deaths.
 - End gender-based violence and harmful practices.
 - Enable every young person to fulfil their potential.

Terms

- **Total Fertility Rate:** Average number of children a woman would have during her reproductive years under prevailing fertility rates.
- **Replacement-Level Fertility:** Fertility level at which a population replaces itself across generations, generally about 2.1 children per woman.
- **Demographic Dividend:** Economic-growth potential arising when the working-age population is larger than the dependent population.
- **Population Momentum:** Continued population growth after fertility declines because a large number of people are entering reproductive age.

World Youth Skills Day 2026: Skills for a Shared Future

What's the News?

World Youth Skills Day (WYSD) was observed on **15 July 2026** with the theme **"Skills for a Shared Future."**

The observance highlighted the need for inclusive and future-ready education and training systems that enable young people to succeed as learners, workers, entrepreneurs, citizens and agents of change. It particularly emphasised skills required for resilient, peaceful, sustainable and human-centred societies.

2026 Theme?

Skills for a Shared Future

The theme recognises that technical competence alone is insufficient in a rapidly changing world. Youth skill systems must combine:

- **Technical and vocational skills** for employment and entrepreneurship
- **Digital and AI skills** for technology-driven workplaces
- **Green skills** for climate-resilient and low-carbon economies
- **Human skills**, including communication, empathy and teamwork
- **Civic and leadership skills** for community participation
- **Adaptability and lifelong learning** for changing occupations

The objective is to prepare young people not merely to enter the labour market but also to contribute to inclusive development and social cohesion.

Why Is Youth Skilling Important?

Young people face a combination of unemployment, informal work, skills mismatch and unequal access to quality training.

According to the ILO's latest major global youth-employment assessment:

- **64.9 million** people aged 15–24 were unemployed worldwide.
- The global youth unemployment rate was approximately **13%**.
- **20.4%**, or about one in five young people, were not in employment, education or training—**NEET**.
- Around **two-thirds of young NEETs were women**.
- More than half of employed young people worked in the informal economy.

These figures demonstrate that increasing enrolment in education is not enough; training must be aligned with labour-market demand and lead to productive and decent employment.

Technical and Vocational Education and Training

Technical and Vocational Education and Training (TVET) provides the knowledge and practical capabilities required for particular occupations and economic activities.

TVET includes:

- Classroom and institution-based vocational education
- Apprenticeships and workplace learning
- Short-term skill training
- Recognition of Prior Learning
- Reskilling and upskilling
- Entrepreneurship and self-employment training

Effective TVET systems require cooperation among governments, employers, workers' organisations, training institutions and young people.

India's Skilling Framework Skill India Mission

India launched the **Skill India Mission on 15 July 2015**, coinciding with World Youth Skills Day. More than **6 crore people** have been covered through different skill-development initiatives since 2014.

Major components include:

- **Pradhan Mantri Kaushal Vikas Yojana**
 - Provides short-term training, reskilling and Recognition of Prior Learning.
 - More than **1.64 crore candidates** have been trained since its launch.
 - Covers emerging areas such as AI, drones, robotics, mechatronics and the Internet of Things.
- **PM National Apprenticeship Promotion Scheme**
 - Promotes industry-based apprenticeship training.
 - Provides practical workplace exposure and supports employer participation.
- **Jan Shikshan Sansthan**
 - Provides vocational training to non-literates, school dropouts and disadvantaged groups.
 - Focuses particularly on women and rural populations.

The restructured **Skill India Programme**, with an outlay of **₹8,800 crore**, integrated these three schemes into a unified Central Sector Scheme.

Additional Info

- **Background**
 - The UN General Assembly designated **15 July** as World Youth Skills Day through **Resolution A/RES/69/145**.

- The resolution was adopted on **18 December 2014**.
- The first World Youth Skills Day was observed in **2015**.

• Relevant SDGs

- **SDG 4.4:** Increase the number of people with relevant skills for employment, decent jobs and entrepreneurship.
- **SDG 8.5:** Achieve productive employment and decent work for all.
- **SDG 8.6:** Reduce the proportion of youth not in employment, education or training.
- **SDG 10:** Reduce inequalities in access to economic opportunities.

• Definition of youth

- The United Nations generally uses **15–24 years** for statistical purposes.
- India's **National Youth Policy, 2014** defines youth as persons aged **15–29 years**.

• Notes

- **World Youth Skills Day:** 15 July
- **International Youth Day:** 12 August
- **National Youth Day in India:** 12 January

National Flag Adoption Day Commemorates Adoption of the Tiranga

What's the News?

India observes **National Flag Adoption Day**, also referred to as National Flag Day, on **22 July**. It commemorates the Constituent Assembly's adoption of the present Indian National Flag on **22 July 1947**, shortly before Independence.

Jawaharlal Nehru moved the resolution concerning the National Flag, which the Constituent Assembly adopted with acclamation. The observance highlights the Tiranga's connection with India's freedom struggle, sovereignty, constitutional values and national unity.

Present National Flag

- **Design:** Three equal horizontal bands:
 - Deep saffron at the top
 - White in the middle
 - Dark green at the bottom
- **Ashoka Chakra:**
 - Navy-blue wheel in the centre of the white band
 - Contains **24 spokes**

- Its design is based on the wheel appearing on the abacus of the **Sarnath Lion Capital of Ashoka**
- **Proportion:** Ratio of length to height is **3:2**.
- The Chakra replaced the spinning wheel or **Charkha** used in the earlier nationalist flag.

Evolution During the Freedom Movement

- **1906 – Calcutta Flag**
 - An early nationalist tricolour was hoisted at Parsee Bagan Square in Calcutta during the Swadeshi and Boycott movement.
- **1907 – Bhikaji Cama's Flag**
 - Madam Bhikaji Cama displayed a modified nationalist flag in Europe, drawing international attention to India's struggle against colonial rule.
- **1917 – Home Rule Flag**
 - Annie Besant and Bal Gangadhar Tilak used another flag during the Home Rule Movement to represent the demand for self-government.
- **1921 – Pingali Venkayya's Design**
 - Pingali Venkayya presented a flag design to Mahatma Gandhi at the Congress session in Bezwada, now Vijayawada.
 - A spinning wheel was incorporated to represent progress and economic self-reliance.
- **1931 – Congress Tricolour**
 - The Indian National Congress formally adopted a saffron-white-green tricolour containing the Charkha.
 - It became the immediate precursor of the present National Flag.
- **1947 – Present Tiranga**
 - The Constituent Assembly retained the tricolour but replaced the Charkha with the Ashoka Chakra.

Flag Code of India

The **Flag Code of India, 2002** consolidates the laws, conventions and instructions governing the display of the National Flag by citizens, private organisations, educational institutions and government bodies.

Key provisions include:

- Citizens may display the National Flag on all days and occasions, subject to its dignity and honour.
- The flag may be of any size, but its **3:2 ratio** must be maintained.
- The **2021 amendment** permitted polyester and machine-made flags, in addition to

hand-spun or handwoven cotton, wool, silk and khadi flags.

- Under the **2022 amendment**, a flag displayed in the open or at a citizen's house may be flown **during the day and night**.
- A damaged or dishevelled flag must not be displayed.
- The flag must not:
 - Touch the ground, floor or water
 - Be displayed with saffron at the bottom
 - Be dipped in salute to any person or object
 - Carry lettering or inscriptions
 - Be used as drapery or as a covering for vehicles and buildings

Constitutional and Legal Provisions

- **Article 51A(a)**
 - It is a Fundamental Duty of every citizen to abide by the Constitution and respect its ideals, institutions, the National Flag and the National Anthem.
- **Prevention of Insults to National Honour Act, 1971**
 - Section 2 prohibits burning, mutilating, defacing, destroying, trampling upon or otherwise showing disrespect to the National Flag.
 - Violation is punishable with imprisonment extending to **three years**, a fine or both.
 - A second or subsequent conviction carries imprisonment of at least **one year**.
- **Union of India v. Naveen Jindal**
 - The Supreme Court held that respectfully flying the National Flag is a form of expression protected under **Article 19(1)(a)**.
 - The right is qualified and remains subject to reasonable restrictions, statutory laws and the dignity of the flag.

Additional Info

- **National Flag Adoption Day:** 22 July
- **Adoption year:** 1947
- **Moved in the Constituent Assembly by:** Jawaharlal Nehru
- **Original design associated with:** Pingali Venkayya
- **Ashoka Chakra:** 24 spokes
- **Flag ratio:** 3:2
- **Regulating ministry:** Ministry of Home Affairs
- **Do not confuse it with:**

- **Armed Forces Flag Day**, observed on **7 December** to support serving personnel, veterans and their dependants.

World Brain Day 2026 Focuses on Universal Access to Brain Healthcare

What's the News?

World Brain Day is observed annually on **22 July** to promote awareness of neurological conditions and the importance of brain health.

The **2026 theme is "Brain Health: Access for All."** It highlights inequalities in access to timely diagnosis, specialist consultation, medicines, rehabilitation and community-based neurological services.

"Brain Health: Access for All"?

The theme calls for neurological healthcare to be available irrespective of a person's income, location or social background.

The campaign is based on five core principles:

- **Equity:** Brain healthcare should be accessible to everyone.
- **Early intervention:** Timely diagnosis and treatment can prevent disability.
- **Prevention:** Modifiable risks should be addressed throughout life.
- **Local access:** Primary and community healthcare systems should provide care closer to patients.
- **Policy action:** Awareness must result in measurable improvements in healthcare delivery.

Major barriers include:

- Shortage of neurologists and trained health workers
- High treatment and diagnostic costs
- Long waiting periods
- Limited rehabilitation services
- Stigma and poor public awareness
- Unequal rural-urban distribution of healthcare infrastructure

Low-income countries have approximately **227 times fewer neurologists per capita** than high-income countries.

Global Neurological Burden

- More than **3.4 billion people**, representing over **40% of the global population**, live with neurological conditions.
- Neurological disorders are the world's leading cause of ill health and disability.
- Around **70% of the neurological and neurodevelopmental disease burden**

occurs in low- and middle-income countries.

- Major contributors include:
 - Stroke
 - Neonatal encephalopathy
 - Migraine
 - Alzheimer's disease and other dementias
 - Diabetic neuropathy
 - Meningitis
 - Epilepsy
 - Neurological complications of premature birth

World Federation of Neurology

The **World Federation of Neurology**, or WFN, organises World Brain Day.

- **Established:** 22 July 1957
- **Place of establishment:** Brussels, Belgium
- **First World Brain Day:** 2014
- **Objective:** To promote neurological education, research, advocacy and equitable access to brain healthcare
- **Membership:** 126 national neurological member societies
- **International status:** A non-state actor in official relations with the World Health Organization

The observance is held on 22 July because the WFN was established on the same date.

India's Policy Relevance

- **National Programme for Prevention and Control of Non-Communicable Diseases**
 - Earlier known as NPCDCS.
 - Includes prevention and management of cardiovascular diseases and stroke.
 - Supports population-based screening of persons aged **30 years and above** for major NCD risk factors such as hypertension and diabetes.
 - These conditions are important modifiable risk factors for stroke and cognitive decline.
- **Primary Healthcare**
 - Strengthening primary-care institutions can support early identification, referral and long-term management of neurological conditions.
 - Community-level care is particularly important where neurologists and specialised centres are limited.
- **Universal Health Coverage**
 - The 2026 theme supports the integration of neurological diagnosis, treatment, medicines and rehabilitation into universal health coverage.

WHO Global Action Plan

The World Health Assembly adopted the **Intersectoral Global Action Plan on Epilepsy and Other Neurological Disorders 2022–2031**, commonly called **IGAP**.

Its objectives include:

- Increasing policy priority for neurological disorders
- Providing timely diagnosis, treatment and rehabilitation
- Promoting brain health and preventing neurological conditions
- Strengthening research, data and information systems
- Improving the participation and quality of life of affected persons
- Developing integrated neurological services through primary healthcare

Protecting Brain Health

Important preventive measures include:

- Regular physical activity
- Adequate and regular sleep
- Balanced nutrition
- Control of hypertension, diabetes and obesity

- Avoidance of tobacco and harmful alcohol consumption
- Prevention of head injuries
- Vaccination and control of neuroinfections
- Continued learning and social interaction
- Early medical attention for seizures, memory loss, persistent headaches or movement difficulties

Sudden facial weakness, arm weakness or speech difficulty may indicate a stroke and require immediate emergency care.

Additional Info

- **Date:** 22 July
- **2026 theme:** Brain Health: Access for All
- **Organising body:** World Federation of Neurology
- **First observed:** 2014
- **Related SDG:** SDG 3–Good Health and Well-being

India Observes 167th Income Tax Day

What's the News?

- India observed **Income Tax Day, or Aaykar Diwas, on 24 July 2026**, commemorating the introduction of income tax in the country in 1860.
- The 2026 observance was officially described as the **167th Income Tax Day**, although 166 years have elapsed since income tax was introduced.
- At the national celebration, Finance Minister **Nirmala Sitharaman** called for a fair, transparent and taxpayer-centric administration based on the **5Rs of Responsive Tax Governance**.
- The observance also highlighted the implementation of the **Income-tax Act, 2025**, technological modernisation and reduction of tax litigation.

Income Tax Day

- **Observed on:** 24 July every year.
- **Also known as:** Aaykar Diwas.
- **First officially celebrated:** 2010, marking 150 years of income tax in India.
- **Purpose:**
 - Recognise the contribution of taxpayers.
 - Promote voluntary tax compliance.
 - Increase awareness of taxpayers' rights and responsibilities.
 - Highlight reforms in direct-tax administration.
- No separate nationwide theme was officially announced for 2026; the central policy focus was responsive and taxpayer-centric governance.

5Rs of Responsive Tax Governance

The Finance Minister outlined five principles for improving taxpayer services:

1. **Recognise:** Promptly acknowledge taxpayers' concerns.
2. **Respond:** Communicate with clarity, courtesy and empathy.
3. **Redress:** Resolve grievances effectively and within reasonable timelines.
4. **Reflect:** Identify recurring problems and their systemic causes.
5. **Reform:** Modify laws, procedures and technology to prevent repetition of problems.

The framework seeks to distinguish **bona fide errors** from deliberate tax evasion and shift the department from grievance disposal to grievance prevention.

Evolution of India's Income-Tax System

Milestone	Development
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1860	Income tax introduced by Sir James Wilson , Finance Member of the Governor-General's Council, following the financial strain caused by the Revolt of 1857
1886	A more structured income-tax law was introduced
1922	Income-tax Act, 1922 reorganised direct-tax administration
1924	Central Board of Revenue constituted
1961–62	Income-tax Act, 1961 replaced the 1922 legislation
1963	Central Board of Revenue bifurcated, creating the Central Board of Direct Taxes
1970s onward	Permanent Account Number and specialised tax-administration institutions developed
2000s	E-filing, Centralised Processing Centre and online refund processing introduced
2019 onward	Faceless assessment and appeal mechanisms expanded
2025–26	Income-tax Act, 2025 replaced the six-decade-old 1961 Act with a simplified framework

Income-tax Act, 2025

- Came into force from **1 April 2026**, replacing the Income-tax Act, 1961.
- Seeks to make direct-tax law simpler, clearer and more taxpayer-friendly.
- Uses streamlined provisions, rules and forms to reduce ambiguity and compliance costs.
- Supports greater tax certainty, voluntary compliance and ease of doing business.
- The Income Tax Department is implementing the law through digital systems and taxpayer-awareness programmes.

Digital Tax Administration

Major initiatives highlighted during the 2026 celebration include:

- **PAN 2.0:** Technology-driven modernisation of PAN and TAN services.
- **ITBA 2.0:** Upgradation of the Income Tax Business Application.
- **IEC 3.0:** Improved taxpayer communication and information systems.
- **SAKSHAM NUDGE:** Data-based behavioural nudges to encourage voluntary compliance.
- **Faceless Assessment:** Reduces physical interaction between taxpayers and assessing officers.
- **Centralised Processing Centre:** Enables large-scale electronic processing of returns and refunds.

Additional Info

- **Central Board of Direct Taxes**
 - Statutory authority under the **Central Boards of Revenue Act, 1963**.
 - Functions under the Department of Revenue, Ministry of Finance.
 - Administers personal income tax, corporate tax and other direct taxes.
- **Constitutional provisions**
 - **Article 265:** No tax can be levied or collected except by authority of law.
 - **Union List, Entry 82:** Parliament can impose taxes on income other than agricultural income.
 - **State List, Entry 46:** State legislatures can impose taxes on agricultural income.
- **Direct tax**
 - The liability is imposed directly on the person or entity earning the income.
 - Its burden normally cannot be transferred to another person.
 - Examples include personal income tax and corporate tax.

India Observes 27th Kargil Vijay Diwas, Honouring Operation Vijay Bravehearts

What's the News?

- India observed the **27th Kargil Vijay Diwas on July 26, 2026**, commemorating the country's victory in the 1999

Kargil War and honouring personnel who fought under **Operation Vijay**.

- Defence Minister **Rajnath Singh** led the national tribute at the **Kargil War Memorial in Dras, Ladakh**, along with senior military officers, veterans, gallantry awardees and families of fallen personnel.

- The commemorations included the **Shradhanjali Samaroh, Shaurya Sandhya, Yudh Sansmaran** and programmes recognising the families of Kargil War heroes.
- Kargil Vijay Diwas does **not have an officially declared annual theme**. The 2026 observance focused on memorial outreach, public participation and preserving the legacy of the Kargil heroes.

Kargil Vijay Diwas

- **Observed on:** July 26 every year
- **Commemorates:** Successful completion of Operation Vijay and restoration of Indian control over positions occupied during the Kargil intrusion.
- **First observed:** 2000
- **Principal venue:** Kargil War Memorial, Dras
- **Significance:** Honours military courage, sacrifice, territorial integrity and India's success in high-altitude warfare.

Operation Vijay

Operation Vijay was launched by the Indian Army to evict Pakistani forces and infiltrators who had crossed the **Line of Control** and occupied commanding mountain positions in the Kargil sector.

- The intrusion was associated with Pakistan's **Operation Badr**.
- The occupied heights overlooked the Srinagar-Leh highway, threatening India's principal logistical link with Ladakh.
- Some positions were located above **5,000 metres**, giving the infiltrators significant tactical advantage.
- India adopted a strategy of "**contain, evict and deny**" while directing its forces not to cross the LoC.
- Indian troops ultimately recaptured all occupied positions after nearly three months of fighting.

Tri-Service Response

- **Indian Army – Operation Vijay**
 - Conducted ground operations to recapture occupied mountain positions.
- **Indian Air Force – Operation Safed Sagar**
 - Provided aerial reconnaissance, battlefield support and precision strikes.
 - Operated under restrictions against crossing the LoC.
- **Indian Navy**
 - Undertook maritime mobilisation to increase strategic pressure on

Pakistan and secure India's maritime interests.

The coordinated campaign demonstrated the importance of joint military planning, surveillance, logistics and air-ground integration.

Major Battle Areas

Important engagements were fought at:

- Tololing
- Tiger Hill
- Point 4875
- Batalik
- Mushkoh Valley
- Kaksar
- Dras sector

The recapture of Tololing provided an early breakthrough, while the recovery of Tiger Hill substantially shifted the operational momentum in India's favour.

Gallantry Honours

The Kargil campaign resulted in the award of:

- **4 Param Vir Chakras**
- **9 Maha Vir Chakras**
- **55 Vir Chakras**
- **83 Sena Medals**
- **24 Vayu Sena Medals**

Param Vir Chakra Awardees

- **Captain Vikram Batra** – Posthumous
- **Lieutenant Manoj Kumar Pandey** – Posthumous
- **Grenadier Yogendra Singh Yadav**
- **Rifleman Sanjay Kumar**

The Param Vir Chakra is India's highest military decoration for conspicuous bravery in the presence of the enemy.

2026 Commemorative Initiatives

- **Shaurya Vijay Yatra**
 - A 13-day motorcycle expedition from the National War Memorial in New Delhi to the Kargil War Memorial.
 - Covered approximately **1,900 kilometres**.
 - Included **28 riders**, comprising serving and retired defence personnel and family members.
 - Motto: "**One Ride, One Nation, One Salute.**"
- **Tiger Hill Expedition**
 - Organised by the Indian Army and the Dras civil administration.
 - Included **11 trained local trekking guides**.
 - Sought to preserve military history while promoting military tourism and local livelihoods.
- **Point 5140 Commemorative Trek**
 - Undertaken by **137 soldiers** to honour the Regiment of

Artillery's contribution to Operation Vijay.

Kargil Review Committee

- The government constituted the **Kargil Review Committee**, chaired by strategic affairs expert **K. Subrahmanyam**, to examine the circumstances leading to the intrusion.
- It highlighted deficiencies in:
 - Intelligence coordination
 - Border surveillance
 - Higher defence management
 - Inter-service coordination
 - National security decision-making
- Its recommendations were subsequently examined by a **Group of Ministers**.
- The reform process contributed to greater military jointness and eventually to the establishment of:
 - Chief of Defence Staff
 - Department of Military Affairs
 - Integrated defence structures
 - Improved intelligence and border-management mechanisms.

Additional Info

- **Line of Control**
 - Military control line separating Indian- and Pakistan-administered areas of the former princely state of Jammu and Kashmir.
 - It emerged from the ceasefire line and was redesignated under the **Simla Agreement of 1972**.
- **Dras**
 - Located in the Union Territory of Ladakh.
 - The Kargil War Memorial is situated near the principal battle areas of Tololing and Tiger Hill.
- **Kargil Vijay Diwas vs Vijay Diwas**
 - **Kargil Vijay Diwas:** July 26; relates to the 1999 Kargil War.
 - **Vijay Diwas:** December 16; marks India's victory in the 1971 war and the liberation of Bangladesh.

CRPF Observes its 88th Raising Day

What's the News?

The **Central Reserve Police Force (CRPF)** observed its **88th Raising Day** on **27 July 2026**, recognising the service and sacrifices of its personnel in maintaining India's internal security.

The observance marks the formation of the force as the **Crown Representative's Police** in 1939. The CRPF works under the **Ministry**

of Home Affairs and assists the Union and State governments in maintaining public order, tackling insurgency and securing elections.

Count clarification: The 2026 observance was the 88th Raising Day, marking **87 completed years** since the force was established.

Central Reserve Police Force

- **Established:** 27 July 1939
 - **Original name:** Crown Representative's Police
 - **Renamed:** Central Reserve Police Force after Independence
 - **Governing law:** Central Reserve Police Force Act, 1949
 - **Administrative ministry:** Ministry of Home Affairs
 - **Motto:** *Seva Aur Nishtha*—Service and Loyalty
 - **Category:** Central Armed Police Force
- The CRPF Act, 1949, provides for an armed force maintained by the Central Government and known as the Central Reserve Police Force.

Major Responsibilities

The CRPF performs a wide range of internal-security and law-enforcement duties:

- Crowd and riot control.
- Counter-insurgency and counter-militancy operations.
- Operations against Left-Wing Extremism.
- Security during elections, particularly in disturbed areas.
- Protection of VIPs and vital installations.
- Assistance to State police forces in maintaining law and order.
- Rescue and relief during natural disasters.
- Participation in United Nations peacekeeping missions.

Specialised Units

Rapid Action Force

- Raised in **1992** as a specialised CRPF unit.
- Deals with riots, communal disturbances and major public-order situations.
- Also functions as a first responder during natural and human-made disasters.

CoBRA

- **CoBRA:** Commando Battalion for Resolute Action.
- Specialises in guerrilla and jungle warfare.

- Primarily deployed against Maoist insurgents in Left-Wing Extremism-affected areas.
- The CRPF has **10 CoBRA battalions**.

Organisational Strength

The CRPF's organisational structure includes:

- **201** General Duty battalions.
- **16** Rapid Action Force battalions.
- **10** CoBRA battalions.
- **6** Mahila battalions.
- **6** VIP Security battalions.
- **7** Signal battalions.
- **43** Group Centres.
- **22** training institutions.

Additional Info

- **CRPF Raising Day and CRPF Day Parade**
 - Raising Day is observed annually on 27 July.
 - The ceremonial CRPF Day Parade may be organised separately.
- **Police Commemoration Day**
 - Observed on **21 October**.
 - Commemorates police personnel killed during a Chinese attack on a CRPF patrol at Hot Springs, Ladakh, in 1959.
- **CRPF Valour Day**
 - Observed on **9 April**.
 - Marks the CRPF's defence of Sardar Post in the Rann of Kutch against a larger Pakistani force in 1965.

International Tiger Day Highlights Community-Led Conservation

What's the News?

- **International Tiger Day**, also called Global Tiger Day, is observed annually on **29 July** to promote tiger conservation, habitat protection and action against poaching and illegal wildlife trade.
- The **reported theme for 2026** is **"Securing the Future of Tigers with Indigenous Peoples and Local Communities at the Heart."**
- It highlights the role of forest-dependent and local communities in protecting tiger habitats, maintaining wildlife corridors and reducing human-tiger conflict.
- Theme attribution should be treated cautiously for examinations: the same theme was formally used by the **International Union for Conservation of Nature in 2025**, while some 2026 reports state that no separate official global theme was announced.

International Tiger Day?

- The observance originated at the **Saint Petersburg Tiger Summit** held in Russia in 2010.
- The summit brought together the **13 tiger-range countries** to address the rapid decline in wild tiger populations.
- These countries adopted the **Global Tiger Recovery Programme** and the **TX2 goal**, which aimed to double the global wild tiger population by 2022.
- The day seeks to mobilise governments, conservation organisations and communities against habitat loss, poaching and illegal wildlife trade.

Why Are Tigers Important?

- **Apex predators:** Tigers regulate herbivore populations and maintain balance in forest food chains.
- **Umbrella species:** Conserving large tiger habitats indirectly protects numerous plant and animal species.
- **Indicator species:** A stable tiger population indicates adequate prey, water, vegetation and habitat connectivity.
- **Ecosystem services:** Tiger landscapes support carbon storage, watershed protection, climate regulation and local livelihoods.

Tiger Conservation in India

Indicator	Latest official position
Estimated tiger population	3,682
Estimation range	3,167–3,925
Annual growth rate	6.1%
Tiger reserves	58
Tiger-range states	18
Area under tiger reserves	84,487 sq. km
Share of India's geographical area	2.56%

India hosts more than **70% of the world's wild tiger population**. Approximately one-third of India's tigers occur outside notified tiger reserves, making wildlife corridors and adjoining forests important for long-term conservation.

State-wise Tiger Population

According to the All India Tiger Estimation 2022:

- **Madhya Pradesh:** 785
- **Karnataka:** 563
- **Uttarakhand:** 560
- **Maharashtra:** 444

Corbett recorded the highest tiger abundance among individual tiger reserves, followed by Bandipur, Nagarhole and Bandhavgarh.

Major Conservation Measures

- **Project Tiger**
 - Launched in 1973 as a Centrally Sponsored Scheme.
 - Began with nine tiger reserves covering approximately 18,278 sq. km.
 - Supports habitat management, anti-poaching operations, eco-development and conflict mitigation.
- **National Tiger Conservation Authority**
 - A statutory body under the Ministry of Environment, Forest and Climate Change.
 - Constituted under the **Wild Life (Protection) Act, 1972**.
 - Approves Tiger Conservation Plans and monitors the management of tiger reserves.
- **All India Tiger Estimation**
 - Conducted once every four years by NTCA in collaboration with the Wildlife Institute of India and state forest departments.
 - Uses camera traps, field surveys, geographical information systems and statistical modelling.
- **M-STrIPES**
 - Full form: **Monitoring System for Tigers-Intensive Protection and Ecological Status**.
 - A digital platform used for patrolling, ecological monitoring and recording human-wildlife conflict.

Legal Provisions

- The tiger is protected under **Schedule I of the Wild Life (Protection) Act, 1972**, providing the highest level of legal protection.
- **Section 38L:** Provides for the constitution of the National Tiger Conservation Authority.
- **Section 38V:** Requires each tiger reserve to have an approved Tiger Conservation Plan.
- Tiger reserves are notified by state governments on the advice of NTCA.
- A Tiger Conservation Plan contains:
 - Core or critical tiger-habitat plan
 - Buffer-area plan
 - Adjoining-area and wildlife-corridor plan

World Nature Conservation Day Promotes Sustainable Use of Natural Resources

What's the News?

- **World Nature Conservation Day** is observed annually on **28 July** to promote the protection of biodiversity, ecosystems and natural resources.
- The observance highlights threats such as deforestation, habitat fragmentation, pollution, climate change, overexploitation and species loss.
- It encourages governments, communities and individuals to integrate conservation with economic development and sustainable lifestyles.
- **No authoritative international organisation has announced an official global theme for 2026.** Themes or slogans appearing in some reports should therefore not be treated as official for examination purposes.

World Nature Conservation Day?

World Nature Conservation Day is a widely observed environmental awareness day focusing on the responsible use and restoration of:

- Forests and wildlife
- Rivers, wetlands and oceans
- Soil and agricultural ecosystems
- Freshwater and mineral resources
- Air quality and ecological habitats

Unlike World Environment Day, it is **not an officially proclaimed United Nations international day**. Its exact founder and year of establishment are also not documented in an authoritative global resolution. The **1972 Stockholm Conference** was an important milestone in international environmental governance, but it should not be described as the formal origin of this observance.

Why Does Nature Conservation Matter?

Healthy ecosystems provide essential services such as:

- Carbon sequestration and climate regulation
- Pollination and soil fertility
- Clean air and freshwater
- Food, medicine and raw materials
- Flood control and coastal protection
- Livelihoods for indigenous and forest-dependent communities

Globally, around **one million of an estimated eight million plant and animal species** face extinction. Human activity has significantly altered approximately **75% of the Earth's land surface**, while

current consumption patterns use resources equivalent to about **1.6 Earths**.

Global Biodiversity Framework

The **Kunming-Montreal Global Biodiversity Framework**, adopted under the Convention on Biological Diversity, contains:

- **4 long-term goals for 2050**
- **23 action-oriented targets for 2030**

Important targets include:

- Restoring at least **30% of degraded terrestrial, inland-water, coastal and marine ecosystems** by 2030.
- Conserving and effectively managing at least **30% of land, inland waters, coastal areas and oceans** by 2030—the “30×30” target.
- Reducing pollution and environmentally harmful subsidies.
- Ensuring equitable participation of indigenous peoples and local communities.
- Mobilising at least **\$200 billion annually** for biodiversity-related action from all sources.

Nature Conservation in India

According to the **India State of Forest Report 2023**:

Indicator	Area	Share of geographical area
Forest cover	7,15,343 sq. km	21.76%
Tree cover	1,12,014 sq. km	3.41%
Total forest and tree cover	8,27,357 sq. km	25.17%

India's total forest and tree cover increased by approximately **1,446 sq. km** compared with the previous assessment.

Constitutional and Legal Framework

- **Article 48A**
 - Directs the State to protect and improve the environment and safeguard forests and wildlife.
- **Article 51A(g)**
 - Makes it a Fundamental Duty of every citizen to protect and improve forests, lakes, rivers and wildlife and show compassion for living creatures.
- **Wild Life (Protection) Act, 1972**
 - Provides for wildlife protection, protected areas and regulation of wildlife trade.
 - Establishes the National and State Boards for Wildlife.
- **Environment (Protection) Act, 1986**
 - Umbrella legislation empowering the Union Government to protect

and improve environmental quality.

- **Biological Diversity Act, 2002**

- Focuses on:
 - Conservation of biological diversity
 - Sustainable use of biological resources
 - Fair and equitable sharing of benefits
- Provides for the National Biodiversity Authority, State Biodiversity Boards and local Biodiversity Management Committees.

Additional Information

- **National Mission for a Green India**

- Seeks to improve forest quality, ecosystem services, carbon sequestration and the livelihood security of forest-dependent communities.

- **MISHTI**

- *Mangrove Initiative for Shoreline Habitats and Tangible Incomes*
- Supports mangrove restoration and afforestation along India's coastline.

- **Amrit Dharohar**

- Promotes conservation of Ramsar sites through community participation, sustainable ecosystem management and livelihood generation.

- **Mission LiFE**

- *Lifestyle for Environment*
- Encourages environmentally responsible behavioural changes involving energy, water, transport, consumption and waste management.

- **Related Sustainable Development Goals**

- SDG 6: Clean Water and Sanitation
- SDG 12: Responsible Consumption and Production
- SDG 13: Climate Action
- SDG 14: Life Below Water
- SDG 15: Life on Land

World Hepatitis Day 2026 Calls for Breaking Barriers to Care What's the News?

- **World Hepatitis Day** is observed annually on **28 July** to raise awareness about viral hepatitis, which can cause liver inflammation, cirrhosis and liver cancer.
- The official WHO theme for 2026 is **“Hepatitis: Let's Break It Down.”**

- The theme calls for removing financial, social and health-system barriers that restrict access to vaccination, testing, treatment and care.
- WHO's high-level commemoration focused on greater political commitment, investment, equitable healthcare access and integration of hepatitis services into primary healthcare and universal health coverage.

Global Hepatitis Burden

According to the WHO Global Hepatitis Report 2026:

Indicator	Global position in 2024
People living with chronic hepatitis B	240 million
People living with hepatitis C	47 million
Total chronic hepatitis B or C cases	287 million
Hepatitis B and C deaths	1.3 million
New chronic hepatitis B infections	0.9 million
New hepatitis C infections	0.9 million
Newborns receiving timely hepatitis B birth dose	45%

Hepatitis B and C account for over **95% of viral hepatitis-related deaths**. Less than 5% of people living with chronic hepatitis B were receiving treatment, while global progress towards eliminating viral hepatitis by 2030 remained off track.

Hepatitis Types

Type	Main transmission	Key feature
Hepatitis A	Contaminated food or water	Usually acute; vaccine available
Hepatitis B	Blood, sexual contact and mother-to-child transmission	May become chronic; vaccine available
Hepatitis C	Primarily infected blood	Frequently chronic; curable with antiviral medicines
Hepatitis D	Occurs only with hepatitis B infection	Can cause severe liver disease
Hepatitis E	Contaminated water	Usually acute; associated with poor sanitation

Hepatitis B, C and D can cause chronic infection leading to cirrhosis and hepatocellular carcinoma. There is no effective vaccine against hepatitis C, but direct-acting antiviral medicines can cure more than **95% of cases**.

Symptoms and Diagnosis

Many people remain asymptomatic for several years. Possible symptoms include:

- Fatigue and fever
- Loss of appetite
- Nausea and vomiting
- Abdominal discomfort
- Dark urine and pale stools
- Joint pain
- Yellowing of the skin and eyes, or jaundice

Laboratory blood tests are required to identify the hepatitis virus and determine whether the infection is acute or chronic. Early diagnosis reduces the risk of advanced liver disease and prevents further transmission.

Prevention and Treatment

- Administer the hepatitis B vaccine to newborns within **24 hours of birth**, followed by the complete vaccination schedule.
- Ensure safe blood transfusion, sterile injections and infection-control practices.
- Avoid sharing needles, razors and other objects that may be contaminated with blood.
- Use sterile equipment for tattoos and body piercing.
- Promote safe sexual practices and testing among high-risk groups.
- Improve access to safe drinking water, sanitation and food hygiene to prevent hepatitis A and E.
- Screen pregnant women for hepatitis B and provide antiviral prophylaxis when medically indicated.
- Treat hepatitis C with curative direct-acting antivirals and manage chronic hepatitis B with long-term antiviral therapy.

History of the Day

- World Hepatitis Day commemorates the birth anniversary of **Dr Baruch Samuel Blumberg**.
- He discovered the hepatitis B virus and contributed to the development of its diagnostic test and vaccine.
- The **World Health Assembly**, through Resolution **WHA 63.18**, designated 28 July as World Hepatitis Day in 2010.

- It is one of the WHO's officially recognised global public-health campaigns.

Hepatitis Control in India

National Viral Hepatitis Control Programme

- Launched under the **National Health Mission** on World Hepatitis Day in 2018.
- Implemented by the Ministry of Health and Family Welfare through the National Centre for Disease Control.
- Major objectives include:
 - Eliminating hepatitis C as a public-health problem by **2030**.
 - Reducing illness and deaths from hepatitis B and C.
 - Reducing risks associated with hepatitis A and E.
 - Providing phased free screening, diagnosis and treatment for hepatitis B and C.
 - Strengthening surveillance, laboratories and healthcare-worker capacity.

The programme estimates that India has approximately **40 million people with hepatitis B** and **6–12 million people with hepatitis C**. These are programme-level burden estimates rather than results of a new nationwide prevalence survey.

Important Interventions

- Hepatitis B vaccination under the **Universal Immunisation Programme**
- Birth-dose vaccination within 24 hours
- Screening of pregnant women for hepatitis B
- Safe blood and blood-product services
- Use of reuse-prevention syringes
- Free hepatitis B and C diagnostics and treatment
- Viral Hepatitis Information and Management System
- Integration with maternal health, HIV, cancer-control and primary healthcare services

Additional Information

- **SDG 3.3**
 - Calls for combating hepatitis and other communicable diseases by 2030.
- **WHO elimination targets**
 - Reduce new chronic hepatitis B infections by **95%**.
 - Reduce hepatitis-related deaths by **65%**, compared with the 2015 baseline.
 - Achieving these targets requires wider birth-dose vaccination, testing and treatment coverage.
- **WHO South-East Asia regional focus**

- The regional message for 2026 was **"Eliminating Hepatitis Everywhere, for Everyone – Right Now."**
- It emphasised immediate and equitable delivery of prevention, diagnosis and treatment services.

World Day Against Trafficking in Persons 2026 Highlights Forced Online Scamming

What's the News?

The **World Day Against Trafficking in Persons** is observed annually on **30 July** to raise awareness about human trafficking, protect victims' rights and strengthen international cooperation.

The **2026 theme is "Trapped behind the scam."** It highlights the growing trafficking of people into online scam centres, where organised criminal groups force victims to conduct cyber-enabled financial fraud.

2026 Theme: "Trapped behind the scam"

The theme draws attention to the hidden victims behind online scams. Many individuals operating fraudulent accounts or contacting potential targets are themselves victims of trafficking and forced criminality.

Common fraudulent activities include:

- Cryptocurrency and investment scams.
- Romance scams.
- Phishing and digital-payment fraud.
- Fake e-commerce or employment schemes.
- Social-media impersonation.

The campaign emphasises that law-enforcement agencies must identify coercion and avoid automatically treating trafficked persons as willing cybercriminals.

How Are Victims Trapped?

Trafficking networks commonly use the following process:

- **Deceptive recruitment**
 - Fake advertisements offer high-paying overseas jobs in information technology, marketing, customer support or data entry.
- **Cross-border movement**
 - Victims are transported to another country, sometimes through irregular routes.
- **Confinement**
 - Passports and mobile phones may be confiscated.
 - Victims are confined in guarded scam compounds.

- **Forced criminality**
 - Victims are compelled to meet fraud targets under threats, violence, debt bondage and surveillance.
- **Further exploitation**
 - Victims may be sold or transferred between criminal organisations when they fail to meet targets.

Scale of Scam-Centre Crime

UN estimates indicate that scams targeting people in East and South-East Asia caused approximately **US\$18–37 billion in financial losses during 2023**.

Scam centres increasingly combine:

- Human trafficking.
- Cybercrime.
- Money laundering.
- Corruption.
- Illegal gambling.
- Drug and wildlife trafficking.

This convergence allows transnational organised crime groups to diversify their operations and conceal illicit financial flows.

History of the Observance

- The United Nations General Assembly designated **30 July** as the World Day Against Trafficking in Persons through **Resolution A/RES/68/192**.
- The resolution was adopted in **2013**.
- The day was first observed in **2014**.
- The United Nations Office on Drugs and Crime—**UNODC**—leads the global campaign.

Human Trafficking?

Under the Palermo Protocol, trafficking in persons generally contains three elements:

- **Act**
 - Recruitment, transportation, transfer, harbouring or receipt of persons.
- **Means**
 - Force, coercion, abduction, fraud, deception, abuse of power or exploitation of vulnerability.
- **Purpose**
 - Exploitation, including forced labour, sexual exploitation, slavery, servitude, forced criminality or organ removal.

For trafficking involving a **child**, proving the use of coercion, fraud or other “means” is not necessary when the act is undertaken for exploitation.

India's Anti-Trafficking Framework

- **Article 23 of the Constitution**

- Prohibits trafficking in human beings, *begar* and similar forms of forced labour.
- A violation is punishable according to law.

• Bharatiya Nyaya Sanhita, 2023

- **Section 143:** Trafficking of persons.
- **Section 144:** Exploitation of a trafficked person.
- **Section 146:** Unlawful compulsory labour.

• Immoral Traffic (Prevention) Act, 1956

- Primarily addresses trafficking and exploitation connected with commercial sexual exploitation.
- It is not a comprehensive law covering every form of human trafficking.

• Anti-Human Trafficking Units

- Financial assistance has been provided to States and Union Territories for setting up or upgrading AHTUs covering districts.
- As police and public order are State subjects, prevention, investigation and prosecution are primarily handled by State governments.

• Shakti Sadan

- Operates under the **Samarthya** component of Mission Shakti.
- Provides shelter, counselling, medical care, legal assistance, vocational training and rehabilitation for women in distress, including trafficked women.

International Initiatives

• Palermo Protocol

- Formally called the Protocol to Prevent, Suppress and Punish Trafficking in Persons, Especially Women and Children.
- Supplements the UN Convention against Transnational Organized Crime.

• Blue Heart Campaign

- UNODC's global awareness campaign against human trafficking.
- The blue heart symbolises solidarity with victims and the cold-heartedness of traffickers.

• Sustainable Development Goals

- **Target 5.2:** Eliminate trafficking and other forms of exploitation of women and girls.

- **Target 8.7:** End forced labour, modern slavery and human trafficking.
- **Target 16.2:** End abuse, exploitation and trafficking of children.

Additional Info

- **Trafficking vs migrant smuggling**

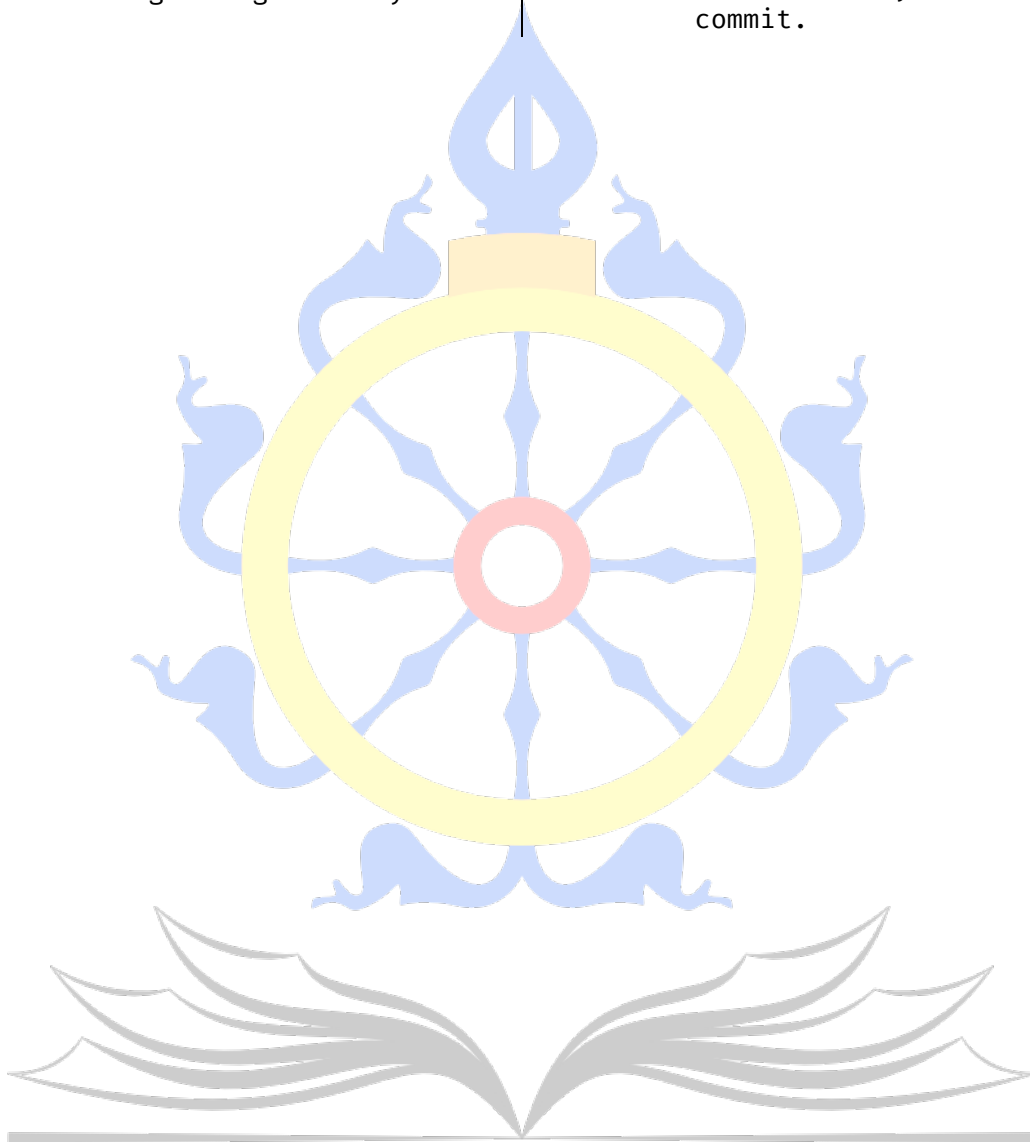
- Trafficking requires exploitation and may occur without crossing an international border.
- Migrant smuggling involves facilitating illegal entry into

another country for financial or material benefit.

- A smuggling situation can become trafficking when migrants are subsequently coerced or exploited.

- **Key policy requirement**

- Governments must combine prosecution of criminal networks with victim identification, rehabilitation, safe repatriation and the non-punishment of victims for offences they were compelled to commit.



State Affairs

Gujarat Builds First Air-Filled Rubber Dams Using South Korean Technology

What's the News?

Gujarat is constructing its first **two air-filled rubber dams** using **South Korean rubber bladder technology**. The projects are being built on the **Heran River** in Chhota Udepur district and the **Ambika River** in Tapi district. They aim to improve **irrigation, groundwater recharge, water storage and flood management**.

Air-Filled Rubber Dam?

- An air-filled rubber dam is an **inflatable hydraulic structure** placed across a river or canal.
- It uses a **rubber bladder** that can be:
 - **Inflated** to raise water levels and store water.
 - **Deflated** during floods to allow excess water and silt to pass.
- It is more flexible than a conventional concrete dam and is useful for small-to-medium water management projects.

Gujarat's Two Projects

- **Rajvasana Rubber Dam**
 - Location: Rajvasana, Chhota Udepur district
 - River: Heran River
 - Project cost: **₹82.97 crore**
 - Status: Around **75% complete**
 - Expected benefit: Irrigation for over **3,420 hectares**
 - Coverage: Around **25 villages**
- **Pathakwadi Rubber Dam**
 - Location: Pathakwadi, Tapi district
 - River: Ambika River
 - Project cost: **₹79.13 crore**
 - Status: Around **90% complete**
 - Expected benefit: Irrigation for about **650 hectares**
- Combined investment: Over **₹162 crore**.

Technology Features

- Rubber bladders have been imported from **South Korea**.
- Key technical details:
 - Thickness: **18 mm to 32 mm**
 - Heat tolerance: Above **50°C**
 - Estimated service life: Around **30 years**
- Both projects will use **SCADA-based automation**.
 - SCADA: **Supervisory Control and Data Acquisition**
 - Function: Enables automated monitoring and electronic

control of inflation and deflation.

Additional Info

- **Rubber dams vs conventional dams**
 - Rubber dams are flexible, inflatable and easier to operate in variable flow conditions.
 - Conventional dams are fixed concrete or masonry structures and usually involve higher construction and environmental costs.
- **Water management relevance**
 - Such structures can help in:
 - Local irrigation
 - River flow regulation
 - Check-dam-like water retention
 - Flood moderation
 - Recharge of aquifers
- **SCADA in infrastructure**
 - Used in sectors such as:
 - Water supply systems
 - Power grids
 - Irrigation networks
 - Industrial automation
 - It improves real-time monitoring and reduces manual intervention.

Four States Settle Narmada Project Payment Dispute

What's the News?

Madhya Pradesh, Gujarat, Rajasthan and Maharashtra signed an agreement in New Delhi to settle long-pending payment disputes linked to Narmada Award projects. The pact resolves issues related to cost-sharing for the Sardar Sarovar Project, pending dues, rehabilitation expenditure, compensation for submerged land, and interest burden on construction borrowings. The agreement was signed in the presence of Union Home Minister Amit Shah and Union Jal Shakti Minister C. R. Patil.

Narmada Payment Pact

- The pact covers beneficiary states under the **Narmada Water Disputes Tribunal Award**.
- It provides a **one-time settlement mechanism** for pending dues among the states.
- Major issues resolved:
 - Cost-sharing for **Sardar Sarovar Project**.
 - Issues linked to **Indira Sagar Project**.

- Resettlement & Rehabilitation expenditure.
- Compensation for submerged land.
- Interest on borrowings during project construction.
- Maharashtra CM Devendra Fadnavis stated that claims of around ₹2,000-₹3,000 crore against Maharashtra were waived, while the state would pay ₹27 crore.

Narmada Water Disputes Tribunal

- Constituted under the **Inter-State Water Disputes Act, 1956**.
- Set up to adjudicate disputes over sharing of Narmada waters and related project obligations.
- The Award allocated the utilisable waters of the Narmada among:
 - Madhya Pradesh
 - Gujarat
 - Rajasthan
 - Maharashtra
- It also determined shares in power generated from the **Navagam Canal Head Power House** and **River Bed Power House**.

Additional Info

- **Narmada River**
 - Major west-flowing river of India.
 - Flows through central and western India.
 - Drains into the **Arabian Sea**.
 - Associated with major multipurpose projects for irrigation, drinking water and hydropower.
- **Sardar Sarovar Project**
 - Located on the **Narmada River in Gujarat**.
 - Multipurpose project involving irrigation, drinking water supply and hydropower.
 - Beneficiary states include Gujarat, Madhya Pradesh, Rajasthan and Maharashtra.
- **Indira Sagar Project**
 - Located on the **Narmada River in Madhya Pradesh**.
 - Important reservoir and hydropower project.
 - Linked with inter-state cost-sharing and rehabilitation obligations.
- **Constitutional Link**
 - **Article 262:** Parliament may provide for adjudication of inter-state river water disputes.
 - Parliament may also exclude jurisdiction of the Supreme Court or other courts in such disputes.

- **Inter-State Water Disputes Act, 1956** operationalises this constitutional provision.

Jaipur Ranks Sixth in Time Out's World's Happiest Cities Survey 2026

What's the News?

Jaipur has been ranked **sixth globally** in Time Out's list of the **World's Happiest Cities 2026**. It was the highest-ranked Indian city in the survey.

The ranking was based on responses from more than **24,000 city residents worldwide** regarding personal happiness, positivity, community experience and everyday life in their cities. **Bath in the United Kingdom** secured the first position.

How Were Cities Ranked?

Respondents assessed five broad statements:

- Their city makes them happy.
- They feel happier there than in other places.
- People in the city appear positive.
- Everyday experiences in the city bring them joy.
- Happiness in the city has increased recently.

Cities were ranked according to the percentage of positive responses. To ensure wider geographical representation, only the **highest-ranked city from each country** was included in the final list of 20.

It is therefore a **resident-perception survey**, rather than an assessment based primarily on administrative or economic statistics.

Top 10 Cities

1. Bath – United Kingdom
2. Panama City – Panama
3. Guadalajara – Mexico
4. Medellín – Colombia
5. Kraków – Poland
6. Jaipur – India
7. Chicago – United States
8. Cape Town – South Africa
9. Shanghai – China
10. Gothenburg – Sweden

Jaipur's Significance

Jaipur's inclusion highlights the role of:

- Strong cultural identity and community life
- Heritage architecture and public spaces
- Traditional markets, cuisine, festivals and crafts
- Tourism-linked employment and economic activity

- Residents' emotional connection with the city
- Jaipur, popularly called the **Pink City**, is the capital of Rajasthan and forms part of India's major heritage-tourism circuit.

Exam Caution: Not the Happy City Index

The ranking should not be confused with the **Happy City Index 2026** published by the Institute for Quality of Life and Happy City Hub.

- The official Happy City Index assessed cities through **64 indicators across six dimensions**:
 - Citizens
 - Governance
 - Environment
 - Economy
 - Health
 - Mobility
- It covered **251 cities**, with 250 formally ranked.
- Copenhagen** ranked first in that index.
- Mumbai**, at rank 237, was the Indian city appearing in its published ranking.
- Jaipur did not rank sixth in the official Happy City Index.

Additional Info

- Time Out survey**
 - Subjective and perception-based
 - Based on residents' responses
 - Bath ranked first and Jaipur sixth
- Happy City Index**
 - Data- and indicator-based urban assessment
 - Developed by the Institute for Quality of Life and Happy City Hub
 - Copenhagen ranked first
- World Happiness Report**
 - Ranks countries rather than cities
 - Should not be confused with either of the above city-level exercises

Delhi Ranks 120th in Global Liveability Index 2026

What's the News?

- New Delhi** ranked **120th among 173 cities** in the **Economist Intelligence Unit's Global Liveability Index 2026**.
- Delhi received an overall score of **48.1 out of 100** and retained its previous rank.
- Other Indian cities mentioned in the ranking were:

- Mumbai**: 121st
- Chennai**: 123rd
- Bengaluru**: 127th

- Copenhagen, Denmark**, retained the top position, followed by **Vienna** and **Melbourne**.
- The index ranks **cities, not countries or nations**.

Delhi's Category-wise Performance

Delhi's scores were:

- Education**: 66.7
- Infrastructure**: 58.9
- Stability**: 50
- Healthcare**: 41.7
- Culture and Environment**: 35.4
- Overall score**: 48.1

Education was Delhi's strongest category, while **culture and environment** received its lowest score. The figures indicate continuing challenges involving environmental conditions, healthcare access and pressure on urban infrastructure.

Global Liveability Index?

- It is an annual urban assessment prepared by the **Economist Intelligence Unit (EIU)**, which is part of The Economist Group.
- The 2026 edition evaluated **173 cities through 30 qualitative and quantitative indicators**.
- Cities receive scores from **1 to 100**:
 - 100**: Ideal living conditions
 - Below 40**: Intolerable living conditions
- The index is used for comparing urban conditions and assessing hardship allowances for employees posted to different cities.

Assessment Categories

The overall score is calculated using five weighted categories:

- Stability – 25%**
 - Crime, terrorism, military conflict and civil unrest
- Healthcare – 20%**
 - Availability and quality of public and private healthcare
- Culture and Environment – 25%**
 - Climate, corruption, censorship, cultural facilities and availability of goods and services
- Education – 10%**
 - Availability and quality of private and public education
- Infrastructure – 20%**
 - Roads, public transport, housing, energy, water and telecommunications

Additional Info

- **Top three cities**
 - Copenhagen – 1st
 - Vienna – 2nd
 - Melbourne – 3rd
- **Lowest-ranked city**
 - Damascus, Syria – 173rd

Gujarat Tops NITI Aayog's First Investment Friendliness Index

What's the News?

NITI Aayog released the inaugural **Investment Friendliness Index (IFI) 2026**, assessing how effectively States and Union Territories create an environment capable of attracting and retaining private investment.

Gujarat ranked first, followed by **Maharashtra** and **Tamil Nadu**. Goa and Odisha completed the group of five "Top Performers". The index seeks to promote evidence-based reforms and competitive federalism among subnational governments.

Investment Friendliness Index?

The IFI is a comprehensive assessment of the investment ecosystem across all **28 States and eight Union Territories**.

It measures conditions influencing domestic and foreign private investment, including infrastructure availability, regulatory predictability, economic performance, resources, governance and fiscal capacity.

- **Scoring scale:** 0–100
- **Total indicators:** 84
 - 62 secondary-data indicators
 - 22 investor-perception indicators
- **Investor survey:** 1,850 investors
- **Responses received:** 2,503
- **Stakeholder inputs:** 165 stakeholders
- **Peer groups:**
 - Large States
 - Hilly and North-Eastern States
 - City States and Union Territories

Leading States

Rank	State/UT	Score
1	Gujarat	56.6
2	Maharashtra	53.7
3	Tamil Nadu	53.3
4	Goa	53.1
5	Odisha	52.4

Peer-Group Leaders

- **Large States:** Gujarat, Maharashtra and Tamil Nadu
- **Hilly and North-Eastern States:** Uttarakhand, Assam and Himachal Pradesh
- **City States and UTs:** Goa, Delhi and Chandigarh

Performance Categories

States and UTs were divided into four performance groups:

- **Top Performers:** Score above 50
 - Five States
- **Frontrunners:** Score from 45 to 50
 - 15 States and UTs
- **Emerging Performers:** Score of at least 40 but below 45
 - Eight States and UTs
- **Aspiring States:** Score below 40
 - Eight States and UTs

The categorisation is intended to identify reform priorities rather than merely produce an overall ranking.

Eight Assessment Pillars

Pillar	Weight
Infrastructure	25%
Business climate	20%
Resources	15%
Regulatory ease	12%
Government policy	10%
Financial health	7%
Institutional environment	6%
Environmental resilience	5%

The pillars examine factors such as logistics, energy, digital connectivity, industrial infrastructure, economic performance, innovation, human and natural resources, approvals, legal compliance, fiscal position, governance and climate-related risks.

Why Did the Top States Perform Well?

- **Gujarat**
 - Efficient port operations and low turnaround time.
 - Reliable and competitive power supply.
 - Strong regulatory ease, financial health and government policy environment.
- **Maharashtra**
 - High private-equity and venture-capital investment.
 - Strong economic indicators and business climate.
 - Highest number of Atal Tinkering Labs.
- **Tamil Nadu**
 - Strong manufacturing and export ecosystem.
 - Efficient port infrastructure.
 - Nearly 100% conversion of investment memoranda of understanding into projects.

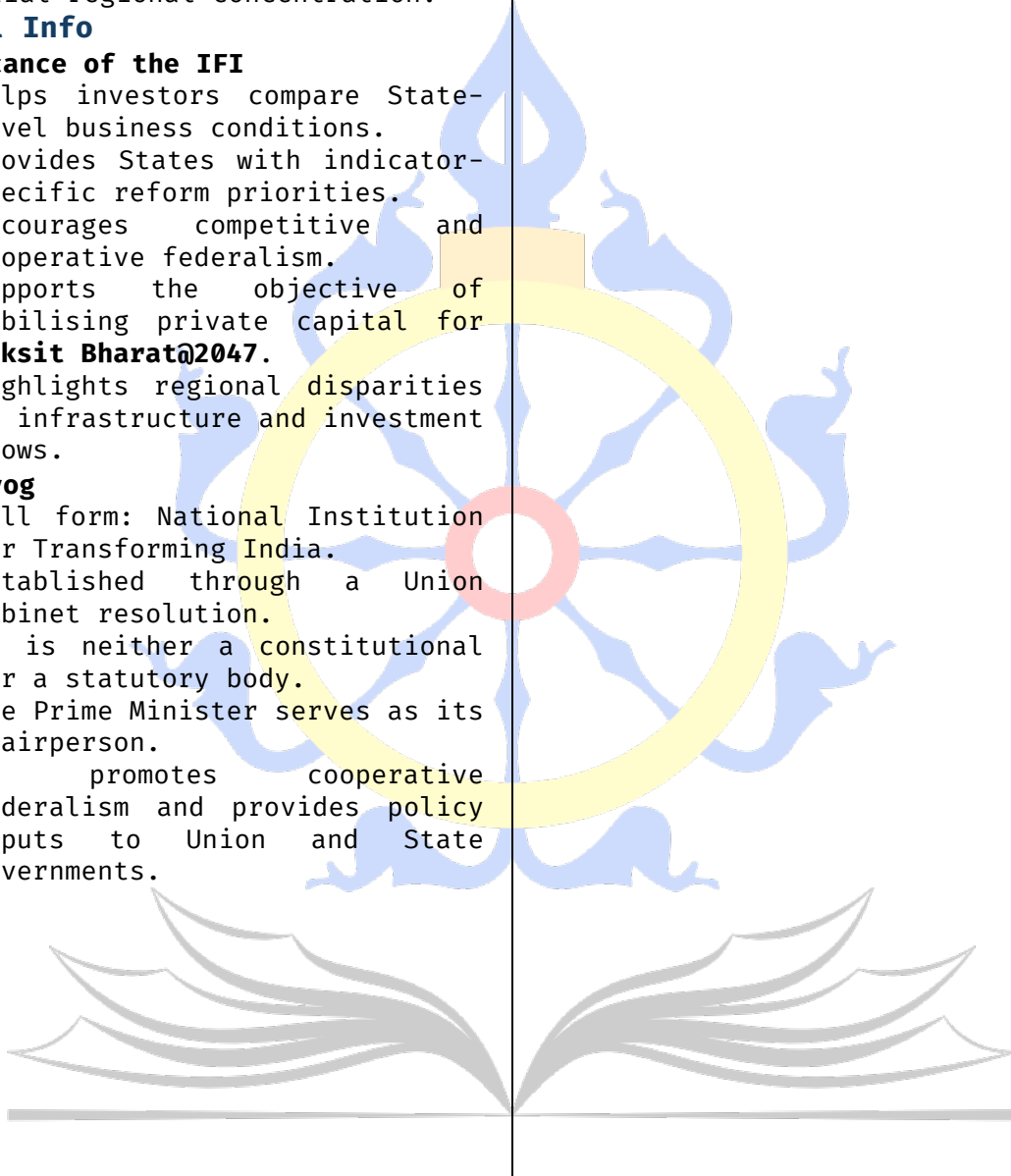
Investment Context

- India's total investment reached **29.9% of GDP** in FY2024–25, compared with a decadal average of 29.1%.

- Government and public-sector capital expenditure grew by **13.9%** during FY2021-22 to FY2023-24.
- Household capital expenditure, mainly real estate, grew by **13.4%**.
- Private capital expenditure grew more slowly at **8.7%**.
- Maharashtra, Karnataka, Gujarat, Delhi and Tamil Nadu collectively attract approximately **85% of India's FDI inflows**.
- The North-Eastern States collectively receive less than **1%**, indicating substantial regional concentration.

Additional Info

- **Significance of the IFI**
 - Helps investors compare State-level business conditions.
 - Provides States with indicator-specific reform priorities.
 - Encourages competitive and cooperative federalism.
 - Supports the objective of mobilising private capital for **Viksit Bharat@2047**.
 - Highlights regional disparities in infrastructure and investment flows.
- **NITI Aayog**
 - Full form: National Institution for Transforming India.
 - Established through a Union Cabinet resolution.
 - It is neither a constitutional nor a statutory body.
 - The Prime Minister serves as its Chairperson.
 - It promotes cooperative federalism and provides policy inputs to Union and State governments.



Defence

Army to Raise 'Baaz Battalions' for Drone Warfare

What's the News?

The Indian Army has decided to raise specialised **Baaz Battalions** to strengthen its drone warfare capabilities. These dedicated units will function under the **Army Aviation Corps** and focus on intelligence, surveillance, reconnaissance (ISR), target acquisition, and tactical drone operations. The initiative is part of the Army's broader modernization drive to institutionalise unmanned systems and improve battlefield awareness.

Baaz Battalions

- **Baaz Battalions** are specialised drone units designed to centralise and professionalise the Army's Remotely Piloted Aircraft (RPA) operations.
- They will:
 - Conduct **Intelligence, Surveillance and Reconnaissance (ISR)** missions.
 - Support precision targeting and battlefield monitoring.
 - Enhance real-time situational awareness for frontline commanders.
 - Integrate drone operations with ground formations for faster decision-making.
- These battalions will build upon the Army's existing **RPA Flights**, creating a dedicated cadre trained in operating, maintaining, analysing and integrating unmanned systems.

Why are Baaz Battalions Being Raised?

The decision is driven by lessons from recent military operations and evolving warfare trends.

- Border standoffs along the **Line of Actual Control (LAC)** highlighted the need for persistent aerial surveillance.
- **Operation Sindoor** demonstrated the operational value of drones in modern combat.
- The **Russia-Ukraine conflict** showcased the growing role of drones in reconnaissance, targeting and precision strikes.
- Increasing deployment of drones by neighbouring adversaries has accelerated India's focus on unmanned warfare capabilities.

Drone Modernisation

- The Army's drone inventory has expanded from **a few hundred systems** two years ago to **over 50,000 unmanned systems**.
- The inventory is expected to continue expanding with continuous induction and technological upgrades.
- Alongside offensive capabilities, the Army is also strengthening **counter-drone** detection and neutralisation systems.

Additional Info

Army Aviation Corps

- Established: **1986**
- Functions:
 - Operates helicopters and unmanned aerial systems for the Indian Army.
 - Provides tactical air mobility, reconnaissance, casualty evacuation and logistical support.

Intelligence, Surveillance and Reconnaissance (ISR)

- A military capability for:
 - Collecting intelligence.
 - Monitoring battlefield activities.
 - Supporting operational planning and precision engagement.

Remotely Piloted Aircraft (RPA)

- Aircraft controlled remotely by trained operators.
- Used for:
 - Surveillance
 - Reconnaissance
 - Target acquisition
 - Precision strike missions
 - Battle damage assessment

Line of Actual Control (LAC)

- The de facto border separating India and China.
- Extends for about **3,488 km** (Indian estimate).
- Frequent tensions along the LAC have accelerated India's surveillance and drone modernisation efforts.

Decade of Transformation

- A long-term Indian Army modernisation initiative aimed at:
 - Technology integration.
 - Force restructuring.
 - Indigenous capability development.
 - Preparing for future technology-intensive warfare.

India's Operational Deployment of Nuclear Warheads: SIPRI Assessment

What's the News?

The **Stockholm International Peace Research Institute (SIPRI)**, in its **Yearbook 2026**, has assessed that India has **operationally deployed 12 nuclear warheads** for the first time during peacetime. SIPRI estimates India's total nuclear arsenal at **190 warheads**, with around **12 deployed** and the remaining held in storage. The assessment indicates a shift towards greater operational readiness, although the Government of India has not officially confirmed any change in its nuclear posture.

What Does "Operationally Deployed" Mean?

- SIPRI classifies a nuclear warhead as **operationally deployed** if it is:
 - Mounted on a delivery system (missile or aircraft), or
 - Located at a base with operational military forces and ready for rapid use.
- This differs from India's traditional practice of storing **warheads separately from delivery systems** during peacetime.
- SIPRI estimates:
 - Total nuclear warheads:** ~190
 - Operationally deployed:** ~12
 - Stored:** ~178

India's Nuclear Doctrine

India's declared nuclear doctrine continues to rest on:

- No First Use (NFU):** Nuclear weapons will only be used in retaliation to a nuclear attack.
- Credible Minimum Deterrence:** Maintain only the minimum arsenal necessary for effective deterrence.
- Massive Retaliation:** Any nuclear attack on India or Indian forces would invite massive retaliation designed to inflict unacceptable damage.

No official announcement has indicated any change to these principles.

Nuclear Triad

India possesses a **nuclear triad**, enabling nuclear weapon delivery through all three domains:

- Land-based:** Agni series ballistic missiles.
- Air-based:** Fighter aircraft capable of delivering nuclear weapons.
- Sea-based:** Nuclear-powered ballistic missile submarines (SSBNs) equipped

with submarine-launched ballistic missiles (SLBMs).

The sea-based leg provides the most survivable component of India's deterrence.

Additional Info

Stockholm International Peace Research Institute (SIPRI)

- Established: **1966**
- Headquarters: **Stockholm, Sweden**
- Independent international institute researching:
 - Armaments
 - Arms control
 - Military expenditure
 - International security
- Publishes the annual **SIPRI Yearbook**, a globally recognised assessment of nuclear arsenals and military trends.

Advantages

- Assured second-strike capability
- Higher survivability
- Greater strategic deterrence

Nuclear Terms

- Operationally Deployed Warheads:** Warheads mounted on launch systems or located with operational forces for immediate use.
- Second-Strike Capability:** Ability to launch a retaliatory nuclear strike even after suffering a first nuclear attack.
- Credible Minimum Deterrence:** Maintaining the minimum nuclear force required to deter adversaries.

India's Strategic Nuclear Forces

- Estimated total nuclear warheads (SIPRI 2026): **190**
- Estimated operationally deployed warheads: **12**
- Delivery platforms include:
 - Agni ballistic missiles
 - Aircraft
 - SSBNs with SLBMs

DRDO Tests Pinaka Long-Range Guided Rocket at 60-km Minimum Range

What's the News?

The **Defence Research and Development Organisation (DRDO)** successfully flight-tested the **Pinaka Long-Range Guided Rocket (LRGR)** at the **Integrated Test Range, Chandipur, Odisha**.

The rocket was tested at a **user-defined minimum range of 60 km**. It completed all planned in-flight manoeuvres, followed the predicted trajectory and struck the designated target with "textbook precision".

The LRGR was fired from an **in-service Pinaka launcher**, demonstrating that the same launcher can deploy Pinaka rocket variants of different ranges.

Pinaka LRGR

- Pinaka is an indigenous **Multi-Barrel Rocket Launcher (MBRL)** system developed for the Indian Army.
- The LRGR is a precision-guided, extended-range version of the Pinaka rocket.
- The latest trial validated its performance at the **minimum strike range of 60 km**.
- An earlier maiden trial had validated the LRGR at its **maximum range of 120 km**.
- Thus, 60 km should not be treated as the rocket's maximum range.
- Guidance and control enable the LRGR to strike specific targets more accurately than conventional unguided area-saturation rockets.

Development Agencies

The Pinaka LRGR was developed through collaboration among multiple DRDO laboratories:

- **Armament Research and Development Establishment (ARDE)**
 - Principal designer of the rocket.
 - Located in Pune, Maharashtra.
- **High Energy Materials Research Laboratory (HEMRL)**
 - Associated with energetic materials, propellants and warhead technologies.
- **Defence Research and Development Laboratory (DRDL)**
 - Provided technical support for the development programme.
- **Research Centre Imarat (RCI)**
 - Specialises in guidance, navigation, control and avionics systems.
- **Integrated Test Range and Proof & Experimental Establishment**
 - Coordinated and supported the flight trial.

Additional Info

- **Pinaka**
 - Named after the bow associated with **Lord Shiva**.
 - Developed primarily by DRDO's ARDE.
 - It is an **artillery rocket system**, not a conventional ballistic or cruise missile.
 - Designed for rapid and concentrated fire against enemy troop concentrations, communication facilities,

artillery positions and other battlefield targets.

• Rocket vs missile

- A conventional rocket generally follows an unguided ballistic trajectory.
- A guided rocket incorporates navigation, guidance and control systems for trajectory correction.
- The Pinaka LRGR therefore combines the salvo capability of rocket artillery with precision-strike features.

• Integrated Test Range

- Located at **Chandipur in Balasore district, Odisha**.
- Operated by DRDO.
- Used for testing rockets, missiles and other weapon systems.

IAF Placed Third Among Countries in WDMMA Air-Power Assessment

What's the News?

The **Indian Air Force (IAF)** has been placed behind the United States and Russia—and ahead of China—in the country-level interpretation of the **World Directory of Modern Military Aircraft (WDMMA) Global Air Powers Ranking 2026**.

However, WDMMA's formal table ranks individual military air services separately. Under this classification, the IAF is **sixth**, while China's People's Liberation Army Air Force is **seventh**. The IAF has reportedly remained ahead of the Chinese Air Force in the assessment for the fifth consecutive year.

WDMMA Rankings

Indicator	Indian Air Force	Chinese Air Force
Rank among individual air services	6th	7th
TruVal Rating	69.4	63.8
Aircraft counted	1,716	3,733

The IAF ranks below the US Air Force, US Navy, Russian Air Force, US Army Aviation and US Marine Corps Aviation in the service-wise list.

Note

- **Third position:** Ranking when air power is discussed at the country level.
- **Sixth position:** Official WDMMA ranking of individual air-service branches.
- The ranking should not be interpreted as a definitive assessment of likely performance in an actual war.

TruVal Rating

WDMMA uses a proprietary **TruVal Rating**, or **TVR**, rather than ranking air forces solely by aircraft numbers.

It considers:

- Fleet size, quality and composition.
- Modernisation and logistical support.
- Offensive and defensive capabilities.
- Transport, tanker, trainer and special-mission aircraft.
- Close-air-support and bomber capabilities.
- Aircraft on order.
- Domestic aerospace-manufacturing capacity.
- Inventory balance and operational experience.

WDMMA monitors **48,082 aircraft belonging to 129 air services across 103 countries.**

Why Did India Rank Above China?

Despite China possessing a substantially larger aircraft inventory, the IAF received a higher TVR because the methodology assigns importance to fleet balance, operational experience, logistical capability and the availability of different aircraft categories—not merely numerical strength. WDMMA counts the IAF inventory as comprising approximately:

- **542 fighter aircraft**
- **498 helicopters**
- **282 transport aircraft**
- **374 training aircraft**
- **20 special-mission aircraft**

The database reportedly continued to include the retired MiG-21 in its fighter count, highlighting that open-source rankings may contain data lags.

IAF's Capability Gaps

The high ranking does not eliminate significant structural deficiencies:

- **Fighter squadrons:** Around 29 operational squadrons against a sanctioned strength of 42.
- **Force multipliers:** Limited numbers of airborne early-warning and control aircraft and aerial refuelling tankers.
- **Specialised platforms:** Shortages in electronic warfare and Intelligence, Surveillance, Target Acquisition and Reconnaissance systems.
- **Fleet replacement:** Jaguars, Mirage 2000s and MiG-29s will progressively require replacement.
- **Production constraints:** Timely delivery of indigenous fighters remains critical for preventing further squadron depletion.

Modernisation Measures

- Induction of **Tejas Mk-1A** multirole fighters.
- Development of **Tejas Mk-2** and the fifth-generation **Advanced Medium Combat Aircraft**.
- Upgradation of the Su-30MKI fleet.
- Proposed procurement of additional multirole fighter aircraft.
- Expansion of airborne surveillance, electronic-warfare and aerial-refuelling capabilities.
- Greater emphasis on indigenous defence manufacturing under **Atmanirbhar Bharat**.

Additional Info

Indian Air Force

- **Established:** 8 October 1932.
- **Constitutional head:** President of India, as Supreme Commander of the Armed Forces.
- **Administrative ministry:** Ministry of Defence.
- **Headquarters:** New Delhi.
- **Motto:** *Nabha Sparsham Deeptam*—"Touch the Sky with Glory".
- **Air Force Day:** 8 October.

Major IAF Commands

- Western Air Command – New Delhi
- Eastern Air Command – Shillong
- Central Air Command – Prayagraj
- Southern Air Command – Thiruvananthapuram
- South Western Air Command – Gandhinagar
- Training Command – Bengaluru
- Maintenance Command – Nagpur

India Develops First Indigenous Expendable Turbojet Engine

What's the News?

- India has successfully developed its first indigenous **expendable turbojet engine in the 350-kg thrust class**.
- The engine was designed by the **Gas Turbine Research Establishment (GTRE)**, a laboratory of the Defence Research and Development Organisation.
- Hyderabad-based **Azad Engineering** was selected as the industry partner for its manufacturing and assembly.
- The engine has been realised and delivered to GTRE, demonstrating cooperation between India's defence research establishment and private industry.

Expendable Turbojet Engine

A turbojet is an air-breathing gas-turbine engine that produces thrust through the following process:

1. Air enters through the intake.
2. A compressor raises the air pressure.
3. Fuel is mixed with the compressed air and burned.
4. Hot gases rotate a turbine.
5. High-speed exhaust exits through a nozzle to generate thrust.

An **expendable engine** is designed primarily for single-use or limited-use platforms, such as missiles, aerial targets and certain unmanned systems.

350-kg Thrust Class

- The figure refers to the engine's **thrust output**, not its physical weight.
- **350 kilogram-force** is approximately equal to **3.43 kilonewtons**.
- Engines in this class can provide propulsion for compact, high-speed unmanned or missile-based platforms.
- The indigenous engine was reportedly realised in about **24 months**.

Defence Applications

Reported potential applications include:

- Naval anti-ship and cruise missiles.
 - Unmanned aerial vehicles.
 - Medium-range anti-drone systems.
 - Air-to-air missiles.
 - Air-to-surface missiles.
 - High-speed expendable aerial targets.
- Turbojet propulsion is suited to such platforms because it can provide sustained thrust during powered flight. The final deployment of the engine on a specific weapon system has not yet been officially announced.

GTRE-Industry Partnership

- **Design authority:** Gas Turbine Research Establishment.
- **Manufacturing and assembly partner:** Azad Engineering, Hyderabad.
- **DRDO officials receiving the engine:**
 - Dr K. Rajalakshmi Menon, Director General, Aeronautical Systems.
 - Dr S. V. Ramanamurty, Director, GTRE.
- **Industry representative:** Rakesh Chopdar, Chief Executive Officer of Azad Engineering.

The partnership allowed DRDO's design to be converted into a production-grade physical engine through domestic precision manufacturing.

Additional Info

- **Gas Turbine Research Establishment**
 - Located in Bengaluru, Karnataka.
 - Functions under DRDO's Aeronautical Systems cluster.
 - Works on aero-gas-turbine engines and related propulsion technologies.

Defence Research and Development Organisation

- Functions under the Ministry of Defence.
- Develops defence technologies for aeronautics, missiles, electronics, combat vehicles, naval systems and life sciences.

Turbojet versus Turbofan

- **Turbojet:** Most thrust comes from high-speed exhaust gases.
- **Turbofan:** A significant part of the thrust is generated by air moved by a large fan.
- Turbojets are compact and suitable for certain high-speed applications, while turbofans generally provide better fuel efficiency.

DRDO Successfully Tests Indigenous Kusha Long-Range Air-Defence Missile

What's the News?

- The Defence Research and Development Organisation conducted the maiden flight test of the indigenous **Kusha Long-Range Surface-to-Air Missile**, or LRSAM.
- The missile was launched from **Dr APJ Abdul Kalam Island** off the Odisha coast.
- It successfully intercepted an electronic target simulating a **high-speed, high-altitude aerial threat**.
- The test marks an important developmental milestone; further trials are required before operational induction.

Kusha Missile System

Kusha is an indigenous long-range air-defence system being developed to protect strategic assets and large geographical areas from multiple aerial threats.

It is designed to engage:

- Fighter aircraft.
- Cruise and other aerial missiles.
- Unmanned aerial vehicles.
- Large airborne platforms.
- High-speed threats operating at different altitudes.

The system is intended to provide a layered interception capability rather than relying on a single missile for every target and range.

Test Details

- **Type of test:** Maiden developmental flight test.
- **Launch site:** Dr APJ Abdul Kalam Island, Odisha.

- **Target:** Electronic target simulating a high-speed and high-altitude aerial threat.
- **Result:** The simulated threat was successfully intercepted.
- **Purpose:** To validate the missile's flight performance, guidance, control and interception capability under representative conditions.

A successful maiden test demonstrates the viability of the design. It does not mean that the complete system has entered service.

Planned Range Architecture

Reports describe Kusha as a multi-tier system with three planned interceptor classes:

Interceptor	Reported engagement range
M1	Around 150 km
M2	Around 250 km
M3	Around 350-400 km

The official announcement of the maiden test did not identify the interceptor variant tested or state its demonstrated range. These range figures therefore represent the programme's reported planned configuration, not the verified performance of the particular test.

Indigenous Weapon-System Elements

Major components of the Kusha system have been developed by different DRDO laboratories with Indian industry partners. These include:

- Interceptor missiles.
- Surveillance and engagement radars.
- Command-and-control centre.
- Launch and associated support systems.
- Target-tracking and fire-control mechanisms.

An integrated air-defence system requires sensors to detect a threat, command systems to assess and assign the target, and an interceptor missile to neutralise it.

Strategic Significance

- **Import substitution:** Reduces dependence on imported long-range air-defence systems.
- **Layered defence:** Supplements India's existing short-, medium- and long-range air-defence capabilities.
- **Multiple-target capability:** Intended to address aircraft, drones and missile threats across different ranges and altitudes.
- **Domestic ecosystem:** Strengthens Indian capabilities in missile propulsion, seekers, radar technology, guidance and command-and-control systems.

- **Critical infrastructure protection:** Can eventually support the defence of military bases, population centres and other strategic installations.

The Defence Minister described indigenous development of a long-range surface-to-air missile system as a capability possessed by only a limited number of countries.

Additional Info

- **Surface-to-Air Missile**
 - Launched from the ground to intercept an airborne target.
 - Differs from a surface-to-surface missile, which attacks a target located on land or at sea.
- **Layered Air Defence**
 - Uses different sensors and interceptors for short-, medium- and long-range threats.
 - Provides multiple opportunities to engage an incoming threat.
- **DRDO**
 - Functions under the Department of Defence Research and Development, Ministry of Defence.
 - Develops missiles, radars, electronic-warfare systems, aeronautical platforms and other defence technologies.
- **Dr APJ Abdul Kalam Island**
 - Located off the Odisha coast.
 - Used for developmental testing of Indian missile systems.
 - Named after former President and aerospace scientist Dr A.P.J. Abdul Kalam.

Indian Army Reviews Indigenous Bhargavastra Counter-Drone System

What's the News?

- The Indian Army witnessed a demonstration of **Bhargavastra**, an indigenous, vehicle-mounted **counter-swarm drone system**, at the developer's facility in Nagpur.
- Developed by **Solar Defence and Aerospace Limited (SDAL)**, the system is designed to detect, track and neutralise weaponised drones, loitering munitions and coordinated drone swarms.
- The demonstration was conducted as a status review under the Ministry of Defence's **Make-II programme**.
- SDAL stated that Bhargavastra's internal trials are expected to be completed within **two to three months**,

after which it may progress towards user trials and possible induction.

- The demonstration validated the system's sensors, command-and-control network and target-assignment process. Live rocket firing was not conducted at the facility due to safety restrictions.

What is Bhargavastra?

Bhargavastra is an indigenous, mobile and multi-layered **Counter-Unmanned Aircraft System (C-UAS)** developed primarily to address mass drone and loitering-munition attacks.

It combines:

- Surveillance and detection sensors
- A networked command-and-control system
- Electronic countermeasures
- Unguided micro-rockets
- Precision-guided micro-missiles

Unlike conventional anti-aircraft missiles, Bhargavastra uses relatively small and lower-cost interceptors against inexpensive drones, improving the **cost-exchange ratio** in air-defence operations.

How Does It Work?

Detection Layer

The system uses multiple sensors to identify and track aerial threats:

- **Radar:** Detects larger UAVs at ranges of up to **10 km**.
- **Electro-Optical Tracking System:** Has a reported range of approximately **6 km**.
- **EO/IR sensors:** Provide visual and infrared tracking during day and night.
- **Passive Radio-Frequency detectors:** Identify radio-frequency emissions associated with drones and their controllers.

Information from these sensors is combined to create a common operational picture.

Command-and-Control Layer

Bhargavastra uses a **C4I system**, which stands for:

- Command
- Control
- Communications
- Computers
- Intelligence

The C4I suite generates a real-time air picture, assesses incoming threats and assigns targets to the launcher.

Neutralisation Layer

Bhargavastra follows a dual-layer kinetic engagement mechanism:

- **First layer-unguided micro-rockets**
 - Designed to engage groups or swarms of drones.
 - Reported lethal radius: **20 metres**.

- **Second layer-precision-guided micro-missiles**

- Designed for targeted interception of individual drones.
- Current specified interception range: up to **2.5 km**.
- SDAL is also developing a longer-range missile variant with a range of approximately **6 km**.

Hard-Kill and Soft-Kill Capabilities

- **Hard kill:** Physically destroys a hostile drone using rockets or missiles.
- **Soft kill:** Disrupts the drone's communication, navigation or control signals through electronic means.

Bhargavastra is primarily a hard-kill system. However, its modular architecture permits the addition of:

- Electronic jamming
- Navigation spoofing
- Passive radio-frequency detection

The hard-kill layer remains important against autonomous drones that may continue operating despite communication jamming.

Operational Features

- **Mobility:** Mounted on vehicles for rapid deployment.
- **Multi-target capability:** Designed to detect and engage individual drones as well as coordinated swarms.
- **High-altitude operation:** Engineered for deployment at elevations exceeding **5,000 metres**.
- **Modular configuration:** Sensors and interceptors can be configured according to operational requirements.
- **Network integration:** Designed to connect with the armed forces' existing network-centric warfare infrastructure.
- **Indigenous development:** Its sensors, command system, rockets and micro-missiles are presented as domestically developed components.

Trial Status

- The micro-rockets previously underwent firing trials at the Seaward Firing Range in Gopalpur.
- Four rockets were tested during three trials, including two rockets launched in salvo mode within **two seconds**.
- The developer has also reported micro-missile trials at Balasore and Pokhran.
- During the latest Army demonstration, a drone swarm was detected and tracked through radar, EO/IR and RF sensors.
- The C4I system generated an air-situation picture and assigned targets

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to the launcher, although live firing was not undertaken.

- Internal system trials are expected to conclude within **two to three months**.

Make-II Programme

Bhargavastra was reviewed under the **Make-II category** of India's defence-acquisition framework.

- Make-II promotes indigenous design and development by Indian industry.
- Prototype development is generally **industry-funded**, unlike Make-I projects, which receive government financial support.
- It encourages participation by private companies, start-ups and other Indian defence manufacturers.
- The objective is to reduce import dependence and accelerate the development of equipment required by the armed forces.

Strategic Significance

- Drone swarms can overwhelm conventional air-defence systems by attacking simultaneously from several directions.
- Using expensive surface-to-air missiles against low-cost drones is economically unsustainable.
- Micro-rockets and micro-missiles provide a more proportionate and cost-effective interception option.
- A mobile counter-drone system can protect:
 - Military bases
 - Ammunition depots
 - Air-defence installations
 - Border posts
 - Command centres
 - Critical national infrastructure
- Bhargavastra supports India's broader objectives under **Atmanirbhar Bharat** and indigenous defence manufacturing.

SDAL Chairman Satyanarayan Nuwal has stated that technologies developed for Bhargavastra could contribute to a future multi-range air-defence architecture associated with the proposed **Sudarshan Chakra** programme. This remains the developer's assessment rather than confirmation of Bhargavastra's formal inclusion in that programme.

Additional Info

- **Weaponised drone**

- A UAV equipped with explosives, missiles or another attack payload.

- **Loitering munition**

- A weapon that remains airborne while searching for a target.
- It attacks by crashing into the selected target.
- It is commonly called a "suicide drone".

- **Drone swarm**

- A group of drones operating in a coordinated or autonomous manner.
- Swarms can saturate radar and interception systems through simultaneous attacks.

- **EO/IR**

- Electro-Optical/Infrared.
- Used for target identification, tracking and day-night surveillance.

- **Counter-UAS**

- Systems used to detect, identify, track and neutralise hostile or unauthorised unmanned aircraft.

International Relations

India Signs \$1 Billion Green Methanol Supply Deal with Japan's MGC

What's the News?

ACME Green Molecules Business, part of ACME Group, has signed a binding long-term Purchase and Sale Agreement with Japan's Mitsubishi Gas Chemical Company to supply **100,000 tonnes per annum of green methanol**. The deal is valued at nearly **USD 1 billion** and is being described as India's **first global green marine fuel collaboration**. The green methanol will be produced at ACME's facility in **Paradip, Odisha**, strengthening India's role in low-carbon shipping fuels and green molecule exports.

Green Methanol Deal

- **Parties involved:**
 - ACME Green Molecules Business, India
 - Mitsubishi Gas Chemical Company, Japan
- **Supply volume:** 100,000 tonnes per annum.
- **Estimated value:** Around **USD 1 billion**.
- **Production location:** Paradip, Odisha.
- **End-use:** Global marine fuel market, especially for shipping-sector decarbonisation.
- **Compliance angle:** The fuel is expected to be aligned with **EU regulations** and future **International Maritime Organization** carbon-intensity norms for shipping fuels.

Green Methanol?

- **Methanol formula:** CH_3OH ; also called methyl alcohol.
- **Green methanol:** A low-carbon methanol produced through renewable pathways, generally using green hydrogen and captured/biogenic carbon dioxide.
- **Uses:**
 - Marine fuel
 - Chemicals and industrial feedstock
 - Potential fuel for hard-to-abate sectors
- **Why important for shipping?**
 - Considered an alternative to **Heavy Fuel Oil**, **Very Low Sulphur Fuel Oil**, and **Marine Gas Oil**.
 - Can reduce lifecycle carbon emissions.
 - Requires only limited changes to existing ship engines and port infrastructure.

RFNBO-Compliant Marine Fuel

- **RFNBO:** Renewable Fuels of Non-Biological Origin.
- **Meaning:** Fuels produced using renewable electricity rather than biological feedstock.
- **Relevance:**
 - Important under the EU's clean-fuel regulatory framework.
 - Helps shipping companies meet stricter fuel-emission rules.
 - Supports demand for green hydrogen derivatives such as green methanol and green ammonia.

Additional Info

- **ACME's Odisha green molecule projects**
 - **Paradip green methanol project:** Linked to the Mitsubishi Gas Chemical supply agreement.
 - **Gopalpur green ammonia project:** **405,000 tonnes per annum**, through a joint venture with Japan's IHI Corporation.
 - **Paradip green ammonia project:** **800,000 tonnes per annum**, backed by a Green Ammonia Purchase Agreement with SECI under the National Green Hydrogen Mission's SIGHT scheme.
- **National Green Hydrogen Mission**
 - Nodal Ministry: **Ministry of New and Renewable Energy**.
 - Initial outlay: **₹19,744 crore**.
 - SIGHT Programme outlay: **₹17,490 crore**.
 - Pilot projects: **₹1,466 crore**.
 - R&D: **₹400 crore**.
 - Other mission components: **₹388 crore**.
- **IMO decarbonisation targets**
 - Carbon intensity of international shipping to reduce by at least **40% by 2030** compared to 2008.
 - Zero or near-zero GHG emission technologies, fuels, or energy sources to represent at least **5%**, striving for **10%**, of energy used by international shipping by 2030.
 - Net-zero GHG emissions from international shipping targeted **by or around 2050**.

India Hosts BRICS Anti-Drug Agencies Meeting in Guwahati

What's the News?

India hosted the **BRICS Heads of Anti-Drug Agencies Meeting** in Guwahati, Assam, to strengthen cooperation against narcotics trafficking. The meeting was organised by the **Narcotics Control Bureau** under the **Union Ministry of Home Affairs** and brought together heads and senior officials of anti-drug agencies from BRICS countries. The focus was on intelligence sharing, operational coordination, synthetic drugs, darknet-linked trafficking and cryptocurrency-based financial flows.

BRICS Anti-Drug Meeting

- The meeting serves as a cooperation platform for national drug-control agencies of BRICS members.
- Priorities:
 - Combating synthetic drugs and diversion of precursor chemicals.
 - Strengthening intelligence sharing and real-time coordination.
 - Building institutional and enforcement capacity.
 - Countering darknet-based drug trafficking.
 - Tracking cryptocurrency-linked drug money flows.
- The meeting was expected to conclude with a **Joint Declaration** on cooperation against drug trafficking.

Major Threats Discussed

- **Synthetic drugs**
 - Chemically manufactured drugs that may be easier to produce and traffic.
 - Often linked with clandestine laboratories and precursor chemical diversion.
- **New Psychoactive Substances**
 - Synthetic compounds designed to mimic the effect of controlled narcotic drugs.
 - Their changing chemical composition makes regulation and detection difficult.
- **Darknet trafficking**
 - Uses anonymous online platforms for illegal drug trade.
 - Creates challenges for cybercrime units and narcotics agencies.
- **Crypto-based financial flows**
 - Drug networks increasingly use digital assets to hide payments and launder proceeds.

India's Narcotics Control Framework

- India presented its **Vision Document on Narcotics Control for 2026–2029**.
- Focus areas include:
 - Stronger interdiction.
 - Monitoring of precursor chemicals.
 - Intelligence-led enforcement.
 - Use of data analytics and financial intelligence.
 - International cooperation through joint training and expert exchanges.

Additional Info

- **Narcotics Control Bureau**
 - Nodal drug law enforcement and intelligence agency in India.
 - Works under the **Ministry of Home Affairs**.
 - Coordinates with state police, customs, paramilitary forces and international agencies.
- **Important law**
 - **Narcotic Drugs and Psychotropic Substances Act, 1985**
 - Main law for drug control in India.
 - Covers production, possession, sale, purchase, transport and use of narcotic drugs and psychotropic substances.
- **BRICS expanded membership**
 - BRICS now includes **Brazil, Russia, India, China, South Africa, Egypt, Ethiopia, Indonesia, Iran, Saudi Arabia and the United Arab Emirates**.

India Joins Inaugural UN Global Dialogue on AI Governance

What's the News?

India joined the **inaugural United Nations Global Dialogue on AI Governance** in Geneva, Switzerland. The Indian delegation was led by **Kirti Vardhan Singh**, Minister of State for External Affairs and Minister of State for Environment, Forest and Climate Change. The dialogue is the first universal, multi-stakeholder UN platform dedicated to global cooperation on artificial intelligence governance.

UN Global Dialogue on AI Governance

- It is a UN-led platform for discussions on responsible, inclusive and safe AI governance.
- It brings together:
 - Governments
 - International organisations
 - Academia

- Private sector
- Technical experts
- Civil society
- **Objective:**
 - Promote international cooperation on AI governance.
 - Share best practices and lessons.
 - Ensure AI benefits are distributed across developed and developing countries.
 - Reduce governance gaps in fast-moving AI technologies.

Discussion Areas

- **AI and society**
 - Social, economic, ethical, cultural, linguistic and technical implications of AI.
- **AI divide**
 - Capacity-building for developing countries.
 - Access to AI applications, open data, open-source tools and high-performance computing.
- **Safe and trustworthy AI**
 - Development of safe, secure and reliable AI systems.
 - Compatibility between different national and regional AI governance approaches.
- **Human rights**
 - Transparency, accountability and human oversight.
 - Protection of human rights in AI deployment.

India's Relevance

- India's participation strengthens its role in shaping global technology governance.
- Key Indian priorities likely include:
 - Inclusive AI access for the Global South.
 - Responsible AI innovation.
 - Digital public infrastructure-based AI applications.
 - AI for health, education, agriculture, governance and climate action.
- India has been positioning itself as a bridge between advanced AI economies and developing countries.

Additional Info

- **Global Digital Compact**
 - Adopted at the UN Summit of the Future.
 - Provides a shared framework for an open, safe, inclusive and human-centred digital future.
 - It called for stronger global cooperation on AI governance.
- **UNGA Resolution 79/325**

- Established the Global Dialogue on AI Governance.
- Provides the institutional basis for the UN-led AI governance process.

• Independent International Scientific Panel on AI

- Also referred to as **IISPA**.
- Provides independent scientific assessment of AI opportunities, risks and capabilities.
- Relevant for evidence-based global AI regulation.

India-Australia Finalise Uranium Export and Defence Cooperation Agreements

What's the News?

India and Australia strengthened their **Comprehensive Strategic Partnership** during the Third India-Australia Annual Summit in Melbourne.

The two countries finalised arrangements permitting the long-term export of Australian uranium to India for peaceful nuclear-energy use. They also announced an upgraded defence declaration, a maritime-security roadmap and new cooperation frameworks covering critical technologies, resilient supply chains, education, skills and renewable energy. A total of **18 outcomes** were announced during the visit.

Uranium Export Arrangement

India and Australia finalised the administrative arrangement required to operationalise their civil nuclear cooperation framework.

- Australian uranium can be supplied to India:
 - Exclusively for peaceful purposes
 - Under **International Atomic Energy Agency safeguards**
 - For long-term use in India's civilian nuclear-energy programme

- The arrangement implements the bilateral Civil Nuclear Cooperation Agreement signed in 2014.
- Australia reiterated its support for India's membership of the **Nuclear Suppliers Group**.
- No details regarding the volume, commercial value or commencement of uranium supplies were announced.

Why Is It Important?

- Australia possesses some of the world's largest known uranium resources.

- A diversified uranium supply can improve India's long-term nuclear-fuel security.
- Nuclear power provides low-carbon, continuous electricity and can complement intermittent solar and wind energy.
- The agreement supports India's target of expanding nuclear-power capacity to **100 GW by 2047**.
- Australia gains access to an additional export market while reducing excessive dependence on a limited number of trading partners.

Defence and Maritime Cooperation

The leaders announced a **Joint Declaration on Defence and Security Cooperation**, replacing and expanding the earlier security declaration of 2009.

Major areas include:

- Interoperability between the armed forces
- Defence industrial cooperation
- Maritime-domain awareness
- Cybersecurity and critical technologies
- Counterterrorism
- Humanitarian Assistance and Disaster Relief
- Joint research, military education and capacity-building

An **Annual Defence Ministers' Dialogue** will provide a regular institutional mechanism for strategic consultation.

Maritime Security Collaboration Roadmap

The roadmap seeks cooperation in:

- Maritime information-sharing
- Capability and capacity development
- Operational coordination
- Maritime law enforcement
- Border protection

A separate MoU was signed between the **Indian Coast Guard** and Australia's **Maritime Border Command**. India will also place a military instructor at the Australian Defence College during 2028-29.

Energy and Critical Technologies

The two countries adopted an **India-Australia Joint Statement on Energy Security** amid concerns over geopolitical disruptions to energy and commodity supply chains.

Cooperation will cover:

- Uranium and civilian nuclear energy
- Liquefied natural gas and liquid fuels
- Renewable energy
- Green hydrogen and low-carbon fuels
- Critical minerals and mineral processing

- Resilient energy supply chains
 - Rooftop-solar workforce development
- India and Australia also announced the **Partnership on Cyber, Critical Technologies and Supply Chains**, or **PACTS**. PACTS seeks to strengthen:

- Cybersecurity
- Digital resilience
- Critical and emerging technologies
- Defence research
- Diversification of strategic supply chains

Economic and Investment Cooperation

- Both sides welcomed trade growth under the **Economic Cooperation and Trade Agreement**.
- They reaffirmed negotiations for a more comprehensive **Comprehensive Economic Cooperation Agreement**.
- Cooperation will connect India's **Make in India** programme with Australia's **Future Made in Australia** policy.
- AustralianSuper announced an additional investment of **A\$500 million** in India's National Investment and Infrastructure Fund.
- Critical-mineral cooperation will focus on investment, long-term supply agreements, processing and domestic value addition.

Other Major Outcomes

- A mining and mining-equipment **Centre of Excellence** will be established at the National Skill Training Institute, Bhubaneswar.
- A Rooftop Solar Training Academy in Gandhinagar will train **2,000 women and young people**.
- Flinders University received approval to establish a campus in Bengaluru.
- Victoria University received approval for a campus in Gurugram.
- Three Indian antiquities, including sculptures of Nandi, Bhadrakali and Skanda, were returned.
- India and Australia joined Canada under the **Australia-Canada-India Technology and Innovation Partnership**.
- Cooperation was expanded between the Geological Survey of India and Geoscience Australia.
- Australia continued its support for India's **Gaganyaan programme**, including a temporary tracking terminal on the Cocos (Keeling) Islands.

Additional Info

- **Comprehensive Strategic Partnership**
 - India and Australia elevated their relationship to this level in 2020.

- It covers defence, trade, energy, education, science, technology and people-to-people relations.
- **IAEA safeguards**
 - Verification mechanisms ensuring that designated nuclear material and facilities are used only for peaceful purposes.
 - They do not place India's entire nuclear programme under international safeguards.
- **Nuclear Suppliers Group**
 - A group of nuclear-supplier countries that regulates exports of nuclear materials, equipment and technology.
 - India is not a member, though it received a country-specific waiver in 2008 for international civil nuclear commerce.
- **Indo-Pacific cooperation**
 - India and Australia are members of the **Quad**, along with Japan and the United States.
 - Both support a free, open and rules-based Indo-Pacific, freedom of navigation and peaceful resolution of disputes under international law.

India, Australia and Canada Sign ACITI Technology Partnership MoU

What's the News?

India, Australia and Canada signed a Memorandum of Understanding under the **Australia-Canada-India Technology and Innovation Partnership (ACITI)**.

The MoU provides a formal framework for trilateral cooperation in **artificial intelligence, green-energy innovation, critical and emerging technologies, critical-mineral supply chains and net-zero solutions**.

ACITI was initially announced by the leaders of the three countries on the sidelines of the **G20 Summit in Johannesburg**. The subsequent MoU advances the partnership towards practical implementation.

What is ACITI?

- **Full form:** Australia-Canada-India Technology and Innovation Partnership
- **Members:** India, Australia and Canada
- **Nature:** Trilateral technology and innovation framework
- **Objective:** Combine the technological, industrial and resource capabilities of the three countries.

- **Approach:** Complement—not replace—existing bilateral cooperation among the members.

ACITI seeks trusted international partnerships for developing, deploying and commercialising strategic technologies.

Major Areas of Cooperation

Artificial Intelligence

- Development and mass adoption of AI for public benefit
- Trusted and responsible deployment of AI
- Cooperation among governments, research institutions, universities and businesses
- Commercialisation and cross-border investment in AI technologies

The three countries had already held ministerial-level discussions on trilateral AI cooperation during the **India AI Impact Summit 2026**.

Green-Energy Innovation

The partnership will promote technologies supporting:

- Renewable energy
- Energy storage
- Green hydrogen
- Industrial decarbonisation
- Transition towards net-zero emissions

Critical Minerals

ACITI seeks resilient and diversified supply chains for minerals required in:

- Batteries and electric vehicles
- Semiconductors and electronics
- Renewable-energy systems
- Telecommunications
- Defence and aerospace technologies

Cooperation may extend across mineral exploration, processing, value addition, technology development and long-term supply arrangements.

Supply-Chain Resilience

The countries aim to reduce excessive dependence on concentrated or geopolitically vulnerable supply networks by:

- Diversifying suppliers
- Developing trusted technology ecosystems
- Encouraging domestic processing and manufacturing
- Connecting research with industrial production

Complementary Strengths

- **India**
 - Large market and manufacturing base
 - Extensive digital public infrastructure

- Strong startup and information-technology ecosystem
- Capacity for technology deployment at scale

• Australia

- Major reserves of critical minerals
- Mining and mineral-processing expertise
- Research and commercialisation capabilities
- Strength in renewable-energy resources

• Canada

- Advanced AI research ecosystem
- Critical-mineral resources
- Clean-technology capabilities
- Strong universities and research institutions

The partnership can connect resource security with research, manufacturing and large-scale technology deployment.

Additional Info

• Timeline

- ACITI was announced at the G20 Summit in Johannesburg.
- Officials were directed to develop the initiative further.
- Trilateral AI discussions were held during the India AI Impact Summit.
- The ACITI MoU was later signed during the India-Australia Annual Summit.

• ACITI vs PACTS

- **ACITI:** Trilateral partnership involving India, Australia and Canada.
- **PACTS:** Bilateral Australia-India Partnership on Cyber, Critical Technologies and Supply Chains.
- PACTS additionally focuses on cybersecurity, digital resilience and defence research.

• ACITI vs Quad

- ACITI is a technology-focused partnership among three countries.
- The Quad comprises India, Australia, Japan and the United States.
- ACITI is not a military alliance or a replacement for the Quad.

India and New Zealand Launch Strategic Partnership Roadmap to 2030

What's the News?

India and New Zealand have elevated their bilateral relationship to a **Strategic**

Partnership and adopted the **India-New Zealand Strategic Partnership: Roadmap to 2030** during Prime Minister Narendra Modi's visit to Auckland.

The two countries announced **18 outcomes**, comprising **10 agreements and MoUs** and eight major initiatives. They also set an aspirational target to double bilateral trade in goods and services to **NZ\$7 billion—approximately ₹35,000 crore—by 2030**.

Roadmap to 2030

The roadmap provides a four-year framework for cooperation under six broad pillars:

- Political and diplomatic engagement.
 - Defence and security cooperation.
 - Trade and economic cooperation.
 - People, culture and sports.
 - Education, research, science, technology and disaster management.
 - Regional and multilateral cooperation.
- It provides for regular high-level exchanges, an annual Maritime Security Dialogue, stronger military interaction and cooperation for a rules-based Indo-Pacific. The roadmap is **not legally binding** and does not itself create financial commitments.

Ten Agreements

1. **Maritime Cooperation Arrangement:** Dialogue, information-sharing and coordinated maritime activities.
2. **Hydrography and Nautical Cartography Arrangement:** Exchange of hydrographic data, capacity-building and preparation of navigational charts.
3. **Mutual Logistics Support Arrangement:** Reciprocal logistics support between the Indian Navy and New Zealand Defence Force.
4. **Counter-Terrorism Joint Working Group:** Institutional cooperation and coordination against terrorism.
5. **Disaster Management Cooperation:** Partnership between India's NDMA and New Zealand's NEMA on preparedness, emergency response and capacity-building.
6. **Animal Husbandry and Dairying Cooperation:** Exchange of technology, expertise and best practices.
7. **Tourism Cooperation:** Promotion of two-way tourism and industry collaboration.
8. **Joint Action Plan on Sports:** Cooperation in sports science, medicine, coaching and athlete development.

9. **Maritime Heritage Cooperation:** Collaboration between the National Maritime Heritage Complex at Lothal and the New Zealand Maritime Museum.
10. **Cultural Cooperation Arrangement:** Promotion of cultural exchanges and mutual understanding.

Trade and Investment Target

India and New Zealand aim to raise bilateral trade to **₹35,000 crore by 2030** through early implementation of their Free Trade Agreement, improved customs facilitation and wider market access.

Key economic commitments include:

- A proposed **US\$20 billion investment by New Zealand in India over 15 years** after the FTA enters into force.
- A quota of **5,000 temporary visas** for skilled Indian professionals for periods of up to three years.
- Coverage of sectors such as information technology, engineering, healthcare, education, construction, AYUSH, hospitality and cultural services.
- Operationalisation of the Authorised Economic Operators Mutual Recognition Arrangement to simplify customs procedures for trusted traders.

Other Major Initiatives

- Establishment of an annual **India-New Zealand Maritime Security Dialogue**.
- New Zealand's participation in the maritime-security pillar of the **Indo-Pacific Oceans Initiative**.
- New Zealand's decision to join the **Global Biofuels Alliance**.
- A Kiwifruit Action Plan and proposed Centres of Excellence in **Nagaland and Uttarakhand**.
- Research cooperation between India's National Centre for Polar and Ocean Research and the University of Canterbury.
- Food-technology collaboration between NIFTEM-Kundli and Massey University.
- Encouragement of direct air connectivity under an updated Air Services Agreement.

Additional Info

Indo-Pacific Oceans Initiative

- Launched by India at the East Asia Summit in 2019.
- Promotes practical cooperation for a free, open, inclusive and rules-based Indo-Pacific.
- Its pillars include:
 - Maritime security.
 - Maritime ecology.
 - Disaster-risk reduction.
 - Marine resources.
 - Science and technology.

- Trade connectivity.
- Capacity-building.

Global Biofuels Alliance

- Launched during India's G20 presidency.
- Promotes international cooperation, technology exchange and adoption of sustainable biofuels.
- Complements India's energy-transition and ethanol-blending objectives.

Basic Facts: New Zealand

- **Capital:** Wellington
- **Currency:** New Zealand dollar
- **Location:** South-western Pacific Ocean
- **Major indigenous community:** Māori
- **Indian diaspora:** One of New Zealand's major and rapidly growing ethnic communities.

CAC49 Adopts Seven India-Led Global Food Standards

What's the News?

The **49th Session of the Codex Alimentarius Commission (CAC49)** adopted **seven food standards, guidelines and related texts** developed under India's chairmanship or co-chairmanship.

The Indian delegation was led by **Rajit Punhani**, Chief Executive Officer of the **Food Safety and Standards Authority of India (FSSAI)**, with experts from FSSAI and the Spices Board. The Commission also approved India's proposal to begin developing an international standard for **cashew kernels**.

Seven India-Led Codex Texts Under India's Chairmanship

1. **Standard for Dried Coriander Seeds**
 - Establishes internationally harmonised quality requirements.
 - Expected to facilitate trade in a widely traded spice.
1. **Standard for Fresh Curry Leaves**
 - Creates the first international quality benchmark for this regionally important culinary herb.

Under India's Co-Chairmanship

1. **Standard for Vanilla**
 - Provides common quality parameters for international vanilla trade.
1. **Standard for Large Cardamom**
 - Establishes globally harmonised quality requirements.
 - Significant for India because large cardamom is indigenous to the north-eastern Himalayan region.
1. **Safe Use and Reuse of Water**

- Annexes to the guidelines on water used in food production and processing.
- Support water conservation while maintaining food-safety safeguards.

1. Chicken-Meat Safety

- Revised guidelines for controlling **Campylobacter** and **Salmonella** in chicken meat.
- Aim to reduce major bacterial causes of foodborne disease.

1. Prepackaged-Food Labelling

- Provisions covering joint presentation and multipack formats.
- Improve consistency and clarity in the labelling of products sold together.

Cashew-Kernel Standard

CAC49 approved India's proposal to undertake new work on a **Codex Standard for Cashew Kernels** under the **Codex Committee on Processed Fruits and Vegetables**.

The proposed standard is expected to:

- Harmonise international quality and safety requirements.
- Reduce technical barriers to trade.
- Improve the predictability of export requirements.
- Strengthen the competitiveness and market access of Indian cashew exporters.

India's Codex Role

- India hosts the **Codex Committee on Spices and Culinary Herbs (CCSCH)**.
 - It is one of the five Codex commodity committees.
 - The **Spices Board**, under the Ministry of Commerce and Industry, functions as its secretariat.
 - Standards for coriander, vanilla and large cardamom were finalised through this committee.
- India was selected as co-chair of an **Electronic Working Group on New Food Sources and Production Systems**.
 - The European Union serves as chair.
 - The group will examine regulatory frameworks and gaps in risk-analysis principles for emerging food products and production technologies.

Codex Alimentarius Commission

- **Meaning:** *Codex Alimentarius* means "Food Code."
- **Established by:** Food and Agriculture Organization and World Health Organization.

- **First meeting:** 1963.
- **Membership:** 188 members.
- **Purpose:**
 - Protect consumer health.
 - Ensure fair practices in international food trade.
 - Develop science-based food standards, guidelines and codes of practice.
- **Coverage:**
 - Food hygiene and contaminants
 - Pesticide and veterinary-drug residues
 - Food additives
 - Labelling and presentation
 - Inspection, certification, sampling and testing methods

Why Codex Standards Matter

- **Consumer protection:** Establish science-based benchmarks for food safety and quality.
- **Export competitiveness:** Common requirements reduce differences between national standards.
- **WTO relevance:** Codex food-safety standards are recognised as international reference points under the **WTO Agreement on Sanitary and Phytosanitary Measures**.
- **Trade disputes:** Countries imposing stricter food-safety measures may have to justify them through scientific evidence and risk assessment.
- **Domestic relevance:** FSSAI considers Codex developments while framing or updating Indian food standards.

Additional Info

- **FSSAI**
 - Statutory authority under the **Food Safety and Standards Act, 2006**.
 - Functions under the Ministry of Health and Family Welfare.
 - Regulates the manufacture, storage, distribution, sale and import of food in India.
- **Foodborne bacteria**
 - **Salmonella:** Can cause diarrhoea, fever and abdominal illness through contaminated food.
 - **Campylobacter:** Commonly associated with poultry and is a major cause of bacterial gastroenteritis.

India Joins WTO Agreement on Fisheries Subsidies

What's the News?

India has formally joined the **World Trade Organization Agreement on Fisheries**

Subsidies by depositing its Instrument of Acceptance, becoming the **123rd WTO member** to accept the pact.

Commerce Secretary **Rajesh Agrawal** handed over the instrument to WTO Director-General **Ngozi Okonjo-Iweala** in Geneva. The agreement seeks to curb subsidies supporting destructive marine fishing while protecting fish stocks, coastal livelihoods and food security.

Fisheries Subsidies Agreement

- **Adopted at:** 12th WTO Ministerial Conference, Geneva
- **Adoption year:** 2022
- **Entry into force:** 2025
- **India's position:** 123rd member to deposit its Instrument of Acceptance
- **Status:** First multilateral WTO agreement with environmental sustainability as its central objective
- **Legal placement:** Incorporated into **Annex 1A of the Marrakesh Agreement Establishing the WTO**

An **Instrument of Acceptance** is the formal legal document through which a WTO member expresses consent to be bound by an agreement.

What Does the Agreement Prohibit?

The agreement establishes binding rules against subsidies connected with:

- **Illegal, unreported and unregulated fishing**
- Fishing of stocks officially recognised as **overfished**
- Fishing in areas of the high seas that are outside the jurisdiction of coastal states and not managed by a competent regional fisheries organisation

IUU Fishing

- **Illegal fishing:** Fishing in violation of national laws or rules of a regional fisheries body.
- **Unreported fishing:** Fishing activities that are not reported, or are incorrectly reported, to the competent authority.
- **Unregulated fishing:** Fishing in areas or for stocks where applicable conservation and management measures are absent or disregarded.

Scope of the Agreement

Included

- Marine wild-capture fishing
- Fishing-related activities conducted at sea
- Specific subsidies covered by the WTO Agreement on Subsidies and Countervailing Measures

Excluded

- **Aquaculture**

Inland fisheries

This exclusion is significant for India because aquaculture-based shrimp constitutes a major component of the country's seafood exports.

Implications for India

Small-Scale Fishers

- India's marine fisheries sector is predominantly composed of traditional and small-scale fishers.
- The agreement targets harmful support associated with unsustainable fishing rather than placing a general prohibition on all assistance to fishing communities.
- Sustainable fish stocks can support the long-term income and food security of coastal households.

Seafood Exports

- Compliance can strengthen India's credibility as a responsible and sustainable seafood exporter.
- Sustainability and traceability standards increasingly influence access to premium international markets.
- Aquaculture and inland fish production remain outside the agreement's scope, reducing the immediate impact on India's shrimp-export industry.

Industrial Fishing Fleets

The agreement disciplines subsidies that allow large industrial fleets to operate farther and longer at sea. India does not operate distant-water industrial fleets on the scale maintained by some major fishing nations.

India's Fisheries Framework

India's domestic marine fisheries governance includes:

- **Sustainable Harnessing of Fisheries in the Exclusive Economic Zone Rules, 2025**
 - Regulate fishing within India's EEZ.
 - Promote sustainable use and conservation of marine resources.
- **Guidelines for Sustainable Harnessing of Fisheries in the High Seas by Indian-Flagged Fishing Vessels, 2025**
 - Establish requirements for Indian vessels operating beyond national jurisdiction.
 - Support monitoring, reporting and responsible high-seas fishing.

Pending WTO Negotiations

The existing agreement does not complete all negotiations on harmful fisheries subsidies. WTO members are continuing

discussions on broader rules covering subsidies that contribute to:

- **Overcapacity:** A fishing fleet's capacity exceeds the sustainable harvesting level of available fish stocks.
- **Overfishing:** Fish are harvested faster than the stock can biologically replenish itself.

India has maintained that future rules must:

- Differentiate between small-scale fishers and heavily subsidised industrial fleets.
- Provide effective **special and differential treatment** to developing and least-developed countries.
- Preserve adequate policy space for artisanal fishers and livelihood-support programmes.
- Impose stronger disciplines on distant-water fishing nations.

Additional Information

WTO Fish Fund

- Provides technical assistance and capacity-building to developing and least-developed WTO members.
- Supports legal and regulatory reforms, fisheries-management systems and WTO notification obligations.
- Operates with the involvement of organisations such as:
 - Food and Agriculture Organization
 - International Fund for Agricultural Development
 - World Bank Group

Committee on Fisheries Subsidies

- Oversees implementation of the agreement.
- Examines subsidy notifications submitted by members.
- Promotes transparency regarding fishing practices, fish-stock conditions and government support.
- Reviews the agreement's implementation and operation.

Link with Sustainable Development Goals

The agreement contributes to **SDG 14: Life Below Water**, particularly **Target 14.6**, which calls for:

- Prohibiting fisheries subsidies that contribute to overcapacity and overfishing.
- Eliminating subsidies supporting IUU fishing.
- Providing appropriate and effective special treatment to developing and least-developed countries.

WTO: Key Facts

- **Established:** 1995

- **Headquarters:** Geneva, Switzerland
- **Predecessor:** General Agreement on Tariffs and Trade
- **Highest decision-making body:** Ministerial Conference
- **Core functions:** Administering trade agreements, facilitating negotiations, settling disputes and reviewing national trade policies

IIT Tirupati Hosts 5th BRICS Geospatial Technologies Meeting

What's the News?

IIT Tirupati hosted the **5th BRICS Working Group Meeting on Geospatial Technologies and Applications** at its Yerpedu campus in Andhra Pradesh. Conducted in hybrid mode under the **Department of Science and Technology (DST)**, the meeting brought together experts and delegates from BRICS and partner countries.

The discussions focused on geospatial infrastructure, climate resilience, precise positioning, artificial intelligence-based spatial analytics and cross-border data interoperability. IIT Tirupati's **Navavishkar I-Hub Foundation (IITNiF)** was also involved in organising the meeting.

Technical Areas

- **Spatial Data Infrastructure:** Systems for collecting, managing, sharing and using location-based information.
- **Climate resilience:** Geospatial data for climate-risk mapping, environmental monitoring and disaster preparedness.
- **Positioning, Navigation and Timing:** Satellite-based services used in aviation, shipping, telecommunications, logistics and emergency response.
- **AI-based geospatial analytics:** Machine learning for land-use classification, feature identification and detecting changes in satellite images.
- **Geodesy and precise positioning:** Development of accurate reference frames and high-precision location services.
- **Data interoperability:** Adoption of common standards so that geospatial information can be exchanged and reused across different platforms and countries.

Proposed Outcomes

The meeting is expected to contribute to:

- **Tirupati Recommendations:** Measures for stronger multilateral cooperation in geospatial technologies.

- **BRICS Working Group Action Plan:** Joint projects, capacity-building and knowledge-sharing among participating countries.
- **BRICS Geodesy and Positioning Cooperation Framework:** Coordination of reference systems and positioning services.
- **Interoperable Geospatial Data Infrastructure Framework:** Common protocols for sharing and using spatial data across BRICS countries.

Geospatial Technologies

Geospatial technologies collect, analyse and present information linked to locations on Earth.

- **Remote sensing:** Obtains information through satellites, aircraft or drones without direct physical contact.
- **GIS – Geographic Information System:** Captures, stores, analyses and displays spatial data.
- **Satellite navigation:** Provides location, navigation and timing information.
 - GPS – United States
 - GLONASS – Russia
 - Galileo – European Union
 - BeiDou – China
 - NavIC – India's regional navigation system
- **Digital mapping:** Produces digital representations of terrain, infrastructure and geographic features.

India's Geospatial Policy

The **National Geospatial Policy 2022** seeks to liberalise access to geospatial data, promote private-sector participation and develop India as a global geospatial leader. DST is the nodal department, while the **Survey of India** has a major role in foundational mapping and geospatial infrastructure.

Important policy targets include:

- **By 2030**
 - Topographical mapping at **5–10 cm resolution** for urban and rural areas.
 - Mapping at **50–100 cm resolution** for forests and wastelands.
 - Digital Elevation Model accuracy of **25 cm for plains** and **1–3 metres for mountainous regions**.
 - Development of Geospatial Knowledge Infrastructure.
- **By 2035**
 - High-resolution mapping of inland waters and deep-sea topography.

- Mapping of underground infrastructure in major urban areas.
- Development of digital twins for major cities.

Applications in Governance

- **Disaster management:** Hazard zonation, flood forecasting and damage assessment.
- **Agriculture:** Crop monitoring, soil mapping and precision farming.
- **Urban planning:** Land-use mapping, infrastructure planning and utility management.
- **Transport:** Route optimisation and integrated infrastructure development.
- **Environment:** Monitoring deforestation, water bodies and land degradation.
- **Defence and security:** Border surveillance, navigation and strategic mapping.

Relevant Indian initiatives include **PM Gati Shakti**, **SVAMITVA**, **AMRUT 2.0** and the **NAKSHA** urban land-survey programme.

India Adds Anti-Abuse Rule to Sri Lanka Tax Treaty

What's the News?

India has notified an amended protocol to its **Double Taxation Avoidance Agreement (DTAA)** with **Sri Lanka**, introducing a stronger anti-abuse provision known as the **Principal Purpose Test (PPT)**.

The provision empowers tax authorities to deny treaty concessions when obtaining a tax benefit is one of the principal purposes of a transaction or arrangement. The amended provisions will apply in India from **FY 2027–28**. They do not alter existing tax rates or impose a new tax.

Principal Purpose Test

The **Principal Purpose Test** is a general anti-avoidance rule used in international tax treaties.

Treaty benefits may be denied when:

- Considering all relevant facts and circumstances, it is reasonable to conclude that obtaining a treaty benefit was one of the principal purposes of an arrangement or transaction.
- The arrangement lacks a genuine commercial rationale and is primarily structured to reduce tax liability.

Treaty relief may still be granted when the benefit is consistent with the **object and purpose of the relevant DTAA provisions**. Thus, the PPT follows the principle of **commercial substance over legal form**.

Treaty Shopping

Treaty shopping occurs when a resident of a third country routes an investment or transaction through a country having a favourable tax treaty with the source country.

Typical Structure

- Country A has no favourable tax treaty with India.
- An investor from Country A establishes an intermediary entity in Country B.
- Country B has a favourable DTAA with India.
- The intermediary entity claims reduced withholding tax, capital-gains relief or another treaty concession.

The PPT allows authorities to examine whether the intermediary entity has genuine business operations, employees, assets, decision-making capacity and economic substance.

Revised Treaty Objective

The treaty's preamble has been updated to clarify that its objectives are:

- Eliminating double taxation.
- Promoting legitimate cross-border trade and investment.
- Preventing tax evasion and avoidance.
- Preventing double non-taxation or artificially reduced taxation.
- Denying indirect treaty benefits to residents of third countries through treaty-shopping arrangements.

Double Taxation Avoidance Agreement

A **DTAA** is an agreement between two countries determining how income arising in cross-border transactions will be taxed.

Main Purposes

- Prevent the same income from being taxed twice.
- Allocate taxing rights between the source and residence countries.
- Provide tax credits or exemptions.
- Reduce withholding-tax rates on specified payments.
- Facilitate the exchange of tax information.
- Prevent fiscal evasion.

A DTAA does not independently create a tax. Domestic tax law first determines whether income is taxable, after which applicable treaty relief may be claimed.

BEPS Framework

The amendment implements the minimum standard under **Action 6 of the G20-OECD Base Erosion and Profit Shifting Project.**

BEPS

Base Erosion and Profit Shifting refers to strategies through which multinational

enterprises exploit differences between tax systems to:

- Shift profits to low-tax jurisdictions.
- Artificially reduce taxable income.
- Separate taxable profits from the location of actual economic activity.
- Exploit gaps and mismatches between domestic tax rules.

BEPS Action 6

Action 6 specifically addresses the **prevention of tax-treaty abuse**, particularly treaty shopping. Its minimum standard requires countries to include anti-abuse language and mechanisms such as the PPT in their tax treaties.

Multilateral Instrument

The **Multilateral Convention to Implement Tax Treaty Related Measures to Prevent BEPS**, commonly called the **Multilateral Instrument or MLI**, enables countries to simultaneously modify multiple bilateral tax treaties without renegotiating each agreement separately.

- India is a signatory to the MLI.
- The MLI entered into force for India in 2019.
- Sri Lanka was not an MLI signatory when the amendment was approved.
- Therefore, the India-Sri Lanka treaty had to be amended through a **bilateral protocol**.

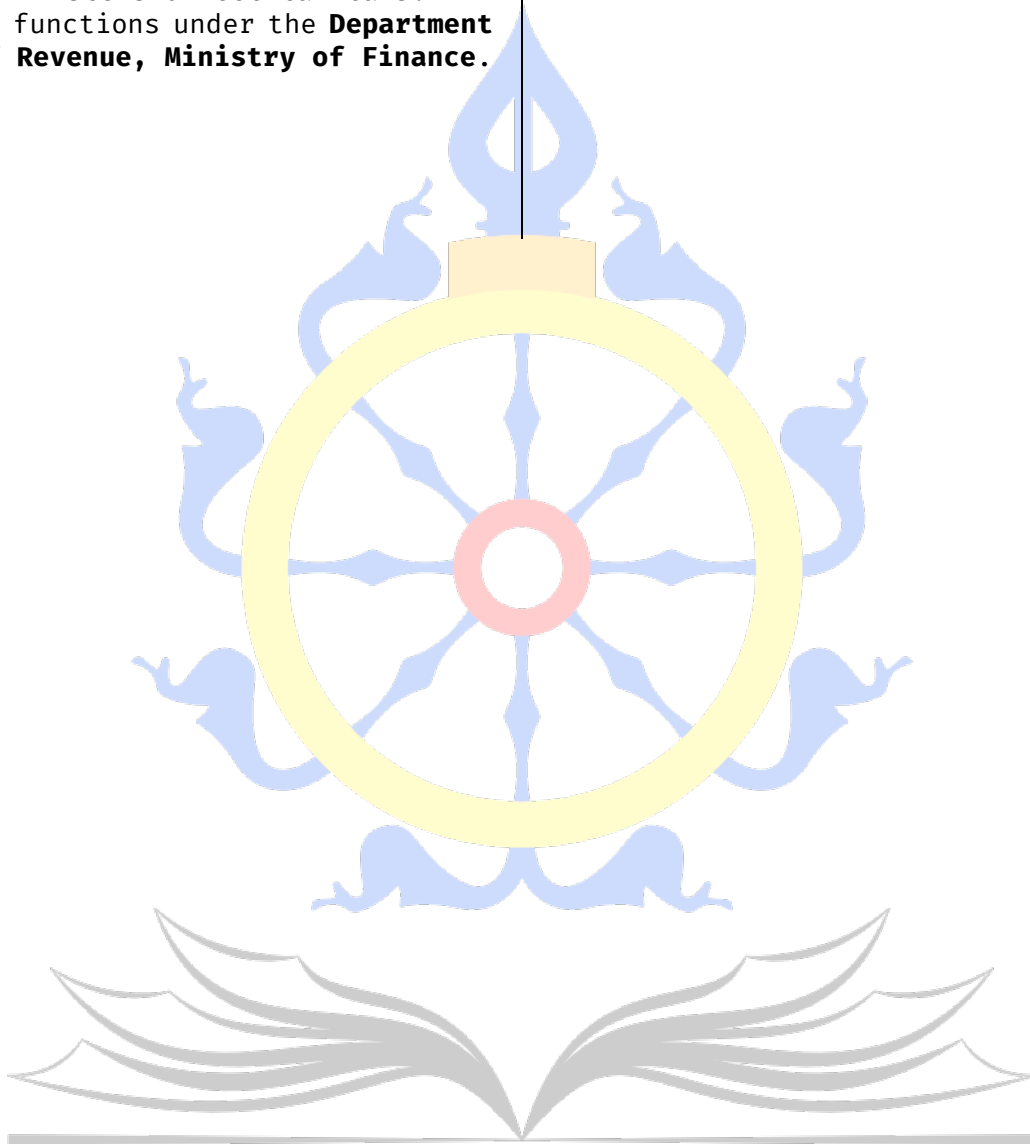
Impact of the Amendment

- **Tax administration:** Authorities can investigate the commercial purpose behind investment and corporate structures.
- **Revenue protection:** Artificial arrangements designed to obtain reduced taxation can be denied treaty relief.
- **Investors:** Entities claiming treaty concessions must maintain documentation demonstrating genuine economic substance and business purpose.
- **Cross-border transactions:** Bona fide trade, investment and movement of capital remain eligible for treaty benefits.
- **Tax certainty:** Claims may become more fact-dependent because the PPT examines purpose and surrounding circumstances rather than only formal documentation.

Additional Info

- **Original India-Sri Lanka DTAA**
 - Signed in 2013.
 - Entered into force in the same year.

- Covers taxes on income and prevention of fiscal evasion.
- **Amending Protocol**
 - Approved by the Union Cabinet in 2020.
 - Signed bilaterally in 2024.
 - Entered into force after both countries completed their domestic legal procedures.
 - Applicable in India to income arising from FY 2027-28.
- **Administrative Body**
 - The **Central Board of Direct Taxes** administers direct-tax laws.
 - It functions under the **Department of Revenue, Ministry of Finance**.



International Events

Aid Cuts Deny Critical Support to One Million Women and Girls

What's the News?

At least **one million women and girls** affected by conflicts and humanitarian crises have lost access to life-saving assistance since early 2025 because of reductions in global aid funding.

The finding is part of UN Women's report, **"Beyond the Breaking Point: The Continuing Impact of Funding Cuts on Women's Organizations in Humanitarian Settings."**

It warns that shrinking donor support is weakening women-led organisations that provide protection, healthcare, shelter and assistance against gender-based violence.

Findings

The report surveyed **855 women-led and women's rights organisations across 52 countries and crisis settings.**

- **120 million** women and girls require humanitarian assistance and protection worldwide.
- Nearly **90%** of surveyed organisations cannot meet existing needs.
- **84%** reported increased demand for their services.
- **40%** face temporary or permanent closure within the next year.
- **60%** are reaching fewer women and girls than before the funding reductions.
- More than **75%** have reduced staff positions.
- **65%** said employees were working without pay.
- Around **50%** have introduced waiting lists or turned beneficiaries away.

Services Affected

Funding reductions have weakened services relating to:

- Prevention and response to gender-based violence.
- Support for survivors of conflict-related sexual violence.
- Maternal and reproductive healthcare.
- Safe shelters and women-friendly spaces.
- Food, cash assistance and livelihood support.
- Education and protection of displaced girls.
- Women's participation and leadership in peacebuilding.

Around **62%** of surveyed organisations reported that safe spaces had been reduced or were no longer available. One-fifth had

suspended activities promoting women's leadership and gender equality.

Why Did Funding Decline?

International humanitarian financing has fallen as major donors reduced foreign-assistance budgets because of fiscal pressures, changing policy priorities and increased defence expenditure.

Large reductions in United States foreign assistance, together with cuts by other donor countries, contributed to what was described as the steepest fall in aid funding on record. Women-led organisations are especially vulnerable because they frequently depend on short-term, project-specific grants.

Why Women-Led Organisations Matter

Local women's organisations often have:

- Direct access to communities that international agencies cannot easily reach.
- Knowledge of local languages, customs and protection risks.
- Greater ability to identify survivors of violence and vulnerable households.
- Community trust required to deliver sensitive healthcare and protection services.

Their closure can therefore create gaps that larger humanitarian agencies may not be able to replace immediately.

Additional Info

UN Women

- **Full name:** United Nations Entity for Gender Equality and the Empowerment of Women.
- **Established:** 2010 through UN General Assembly Resolution **64/289**.
- **Headquarters:** New York.
- **Purpose:** To promote gender equality, women's empowerment and the protection of women's rights.
- **Core functions:**
 - Supporting global gender-equality standards.
 - Assisting countries in implementing these standards.
 - Coordinating gender-related work across the UN system.

Sustainable Development Goal 5

SDG 5 seeks to achieve gender equality and empower all women and girls. Major targets include:

- Ending discrimination against women and girls.
- Eliminating violence, trafficking and harmful practices.

- Recognising unpaid care and domestic work.
- Ensuring women's participation in political and economic decision-making.
- Providing universal access to reproductive health and rights.

Related International Frameworks

- **CEDAW:** Convention on the Elimination of All Forms of Discrimination against Women.
- **Beijing Platform for Action:** Global framework adopted for advancing women's rights.
- **Women, Peace and Security Agenda:** Based on UN Security Council Resolution **1325**, emphasising women's participation in conflict prevention, peace negotiations and post-conflict reconstruction.

Ukraine and Nine European Countries Form Missile-Defence Coalition

What's the News?

Ukraine and nine European countries have established the **Integrated Anti-Ballistic Missile Coalition** in Paris to develop a shared capability for protecting Europe against ballistic-missile threats.

The founding members are:

- Denmark
- France
- Germany
- Italy
- Netherlands
- Norway
- Spain
- Sweden
- Ukraine
- United Kingdom

The coalition is described as a **purely defensive initiative** and remains open to other countries that share its principles. It will combine Ukraine's battlefield experience with European research, defence-manufacturing capacity, sensors and interceptor technologies.

Coalition's Objectives

The coalition seeks to develop an **integrated missile-defence architecture** capable of detecting, tracking and intercepting ballistic missiles.

Its proposed activities include:

- Defining common operational requirements.
- Establishing joint technical working groups.
- Developing governance mechanisms.

- Preparing a roadmap for initial operational capabilities.
- Supporting joint research and development.
- Exploring collective funding options.
- Improving intelligence, data and information exchange.
- Coordinating the defence-industrial capacities of participating countries.

The system will complement—not replace—existing national and European missile-defence systems.

FREYJA Programme

FREYJA, a Ukrainian anti-ballistic missile programme, is the coalition's flagship initiative.

- Ukraine will contribute its experience in countering repeated ballistic-missile attacks.
- European partners can provide radars, command-and-control systems, industrial expertise and other critical components.
- France has agreed to facilitate cooperation between Ukrainian and French defence companies and provide technical expertise through its defence-procurement agency.
- Ukrainian President Volodymyr Zelenskyy expressed the objective of making **FREYJA** operational within approximately **12 months**; however, the coalition's formal declaration does not specify a binding deployment deadline.

Why Ballistic Missiles Are a Major Threat

Ballistic missiles are difficult to intercept because they:

- Travel at very high speeds.
- Follow high-altitude or exo-atmospheric trajectories.
- May descend towards targets at steep angles.
- Provide defenders with a limited interception window.
- Can carry conventional, chemical, biological or nuclear warheads.

A missile-defence network generally requires:

1. **Early-warning sensors:** Satellites and long-range radars detect launches.
2. **Tracking systems:** Determine the missile's speed and trajectory.
3. **Command-and-control network:** Assesses the threat and selects a response.
4. **Interceptor missile:** Attempts to destroy the incoming missile before impact.

Ukraine's Role

Ukraine has developed extensive operational experience in:

- Detecting missile and drone attacks.
- Operating layered air-defence networks.
- Integrating Western and domestically developed systems.
- Adapting defence technologies under battlefield conditions.
- Identifying gaps in existing interceptor capacity.

The coalition intends to use this operational experience to accelerate the development of European anti-ballistic capabilities.

Additional Information

- **Ballistic missile**
 - Powered during the initial phase of flight.
 - Subsequently follows a largely ballistic trajectory towards its target.
- **Cruise missile**
 - Remains powered during most of its flight.
 - Generally flies within the atmosphere, often at low altitude.
- **Existing air and missile-defence systems**
 - **Patriot:** US-developed surface-to-air and missile-defence system.
 - **SAMP/T:** Franco-Italian air and missile-defence system using Aster interceptors.
 - **IRIS-T SLM:** German-developed medium-range air-defence system.
 - **NASAMS:** Norwegian-US ground-based air-defence system.
- **NATO missile defence**
 - NATO operates an integrated air and missile-defence framework combining sensors, command systems and interceptor assets.
 - The new coalition is a separate multinational initiative but is intended to complement existing national and alliance-based capabilities.
- **Integrated or layered defence**
 - Uses different sensors and interceptors to counter threats at various ranges, altitudes and stages of flight.
 - No missile-defence system guarantees complete protection; effectiveness depends on detection coverage, interceptor stocks and response time.

Pakistan to Host 14th South Asian Games in 2027

What's the News?

Pakistan will host the **14th South Asian Games** in March 2027. The revised schedule was unanimously approved by the South Asian Olympic Committees, with limited flexibility for operational requirements. The regional multi-sport event is planned across **Lahore, Islamabad and Faisalabad**, with **27 sports** retained from the programme approved earlier. The event had been postponed multiple times after Pakistan was selected as host.

2027 South Asian Games

- **Edition:** 14th
- **Host country:** Pakistan
- **Host cities:** Lahore, Islamabad and Faisalabad
- **Scheduled period:** March 2027
- **Number of sports:** 27
- **Expected participation:** Media reports project more than 3,500 athletes
- **Governing body:** South Asia Olympic Council
- **Host body:** Pakistan Olympic Association

The final disciplines and events will remain those approved by the SAOC Executive Committee.

Pakistan's Hosting Record

Pakistan will host the South Asian Games for the **third time**.

- **1989 edition:** Islamabad
- **2004 edition:** Islamabad
- **2027 edition:** Multi-city format involving Lahore, Islamabad and Faisalabad

The upcoming edition will therefore be Pakistan's first South Asian Games organised across multiple cities.

South Asian Games

The South Asian Games are a regional multi-sport competition for athletes from South Asian countries.

- The Games were conceived in **New Delhi in 1981** to promote friendship and sporting cooperation.
- The inaugural edition was held in **Kathmandu, Nepal, in 1984**.
- Seven countries and 373 athletes participated in the first edition.
- The competition was originally known as the **South Asian Federation Games or SAF Games**.
- It was renamed the **South Asian Games** in 2004.

South Asia Olympic Council

The **South Asia Olympic Council (SAOC)** is the regional sports body responsible for the South Asian Games.

Its major functions include:

- Selecting the host country
- Approving sports and events
- Coordinating participating National Olympic Committees
- Promoting regional sports development
- Supervising the organisation of the Games

The scheduling meeting was attended by National Olympic Committee representatives from **Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.**

India at the South Asian Games

India has traditionally dominated the competition. At the previous edition hosted by Nepal, India finished first with:

- **174 gold medals**
- **93 silver medals**
- **45 bronze medals**
- **Total: 312 medals**

This was India's highest medal tally in the history of the Games.

India has previously hosted the Games in:

- **Kolkata**
- **Chennai**
- **Guwahati and Shillong**

SAOC and SAARC: Key Difference

The two organisations should not be confused:

- **SAOC**
 - Regional sports organisation
 - Conducts the South Asian Games
 - Comprises participating National Olympic Committees
- **SAARC**
 - Intergovernmental regional organisation
 - Established in 1985
 - Secretariat located in Kathmandu, Nepal
 - Works on regional economic, social and developmental cooperation

The Games may support regional diplomacy, but they are organised by the **SAOC**, not by SAARC.

Spain Wins the FIFA World Cup 2026

What's the News?

Spain defeated defending champion Argentina **1-0 after extra time** to win the FIFA World Cup 2026. **Ferran Torres** scored the decisive goal in the **106th minute** at

the New York New Jersey Stadium—commercially known as MetLife Stadium—in East Rutherford, New Jersey.

The victory gave Spain its **second men's World Cup title**, following its maiden triumph in 2010.

The Final

- **Winner:** Spain
- **Runner-up:** Argentina
- **Score:** Spain 1-0 Argentina
- **Goal scorer:** Ferran Torres
- **Goal time:** 106th minute
- **Venue:** New York New Jersey Stadium, East Rutherford
- **Spain captain:** Rodri
- **Final result:** Decided during extra time Argentina played extra time with ten players after **Enzo Fernández** received a second yellow card during second-half stoppage time. Goalkeeper **Emiliano Martínez** made 12 saves, while Torres was named Player of the Match.

Spain's World Cup Record

- **Titles:** Two—2010 and 2026
- Spain became the first champion of the expanded **48-team World Cup**.
- Spain completed the tournament unbeaten, recording seven victories and one draw.
- The team registered **seven clean sheets** across eight matches.
- Spain became the first country to simultaneously hold the senior men's and women's FIFA World Cup titles, having won the Women's World Cup in 2023.

Final Standings

1. **Spain** – Champion
2. **Argentina** – Runner-up
3. **England** – Third place
4. **France** – Fourth place

England defeated France in the third-place playoff.

Major Individual Awards

- **Golden Ball:** Rodri, Spain
- **Silver Ball:** Lionel Messi, Argentina
- **Bronze Ball:** Kylian Mbappé, France
- **Golden Boot:** Kylian Mbappé, France—10 goals
- **Golden Glove:** Unai Simón, Spain
- **FIFA Young Player Award:** Pau Cubarsí, Spain

FIFA World Cup 2026

- **Edition:** 23rd
- **Host countries:** Canada, Mexico and the United States
- **Participating teams:** 48
- **Total matches:** 104
- **Host cities:** 16
 - United States: 11

- Mexico: 3
- Canada: 2
- **Groups:** 12 groups of four teams
- **Knockout expansion:** Introduction of a Round of 32
- **Significance:** First men's World Cup hosted jointly by three countries and the largest edition in tournament history.

Qualification Format

From each four-team group:

- The top two teams qualified automatically for the Round of 32.
- The eight best third-placed teams also advanced.
- Knockout matches proceeded through:
 - Round of 32
 - Round of 16
 - Quarter-finals
 - Semi-finals
 - Third-place playoff
 - Final

Additional Information

FIFA

- **Full form:** Fédération Internationale de Football Association
- **Established:** 1904
- **Headquarters:** Zurich, Switzerland
- **Role:** International governing body for football, futsal and beach soccer
- FIFA organises major competitions including:
 - FIFA World Cup
 - FIFA Women's World Cup
 - FIFA Club World Cup
 - Youth and futsal World Cups

FIFA World Cup Trophy

- Introduced for the 1974 World Cup.
- Designed by Italian sculptor **Silvio Gazzaniga**.
- Made of **18-carat gold**.
- Depicts two human figures holding the Earth.
- The original trophy remains FIFA's property; winners receive a gold-plated replica.

France Adopts Social Media Ban for Children Under 15

What's the News?

The French Parliament has definitively adopted legislation prohibiting children below **15 years** from accessing social media. France has become the **first European Union country** to establish such a nationwide minimum age for social-network access.

The restrictions will be implemented in phases: children below 15 will be barred from creating new accounts from the

beginning of the new school year, while platforms will receive four additional months to remove or disable existing underage accounts.

Key Provisions

- **Minimum age:** Social-media access prohibited below 15 years.
- **New accounts:** Platforms cannot permit under-15 users to open accounts from **1 September 2026**.
- **Existing accounts:** Underage accounts must be removed or disabled by **January 2027**.
- **Age assurance:** Platforms must introduce reliable age-verification mechanisms.
- **Advertising:** Direct or indirect promotion of social-media services specifically targeting minors is prohibited.
- **Warning requirement:** Promotion of covered platforms must carry a warning indicating that they are dangerous for children below 15.
- **School phones:** The legislation also extends restrictions on mobile-phone use to French high schools.

Platforms Covered

The prohibition broadly covers online services that enable:

- Social interaction between users
- Public dissemination of content
- Participation in online communities
- Algorithm-driven social-media feeds

Major platforms such as Instagram, TikTok, Facebook and Snapchat fall within the intended scope.

The ban does not apply to:

- Collaborative online encyclopaedias such as Wikipedia
- Educational or scientific directories
- Platforms used for developing and sharing open-source software

Why Was the Ban Introduced?

France has linked excessive social-media use with:

- Reduced attention and self-esteem
- Cyberbullying
- Exposure to self-harm, suicide and drug-related content
- Addictive design features such as infinite scrolling
- Algorithmic amplification of extreme or disturbing material

French users aged **12–17 years** reportedly spend an average of approximately **1 hour and 21 minutes per day on TikTok alone**. Around 90% of people in this age group use smartphones daily to access the internet.

Digital Majority

"Digital majority" refers to the minimum age at which an individual can independently access certain digital services or consent to the processing of personal data.

France's model establishes a digital-access threshold of **15 years** for social media. Unlike a parental-consent framework, the final legislation creates a general prohibition for children below the threshold.

The prohibition is directed primarily at platform access arrangements. Children violating the restriction will not themselves face punishment.

EU Digital Services Act

The French measure must operate consistently with the European Union's **Digital Services Act**, or DSA.

- Officially known as **Regulation (EU) 2022/2065**
- Requires platforms accessible to minors to provide a high level of privacy, safety and security
- Prohibits profiling-based advertising when a platform knows with reasonable certainty that the user is a minor
- Requires major platforms to assess and mitigate systemic risks
- Supports privacy-preserving age-assurance systems

Some special enforcement powers proposed for France's national regulator were removed from the final compromise to avoid duplication or conflict with EU law. The European Commission will therefore retain an important role in determining platform compliance.

Additional Info

- **France**
 - Capital: Paris
 - President: Emmanuel Macron
 - Currency: Euro
 - Member of the European Union and permanent member of the UN Security Council
- **Global comparison**
 - Australia introduced the world's first nationwide social-media restriction of this type.
 - Australia's threshold is **16 years**, while France has fixed it at **15 years**.
 - France is the first EU member to adopt a nationwide under-15 prohibition.
- **India comparison**
 - Under the **Digital Personal Data Protection Act, 2023**, a child is a person below 18 years.

- Data fiduciaries must obtain verifiable parental consent before processing a child's personal data.
- The **DPDP Rules, 2025** provide the operational mechanism for such consent, subject to limited exemptions for areas such as healthcare, education and real-time safety.
- India's framework regulates children's data processing; it does not impose a general statutory ban on social-media access below a specified age.

France and Spain Wildfires Trigger Mass Evacuations and EU Response

What's the News?

- Severe wildfires across **southwestern France and central Spain** forced large-scale evacuations, damaged homes and strained national firefighting capacity.
- Initial reports placed evacuations at about **92,000**. As evacuation orders expanded, subsequent updates raised the combined figure to **over 200,000**.
- France evacuated the Cap Ferret peninsula by road and sea, while Spain declared an **emergency of national interest** in Madrid and Ávila.
- Both countries sought assistance through the European Union's disaster-response framework.

Major Affected Areas

France

- The principal fire affected **Gironde**, particularly the Cap Ferret peninsula, an Atlantic-coast tourist area around 60 km from Bordeaux.
- More than **14,000 hectares** were affected and over **100 homes** were reported destroyed as the fire intensified.
- A separate fire affected the neighbouring **Landes** department, including areas around Biscarrosse.
- Later updates reported approximately **110,000 evacuations in Gironde** and **31,000 in Landes**.

Spain

- Major fires affected the **Madrid region** and the neighbouring province of **Ávila** in Castilla y León.
- Multiple fire fronts west of Madrid merged, complicating containment operations.
- Spain's evacuation figure subsequently rose to about **60,000**, while additional

residents were ordered to remain indoors.

- The central government declared a **Level 3 civil-protection emergency**, permitting national coordination and deployment of additional resources.

EU Firefighting Assistance

France received or expected:

- Two Canadair firefighting aircraft from Croatia.
- Two Air Tractor aircraft from Portugal.
- Heavy-lift Black Hawk helicopters from the Czech Republic and Slovakia.

Spain received four Canadair water-bombing aircraft—two each from Italy and Greece. Other European countries also supplied personnel and equipment as the emergency expanded.

EU Civil Protection Mechanism

The **Union Civil Protection Mechanism**, or UCPM, coordinates assistance when a disaster exceeds a country's domestic response capacity.

- Affected countries may request aircraft, helicopters, equipment and specialised teams.
- Coordination is undertaken through the **Emergency Response Coordination Centre**, which operates continuously.
- The EU may co-finance the transport and operational costs of deployed assistance.
- **rescEU** maintains a reserve of firefighting aircraft and other emergency-response assets.

For the 2026 wildfire season, the EU had pre-positioned **777 firefighters from 14 countries** and placed **22 aircraft and five helicopters** on standby for high-risk states, including France and Spain.

Why Did the Fires Intensify?

The rapid spread was associated with:

- Temperatures approaching or exceeding **39°C**.
- Prolonged dry conditions and reduced soil moisture.
- Low humidity and highly combustible vegetation.
- Strong and shifting winds.
- Hilly terrain and dense settlements near forested areas.

Climate change does not necessarily ignite individual fires, but rising temperatures and more intense droughts create conditions in which fires can spread faster and become harder to control. Europe's burned area in 2026 was already above the **2006–2025 average**.

Additional Info

- **Convective wildfire**

- A highly intense fire that releases enough heat to influence local atmospheric circulation.
- It can generate its own winds, accelerate rapidly and abruptly change direction.

European Forest Fire Information System

- Commonly known as **EFFIS**.
- Functions under the Copernicus Emergency Management Service.
- Implemented by the European Commission's Joint Research Centre.
- Provides satellite-based fire-risk forecasts, active-fire information and burned-area assessments.

Spain's emergency of national interest

- Based on the country's National Civil Protection System.
- Used when an emergency affects multiple autonomous communities or requires resources beyond regional capacity.
- Enables stronger central-government coordination of civilian, military and emergency agencies.

Pyrocumulonimbus Fire Clouds Intensify Europe's Wildfires

What's the News?

Severe wildfires in France and Spain have generated **pyrocumulonimbus clouds**, commonly called **fire clouds** or **pyroCbs**. A major blaze near Saumos in France's Gironde region produced what was reported as the country's first documented pyroCb event.

The fire cloud generated strong winds and lightning, making the wildfire more unpredictable and capable of igniting new fires. The Gironde blaze burned more than **42,000 hectares**, while large-scale evacuations were undertaken across affected parts of France and Spain.

Pyrocumulonimbus Cloud

A pyrocumulonimbus is a **thunderstorm cloud generated by intense heat from a wildfire or another major heat source**.

- **Common names:** Fire cloud or fire-generated thunderstorm.
- **Abbreviation:** PyroCb.
- **WMO terminology:** **Cumulonimbus flammagenitus**.
- It can rise to approximately **15 kilometres** and may carry smoke and aerosols into the upper troposphere or lower stratosphere.

- Unlike an ordinary thunderstorm, its initial upward convection is driven mainly by the extreme heat of a fire.

How Does It Form?

1. An intense wildfire heats the surrounding air.
2. Hot air, smoke, ash and water vapour rise rapidly through convection.
3. The rising air expands and cools.
4. Water vapour condenses on smoke and ash particles, forming a pyrocumulus cloud.
5. If the plume continues rising into an unstable and sufficiently moist atmosphere, it develops into a pyrocumulonimbus thunderstorm.

The required conditions generally include:

- Extreme fire intensity.
- Hot and dry conditions near the surface.
- Cooler and relatively moist air at higher levels.
- Atmospheric instability that supports rapid vertical movement.

Why Are Fire Clouds Dangerous?

- **Lightning:** PyroCbs can produce lightning that ignites new fires away from the original blaze.
- **Strong downdrafts:** Descending air can generate sudden and violent surface winds.
- **Changing fire direction:** Fire-generated winds can rapidly alter the speed and direction of a wildfire.
- **Ember transport:** Powerful updrafts may carry burning material over long distances.
- **Reduced visibility:** Dense smoke and ash complicate aerial and ground firefighting.
- **Stratospheric pollution:** Smoke injected high into the atmosphere can travel across continents and affect air quality and atmospheric processes.

Europe's Wildfire Crisis

The Gironde wildfire near Bordeaux:

- Burned more than **420 square kilometres**, equivalent to over **42,000 hectares**.
- Forced approximately **220,000 people** to evacuate within the region.
- Destroyed or damaged more than **240 houses**.
- Produced repeated fire-cloud formations and fire-generated lightning.

Spain also experienced widespread fires, with more than **170,000 hectares** reportedly burned during the year and its largest

active blaze affecting around **50,000 hectares** in Ávila.

Climate Change Link

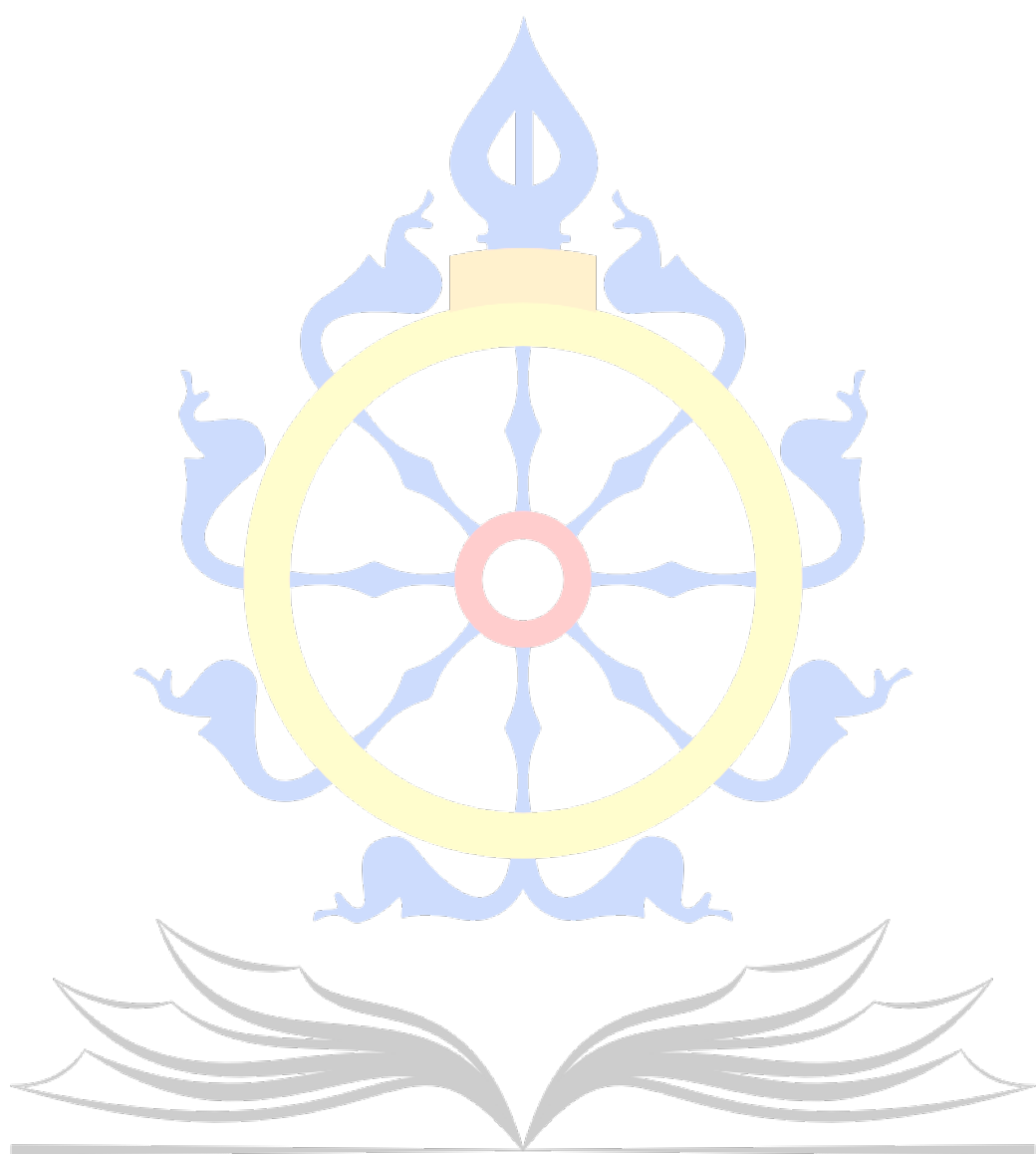
Climate change does not directly ignite every wildfire, as many fires originate from human activity or natural causes such as lightning. However, warmer conditions can:

- Increase the frequency and severity of heatwaves.
- Dry vegetation and soil more rapidly.
- Extend the duration of fire seasons.
- Create larger quantities of combustible material.
- Increase the probability of extreme fire behaviour and pyroCb development.

A wet winter can also promote vegetation growth; subsequent drought and extreme summer heat can convert this vegetation into highly flammable **fine fuel**.

Additional Info

- **Pyrocumulus and Pyrocumulonimbus**
 - **Pyrocumulus:** Fire-generated cumulus cloud that may not produce a thunderstorm.
 - **Pyrocumulonimbus:** More powerful vertical development accompanied by thunderstorm activity, lightning and dangerous winds.
- **Wildfire Monitoring**
 - Satellites detect heat signatures, smoke plumes and rapid cloud development.
 - Lightning-detection instruments can help identify pyroCb intensification.
 - NASA's **Fire Information for Resource Management System—FIRMS** provides satellite-derived information on active fires.



Miscellaneous

India Sends Reduced Contingent to Glasgow 2026 Commonwealth Games

What's the News?

India is participating in the **23rd Commonwealth Games in Glasgow, Scotland**, with a substantially smaller contingent because several of its traditionally medal-rich sports have been excluded from the programme.

Olympic medallists **Saikhom Mirabai Chanu** and **Lovlina Borgohain** have been selected as India's **flag bearer** and **baton bearer**, respectively, for the opening ceremony. Olympic champion **Neeraj Chopra** is among the prominent athletes leading India's medal campaign.

Glasgow 2026 Games

- **Edition:** 23rd Commonwealth Games
- **Host:** Glasgow, Scotland
- **Participating teams:** 74 nations and territories
- **Athletes:** Around 3,000
- **Programme:** 10 sports, including six integrated Para sports
- **Medal events:** 215
 - Includes a record **47 Para-sport medal events**
- **Venues:** Four venues located within an eight-mile corridor
- **Format:** A compact, lower-cost Games using existing sporting infrastructure.

India's Contingent

India's latest detailed roster is reported to contain **126 athletes—78 men and 48 women**—participating in eight able-bodied sports and five Para-sport disciplines.

Able-Bodied Sports

- Athletics
- Weightlifting
- Boxing
- Judo
- Artistic gymnastics
- Swimming
- Track cycling
- Bowls

Para-Sport Disciplines

- Para athletics
- Para powerlifting
- Para swimming
- Para track cycling
- 3x3 wheelchair basketball

Ceremonial Representatives

- **Flag bearer – Saikhom Mirabai Chanu**
 - Olympic silver medallist
 - Multiple Commonwealth Games medallist

- Represents India in weightlifting

- **Baton bearer – Lovlina Borgohain**

- Olympic bronze medallist
- Represents India in boxing.

Reduced Sports Programme

Several sports in which India has historically performed strongly are absent, including:

- Wrestling
- Badminton
- Table tennis
- Hockey
- Cricket
- Squash
- Shooting
- Archery

India won **61 medals** and finished fourth at Birmingham 2022. Wrestling, badminton and table tennis alone contributed **25 medals**, while hockey and women's cricket added three more. Their exclusion substantially reduces India's medal opportunities.

India is expected to depend mainly on:

- Athletics
- Weightlifting
- Boxing
- Judo
- Para sports

Commonwealth Games

- The event began as the **British Empire Games** in Hamilton, Canada, in 1930.
- It is governed by **Commonwealth Sport**, previously known as the Commonwealth Games Federation.
- India made its Commonwealth Games debut in **1934**.
- Glasgow 2026 marks India's **19th participation**.
- India previously hosted the Games in **New Delhi in 2010**.
- **Amdavad, Gujarat**, has been confirmed as the host of the **2030 Centenary Commonwealth Games**.

- The 2030 edition is expected to feature 15–17 sports.

Roster Data Note

The provided reports contain differing contingent figures—ranging from **120 to 126 athletes**, apparently because of roster revisions and inconsistent treatment of athlete and delegation numbers. For examination purposes, the latest detailed approved list reporting **126 athletes** should be preferred unless an updated official notification is issued.

