

Monthly Current Affairs Magazine

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Governance & Policy

Indian Railways Approves ₹170 Crore for Kavach 4.0 in Moradabad Division

What's the News?

- Indian Railways has approved ₹170 crore for deployment of **Kavach Version 4.0** across the remaining **712 Route Kilometres (RKm)** of **Moradabad Division, Northern Railway**.
- The project aims to strengthen railway safety through India's indigenous **Automatic Train Protection (ATP)** system.
- Kavach helps prevent **Signal Passing at Danger (SPAD)**, regulates train speed and automatically applies brakes in potentially unsafe situations, thereby reducing collision risks.

Kavach 4.0?

- Kavach** is an indigenously developed **Automatic Train Protection** system of Indian Railways.
- Version 4.0 incorporates improvements such as:
 - Higher **location accuracy**.
 - Better information on **signal aspects in large railway yards**.
 - Station-to-station communication through Optical Fibre Cable (OFC)**.
 - Direct interface with existing **Electronic Interlocking systems**.
- It assists loco pilots by automatically intervening when prescribed speed or signalling conditions are violated.

Kavach Deployment

- By end-July 2026, Kavach 4.0 had been commissioned over **2,633 RKm**:
 - Delhi-Mumbai corridor:** 1,423 RKm.
 - Delhi-Howrah corridor:** 1,210 RKm.
- Trackside Kavach implementation has been taken up over **21,794 RKm**, covering the **Golden Quadrilateral, Golden Diagonal, High-Density Network** and other identified sections.
- Supporting infrastructure includes:
 - 11,547 km** of Optical Fibre Cable.
 - 1,721** telecom towers.
 - Station data centres at **1,009 stations**.
 - Trackside equipment over **7,726 RKm**.
 - Kavach fitted in **6,290 locomotives**.

- Work is also underway to equip another **7,190 locomotives** and **1,200 EMU/MEMU trains**.

Additional Info

- SPAD – Signal Passing at Danger**
 - Occurs when a train passes a stop signal without authorisation.
 - Kavach can automatically apply brakes to prevent such incidents.
- Electronic Interlocking**
 - A computer-based railway signalling system that controls signals and track points while preventing conflicting train movements.
- RKm – Route Kilometre**
 - Measures the length of a railway route irrespective of the number of parallel tracks.

India Plans 100 New Airports Under Modified UDAN

What's the News?

- The Union Government plans to develop **100 new airports over the next 10 years** under the **Regional Connectivity Scheme (RCS)–Modified UDAN**.
- Union Civil Aviation Minister **K. Rammohan Naidu** said the expansion will focus on **Tier-2 and Tier-3 cities, Himalayan regions, remote areas and island territories**.
- The Cabinet-approved Modified UDAN scheme has a total outlay of **₹28,840 crore for FY 2026–27 to FY 2035–36**. The minister described the overall investment as around **₹30,000 crore**.
- India's operational airport network has expanded from **74 airports in 2014 to 166 airports** currently.

Modified UDAN Scheme

- UDAN: Ude Desh ka Aam Nagrik.**
- It is the Centre's **Regional Connectivity Scheme (RCS)** under the **Ministry of Civil Aviation**, aimed at making air travel affordable and connecting **unserved and underserved regions**.
- Modified UDAN will operate for **10 years** and seeks to improve both **regional aviation infrastructure and route sustainability**.

Components

- 100 airports:** To be developed mainly from existing **unserved airstrips**.
 - Earmarked amount: **₹12,159 crore**.

- **200 modern helipads:** Targeted particularly at **hilly, remote, island and aspirational regions**.
- **Operations & Maintenance support:** Three-year support envisaged for around **441 aerodromes**.
- **Viability support:** ₹10,043 crore earmarked over 10 years to support airlines operating regional routes.
- The programme also seeks to strengthen **indigenous aviation capacity** and improve the commercial sustainability of regional airports.

Hub-and-Spoke Model

- Alongside airport expansion, the government is promoting an **international hub-and-spoke aviation model**.
- Under this model, passengers from smaller airports travel through a designated hub for onward international connectivity, with integrated **check-in, immigration, customs and baggage transfer**.
- **Ahmedabad** has become India's **third airport** under this framework, after **Varanasi and Amritsar**.
- The government plans to extend the model to **22 additional airports** in the current phase.

Why Modified UDAN?

- Increasing demand for air connectivity is emerging from regions beyond metropolitan centres.
- Expected benefits include:
 - Better **last-mile and regional connectivity**.
 - Growth of **tourism, trade and employment**.
 - Faster access to services in **remote and difficult terrain**.
 - Integration of smaller cities into national economic networks.
 - Greater use and financial sustainability of regional aviation infrastructure.

Additional Info

Challenges under Earlier UDAN Phases

A **CAG audit** highlighted sustainability concerns in the earlier phases:

- **403 of 774 routes (52%)** awarded up to UDAN-3 did not commence operations.
- Of the **371 routes** that started, only **112** completed the full three-year concession period.
- Only **54 routes connecting 17 RCS airports** continued beyond the concession period.
- Overall, only about **7% of the 774 routes** were found sustainable over a three-to-five-year period.

- **83 of 139 airports, heliports and water aerodromes** identified for revival/development under the first three phases were either unutilised or under-utilised.

Centre Halves Sugar Stock Limit to Curb Hoarding

What's the News?

- The Union Government has **halved the sugar stock-holding limit for dealers and traders from 4,000 quintals to 2,000 quintals (200 tonnes)**.
- The measure is aimed at **curbing hoarding and speculative trading**, improving domestic availability and stabilising retail prices during the high-demand festive period.
- Dealers are also prohibited from holding a particular sugar stock for **more than 30 days from the date of receipt**.
- **Kolkata and its extended metropolitan areas** are exempt from the reduced ceiling and can continue to hold up to **4,000 quintals (400 tonnes)** because the region serves as an important distribution hub for eastern and North-Eastern India.

Revised Sugar Stock Limits

- **Dealers/Traders**
 - Maximum stock: **2,000 quintals**
 - Equivalent: **200 tonnes**
 - Maximum holding period: **30 days**
- **Kolkata & extended metropolitan area**
 - Maximum stock: **4,000 quintals / 400 tonnes**
- Separately, the government has restricted **bulk consumers** from keeping sugar stocks exceeding **15 days of consumption**.
- Dealers are required to regularly declare and update their stocks through the **Department of Food & Public Distribution's online portal**.

Why Were Limits Tightened?

- Sugar prices witnessed a sharp short-term increase ahead of the festive season.
- The government identified:
 - **Hoarding** by some traders and intermediaries.
 - **Speculative transactions**.
 - Paper trading without corresponding physical movement of sugar.
 - Artificial perceptions of scarcity.
- Following government interventions and improved availability, **ex-mill sugar**

prices declined by around 20% from their recent elevated levels.

Other Measures to Increase Sugar Supply

The Centre has adopted several complementary measures:

- Permitted **duty-free import of 10 lakh metric tonnes (LMT) of raw sugar** to augment domestic availability.
- Central and State government teams are undertaking **physical verification of stocks** held by sugar mills, dealers and traders.
- Sugar mills have been encouraged to commence crushing earlier to boost festive-season supply.
 - Normal October production: **3–4 LMT**
 - Expected production after early crushing: **more than 10 LMT**
- India's current sugar production is estimated at around **306 LMT**, compared with an initial estimate of about **343 LMT**.

Additional Info

Essential Commodities Act, 1955

- **Sugar is regulated under the Essential Commodities Act, 1955.**
- **Section 3** empowers the Central Government to regulate the **production, supply, distribution and availability** of essential commodities.
- The current stock-control measures have been issued using powers under the Act along with the **Sugar (Control) Order, 2025.**

Sugar (Control) Order, 2025

- It replaced the earlier **Sugar (Control) Order, 1966** and **Sugar Price (Control) Order, 2018.**
- It provides an updated regulatory framework covering:
 - Production and sale of sugar.
 - Stock and release quotas.
 - Movement and export/import.
 - **Minimum Selling Price (MSP)** of sugar.
 - Digital reporting and stock monitoring.
 - Raw sugar and specified khandsari units.
- **Administered by:** Department of Food & Public Distribution, **Ministry of Consumer Affairs, Food & Public Distribution.**

Amit Shah Chairs 28th Western Zonal Council Meeting in Goa

What's the News?

- **Union Home Minister Amit Shah** chaired the **28th Western Zonal Council (WZC) meeting** in **Panaji, Goa.**
- The meeting brought together representatives of **Goa, Gujarat, Maharashtra,** and the Union Territory of **Dadra and Nagar Haveli and Daman and Diu.**
- Major deliberations focused on **cooperative federalism, welfare-scheme implementation, cybercrime, health, banking access, nutrition, education, infrastructure** and **inter-State coordination.**
- The meeting was organised by the **Inter-State Council Secretariat (ISCS)** under the **Ministry of Home Affairs.**

Western Zonal Council

- The Western Zonal Council is a **statutory and advisory body** established under the **States Reorganisation Act, 1956.**
- **Members:** Goa, Gujarat, Maharashtra and Dadra and Nagar Haveli and Daman and Diu.
- **Chairman:** Union Home Minister.
- **Vice-Chairman:** Chief Minister of a member State by **annual rotation**; Goa Chief Minister **Pramod Sawant** was Vice-Chairman for the meeting.
- Other participants included Gujarat Chief Minister **Bhupendra Patel,** Maharashtra Chief Minister **Devendra Fadnavis** and UT Administrator **Praful K. Patel.**

Issues Discussed

- **Law & Security**
 - Fast Track Special Courts for cases of rape against women and children.
 - **Emergency Response Support System (ERSS-112).**
 - Cybercrime and digital infrastructure.
 - Implementation of the new criminal laws and measures against drug trafficking.
- **Health & Social Sector**
 - **Ayushman Bharat–PM–JAY** coverage.
 - Food safety standards.
 - Reduction of child malnutrition, underweight and stunting under **POSHAN Abhiyaan.**
 - Reduction in school dropout rates.
- **Economy & Infrastructure**

- Brick-and-mortar banking facilities within the prescribed radius of villages.
- Railway development and environmental clearances.
- Urban master planning and electricity supply.
- Strengthening and computerisation of **Primary Agricultural Credit Societies (PACS)**.

Zonal Councils: Performance

- **2004–14:** 25 meetings of Zonal Councils and their Standing Committees.
- **Since 2014:** 71 meetings.
- **Issues discussed:** 1,893.
- **Issues resolved:** 1,445 – about **76%**.
- PACS computerisation reached about:
 - **Maharashtra:** 98%.
 - **Gujarat:** 92%.
- Zonal Councils are increasingly being used not only for dispute resolution but also to **monitor implementation of public welfare programmes**.

Additional Info

- **Legal Basis**
 - Five Zonal Councils were established under **Sections 15–22 of the States Reorganisation Act, 1956:**
 - Northern Zonal Council.
 - Central Zonal Council.
 - Eastern Zonal Council.
 - Western Zonal Council.
 - Southern Zonal Council.
- **Nature**
 - Zonal Councils are **statutory, not constitutional bodies**.
 - Their recommendations are **advisory**, not binding.
 - They promote **cooperative federalism** and provide a forum for Centre-State and inter-State consultation.
- **Functions**
 - Section 21 permits discussion and recommendations on matters of common interest, including:
 - Economic and social planning.
 - Border disputes.
 - Linguistic minorities.
 - Inter-State transport.
 - Issues arising from State reorganisation.
- **Standing Committees**
 - Each Zonal Council has a Standing Committee consisting primarily of the **Chief Secretaries of member States/UTs**.

- It scrutinises and attempts to resolve issues before they reach the full Council.

• Important Distinction

- **Zonal Councils:** Statutory bodies under the *States Reorganisation Act, 1956*.
- **Inter-State Council:** Constitutional mechanism under **Article 263** of the Constitution.
- The North-Eastern States are principally covered through the separate **North Eastern Council**, rather than a sixth Zonal Council.

Cabinet Approves ₹20,804-Crore Railway Multitracking Projects Across Nine States

What's the News?

- The **Cabinet Committee on Economic Affairs (CCEA)**, chaired by Prime Minister Narendra Modi, approved **eight railway multitracking projects** with a combined estimated cost of **₹20,804 crore**.
- The projects cover **nine states and 31 districts** and will add about **1,196 km** to the Indian Railways network.
- They are targeted for completion by **FY 2029–30** and aim to decongest busy corridors, improve operational efficiency and strengthen passenger and freight movement.

Eight Multitracking Projects

Eastern and Central India – ₹10,783 crore; about 656 km

- **Kharagpur–Jharsuguda (Bagdehi):** 4th line
- **Katni–Pendra Road:** 4th line
- **Bilaspur (Uslapur)–Pendra Road:** 3rd line
- States covered: **West Bengal, Jharkhand, Odisha, Madhya Pradesh and Chhattisgarh**.

Southern India – ₹10,021 crore; about 540 km

- **Arakkonam–Renigunta:** 3rd and 4th lines – **77 km**
- **Whitefield–Bangarapet:** 3rd and 4th lines – **47 km**
- **Hosur–Omalur:** Doubling – **147 km**
- **Salem–Karur–Dindigul:** Doubling – **159 km**
- **Secunderabad (Ghatkesar)–Kazipet:** Multitracking – **110 km**
- States covered: **Tamil Nadu, Andhra Pradesh, Karnataka and Telangana**.

Connectivity & Freight Impact

- The projects are expected to improve rail connectivity for around **6,911 villages**, covering a population of approximately **1.08 crore**.
- Combined additional freight capacity is estimated at **74 million tonnes per annum (MTPA)**:
 - Eastern and central projects: **27 MTPA**
 - Southern projects: **47 MTPA**
- Major commodities transported on these corridors include **coal, cement, iron and steel, containers, automobiles, foodgrains, petroleum products and fertilisers**.

PM Gati Shakti Link

- The projects have been planned under the **PM Gati Shakti National Master Plan**, which promotes coordinated infrastructure planning and **multimodal connectivity**.
- Capacity augmentation is intended to reduce railway congestion, improve logistics efficiency and enable smoother movement between production centres, consumption centres and transport networks.

Environmental & Economic Impact

- Greater movement of freight by rail, an energy-efficient mode of transport, is expected to help lower India's logistics and fuel requirements.
- The projects are estimated to:
 - Reduce oil consumption/import requirement by about **20 crore litres**.
 - Reduce **CO₂ emissions** by about **104 crore kg**.
 - Provide emission benefits estimated to be equivalent to the carbon absorption of about **4.48 crore trees**.

Additional Info

- **Cabinet Committee on Economic Affairs (CCEA)**
 - One of the key Cabinet Committees of the Union Government.
 - Chaired by the **Prime Minister**.
 - Deals with major economic policy matters and large investment proposals, including significant infrastructure projects.
- **Railway Multitracking**
 - Refers to adding additional railway lines along existing corridors.
 - **Doubling**: Conversion of a single-line section into two lines.
 - **Third/Fourth line**: Additional tracks on already double- or

triple-line corridors to increase capacity and reduce congestion.

Coal Ministry Launches First Sector-Wide CSR Framework for Indian Coal Companies

What's the News?

- The **Ministry of Coal**, along with **Coal India Limited (CIL)**, has launched the **Comprehensive CSR Framework for Indian Coal Companies**.
- It is the **first sector-specific CSR framework for the coal sector** since statutory **Corporate Social Responsibility (CSR)** provisions were introduced under the **Companies Act, 2013**.
- Prepared by the **Indian Institute of Corporate Affairs (IICA)**, the framework seeks to make CSR interventions in coal-mining regions more **structured, transparent, measurable and outcome-oriented**.
- The framework focuses particularly on communities residing in **coal-bearing and mining-affected areas**.

Comprehensive CSR Framework

- The framework provides a common guiding structure for CSR activities undertaken by **public and private coal companies**.
- It seeks to ensure that CSR projects:
 - Reflect **local community needs**.
 - Follow systematic planning and implementation.
 - Have **measurable outcomes and impact assessment**.
 - Improve transparency and accountability.
 - Support areas such as **healthcare, education, livelihoods, community development and environmental sustainability**.
- The initiative assumes significance with the increasing participation of **private companies in India's coal sector**, creating the need for a more consistent sector-wide approach to CSR.

Thalassemia Bal Sewa Yojana

- **Thalassemia Bal Sewa Yojana (TBSY)** is a flagship CSR initiative of **Coal India Limited** for children suffering from **Thalassemia and Aplastic Anaemia**.
- Features:
 - Network expanded from **4 to 21 empanelled hospitals**.

- Financial assistance of up to **₹10 lakh per patient** for **Bone Marrow Transplant (BMT)**.
- Total allocation of **₹130 crore across four phases**.
- More than **1,050 bone marrow transplants** have been completed.
- Implemented with **Thalassemics India**, with monitoring guidance from the **Ministry of Health and Family Welfare**.

Nanha Sa Dil

- **Nanha Sa Dil** is CIL's CSR initiative for children affected by **Congenital Heart Defects (CHDs)**.
- It is implemented in partnership with the **Sri Sathya Sai Health and Education Trust**.
- Key achievements:
 - More than **2 lakh children** screened.
 - Over **1,500 corrective cardiac surgeries** completed free of cost.
 - Treatment support includes **hospitalisation and travel expenses**.
- Around **2.4 lakh newborns** in India are estimated to be affected by congenital heart defects annually, while only about **5% receive timely treatment**.
- The programme began in Jharkhand and has subsequently expanded through CIL subsidiaries including **SECL, CCL, NCL and WCL**.

CSR under Companies Act, 2013

- **Section 135 of the Companies Act, 2013** provides the statutory framework for CSR in India.
- CSR provisions apply to a company meeting any one of the following criteria in the immediately preceding financial year:
 - **Net worth:** ₹500 crore or more.
 - **Turnover:** ₹1,000 crore or more.
 - **Net profit:** ₹5 crore or more.
- Eligible companies are generally required to spend at least **2% of the average net profits of the preceding three financial years** on CSR activities.
- Permissible CSR areas are broadly specified under **Schedule VII of the Companies Act**, including healthcare, education, environmental sustainability, rural development and other social-development activities.

Additional Info

- **Indian Institute of Corporate Affairs (IICA)**

- An **autonomous institute under the aegis of the Ministry of Corporate Affairs**.
- Functions as a think tank and capacity-building institution in areas of corporate law, governance, CSR and related corporate-affairs policy.
- **Coal India Limited**
 - A Central Public Sector Enterprise under the **Ministry of Coal**.
 - Its CSR interventions include healthcare, education, livelihood generation and community-development programmes, particularly in and around coal-mining regions.

Government Tightens E-Commerce Rules on Discounts and Digital Practices

What's the News?

- The government has introduced the **Consumer Protection (E-Commerce) (Amendment) Rules, 2026** to strengthen transparency and consumer protection in online marketplaces.
- The amended framework will replace the **Consumer Protection (E-Commerce) Rules, 2020** and come into force from **2027**.
- Major changes cover **discount pricing, search results, sponsored listings, dark patterns, grievance redressal, consumer data and product disclosures**.

Discount and Price Transparency

- When announcing a discount, an e-commerce entity must display:
 - **Reduced price**, and
 - **Prior price**.
- **Prior price** means the **lowest price** at which the good or service was offered during the **preceding 30 days**.
- This seeks to curb misleading discounts based on artificially inflated reference prices.

Search Results and Sponsored Listings

- Platforms cannot manipulate search results in a manner that:
 - Misleads consumers, or
 - Adversely affects the relevance of results to the user's search query.
- **Paid/sponsored listings** must carry **clear and prominent disclosures**, enabling consumers to distinguish advertisements from organic results.

Dark Patterns and Compliance

- E-commerce entities must comply with the **Guidelines for Prevention and Regulation of Dark Patterns, 2023**.
- They must:
 - Conduct a **yearly self-audit**.
 - Prominently display a **certificate of compliance**.
- Dark patterns are deceptive user-interface practices designed to manipulate consumers into decisions they may not otherwise make.

Consumer Protection Measures

- Every e-commerce entity must become a partner in the **convergence process of the National Consumer Helpline (NCH)**.
- Consumers must receive a copy of the complaint recorded by the platform's **grievance officer**.
- Marketplace platforms must disclose important information such as:
 - Best-before/use-before dates
 - Return and refund conditions
 - Warranty
 - Delivery and payment details
 - **Importer details and country of origin** for imported goods.
- Consumer information cannot be used for specified purposes without **express and affirmative consent**.
- Platforms cannot impose **bundled fees for unrelated services**, subject to exceptions for loyalty or membership programmes.

E-Commerce Grievances

- The **National Consumer Helpline** received **17,71,622 grievances in 2025**.
- Of these, **5,11,196 complaints**, or about **29%**, were related to the e-commerce sector.
- India's e-commerce market is projected to expand from about **\$140 billion to as much as \$300 billion by 2030**.
- Online shoppers are projected to increase from around **280–300 million in 2025 to 420–440 million by 2030**.

Additional Info

- **Consumer Protection Act, 2019**
 - Provides the statutory framework for protecting consumer rights in India.
 - It provides for the **Central Consumer Protection Authority (CCPA)** to address violations of consumer rights, unfair trade practices and misleading advertisements.
- **Consumer Protection (E-Commerce) Rules, 2020**
 - Regulate e-commerce entities operating in India.

- The 2026 amendments strengthen these rules for evolving digital-market practices.
- **Dark Patterns**
 - Examples include **false urgency, basket sneaking, confirm shaming, forced action, subscription traps, interface interference, bait-and-switch, drip pricing and disguised advertisements**.
 - Their regulation seeks to preserve **consumer autonomy and informed choice**.

DGCA Orders One-Time Drug Screening for All Pilots

What's the News?

- The **Directorate General of Civil Aviation (DGCA)** has directed Indian airlines to conduct a **one-time mandatory screening for psychoactive substances for all pilots**.
- Airlines have been asked to complete the exercise by **July 2027**, covering an estimated **14,000 pilots**.
- The move follows heightened scrutiny after the pilot-in-command of an **Air India Phuket-Delhi flight** tested positive for a psychoactive substance following a serious in-flight incident.
- The measure significantly expands the existing system, under which only a specified proportion of flight crew undergo random annual drug testing.

Existing Drug-Testing Framework

- DGCA's **Civil Aviation Requirements (CAR)** provide for examination of aviation personnel for consumption of psychoactive substances.
- Under the existing framework:
 - At least **10% of flight crew and air traffic controllers** of an organisation are subjected to random drug testing annually.
 - Employees covered by the programme must have an **equal chance of being selected**.
- The new one-time exercise therefore extends screening to **100% of airline pilots during the current cycle**.

What are Psychoactive Substances?

- Psychoactive substances affect the **central nervous system**, potentially altering perception, cognition, mood, judgement or behaviour.
- Their consumption is a major aviation-safety concern because pilots perform **safety-critical functions** requiring

alertness, judgement and rapid decision-making.

- DGCA regulations prohibit licence holders from exercising their privileges while under the influence of a psychoactive substance that could impair safe performance.

Action After a Positive Test

- An initial positive screening result is treated as **"non-negative"** and undergoes confirmatory testing.
- If confirmed:
 - **First occurrence:** The individual is removed from safety-sensitive duties and undergoes **rehabilitation/de-addiction**, followed by fitness assessment before returning to duty.
 - **Second occurrence:** Licence may be **suspended for three years**.
 - **Third occurrence:** Licence may be **cancelled permanently**.

Triggering Air India Incident

- An Air India **Airbus A320** operating from Phuket to Delhi experienced a serious in-flight event involving temporary loss of hydraulic systems and an altitude loss of about **300 feet**.
- The pilot-in-command subsequently tested positive for a psychoactive substance and was dismissed by the airline.
- **24 passengers and crew members were injured** during the incident.
- Investigators have **not established that the pilot's drug-test result caused the aircraft's technical or altitude-loss event**.

Proposed Stricter Framework

- The government is also considering amendments to strengthen the permanent drug-testing regime for pilots.
- One proposal under consideration is to move beyond the existing **10% annual random-testing requirement** towards much wider, potentially universal annual coverage.
- The present **one-time screening order** and the proposed permanent amendment should therefore be distinguished: the former is already being implemented, while the latter concerns the future regulatory framework.

Additional Info

- **Directorate General of Civil Aviation (DGCA)**
 - Regulatory body for **civil aviation safety in India**.
 - Functions as an **attached office of the Ministry of Civil Aviation**.

- Responsible for:
 - Civil aviation regulations
 - Air safety and airworthiness standards
 - Regulation of air transport services
 - Licensing and oversight of aviation personnel
 - Coordination with the **International Civil Aviation Organization (ICAO)**.

• Aircraft Rules, 1937

- Rule 24 regulates the consumption of **alcohol, sedatives, narcotics and stimulant drugs** by operating crew.
- Crew members cannot perform aviation duties while intoxicated or impaired by such substances.

• AAIB

- The **Aircraft Accident Investigation Bureau** investigates aircraft accidents and serious incidents in India.
- It functions under the **Ministry of Civil Aviation** and is institutionally separate from the DGCA's regulatory role.

Centre Reconstitutes Central Board of Film Certification with 18 Members

What's the News?

- The **Central Government** has **reconstituted the Central Board of Film Certification (CBFC)** with **18 members**, with immediate effect.
- The reconstituted Board will remain in place for **three years or until further orders, whichever is earlier**.
- The exercise was undertaken under **Section 3(1) of the Cinematograph Act, 1952**, read with **Rule 3 of the Cinematograph (Certification) Rules, 2024**.
- **Shashi Shekhar Vempati** is the current **Chairperson of CBFC**. He was appointed separately for a three-year term and will head the reconstituted Board.

New CBFC Board

The **18 appointed members** are:

- Vinod Anupam
- Manoj Joshi
- Abhishek Jain
- Ricky Kej
- Priyadarshan
- Suniel Shetty
- Hansraj Hans

- Supriya Yarlagadda
- Yatindra Mishra
- Roopali Ganguly
- Preity Zinta
- Neela Madhab Panda
- Pankaj Tripathi
- Prosenjit Chatterjee
- Pallavi Joshi
- Nishigandha Wad
- Waman Kendre
- Ramesh Patange

Waman Kendre and Ramesh Patange have been retained from the previous Board.

Central Board of Film Certification

- **CBFC** is a **statutory body** under the **Ministry of Information and Broadcasting**.
- It regulates the **public exhibition of films in India** through certification under the **Cinematograph Act, 1952**. A film must receive CBFC certification before public exhibition in India.
- **Headquarters:** Mumbai.
- It operates through regional offices that are assisted by **Advisory Panels** for examination of films.

Legal Composition

Under **Section 3 of the Cinematograph Act, 1952:**

- The Central Government constitutes the Board for sanctioning films for public exhibition.
- The Board consists of a **Chairperson and not fewer than 12 and not more than 25 other members**, appointed by the Central Government.
- Thus, the present reconstitution concerns **18 Board members**, while **Shashi Shekhar Vempati** continues separately as Chairperson.

Film Certification Categories

The current certification framework provides the following categories:

- **U** – Unrestricted public exhibition.
- **UA 7+** – Unrestricted exhibition, with parental/guardian guidance for children below 7.
- **UA 13+** – Parental/guardian guidance for children below 13.
- **UA 16+** – Parental/guardian guidance for children below 16.
- **A** – Exhibition restricted to adults.
- **S** – Exhibition restricted to members of a specified class or profession.

Cinematograph (Certification) Rules, 2024

- The **Cinematograph (Certification) Rules, 2024** replaced the earlier **1983 Rules**.

- They provide the procedural framework for film certification and introduced age-based **UA markers** – **UA 7+, UA 13+ and UA 16+**.
- Under Rule 3:
 - the Chairperson normally holds office for **three years** and may continue until a successor is appointed;
 - other Board members hold office for a period **not exceeding three years**, subject to the pleasure of the Central Government.

Additional Info

• Previous Board

- The CBFC had last been formally reconstituted in **2017**.
- Members continued beyond the original tenure until successors were appointed, as permitted by the applicable framework.

• Current Chairperson

- **Shashi Shekhar Vempati** was appointed CBFC Chairperson following the departure of **Prasoon Joshi**, who stepped down after becoming Chairperson of **Prasar Bharati**.

• Certification, not censorship

- The statutory name is the **Central Board of Film Certification**. Its core legal function is to **certify films for public exhibition** according to the Cinematograph Act and associated rules.

MEA Revises Passport Validity Rules for Children Below 15 Years

What's the News?

The **Ministry of External Affairs (MEA)** has notified the **Passports (Amendment) Rules, 2026**, revising the validity of ordinary passports issued to children below 15 years.

A **36-page ordinary passport** issued to a child below 15 will now remain valid for **five years from the date of issue or until the child turns 18, whichever is earlier**. The amended provisions came into force upon publication in the Official Gazette.

What Changed?

The amendment modifies **Rule 12(1A) of the Passports Rules, 1980**.

- **Earlier provision:** A passport issued to a child below 15 was valid for **five years or until the child attained 15 years**, whichever was earlier.
- **New provision:** It is valid for **five years or until the child attains 18 years**, whichever occurs earlier.

- The provision specifically covers a **36-page ordinary passport** issued to a child below 15.
- The change can extend passport validity for children approaching 15 and reduce the need for an immediate reissue merely because the holder crosses the age of 15.

Passport Fee Provisions

The amendment also revises **Rule 8 of the Passports Rules, 1980**, providing that application fees for different passport services will be those specified in **Schedule IV**.

Passport charges had already been revised earlier in 2026. For minor applicants:

- A **36-page fresh or reissued passport** under the normal category costs **₹1,750**, compared with **₹1,000** earlier.
- A **10% concession on the basic passport fee** continues for fresh applications by children up to eight years of age; it does not apply to reissue applications.

Legal Framework

- **Passports Act, 1967:** Governs the issue of passports and travel documents and regulates the departure of persons from India.
- **Section 24:** Empowers the **Central Government** to make rules through notification in the Official Gazette for implementing the Act, including rules concerning passport validity and fees.
- **Passports Rules, 1980:** Principal rules framed under the Act.
 - **Rule 8:** Passport application fees.
 - **Rule 12:** Duration/validity of passports and travel documents.
 - **Schedule IV:** Prescribes fees for different passport-related services.

Additional Info

Children aged **15–18 years** have separate provisions. Passport Seva guidance allows them to obtain a passport with limited validity or, subject to the applicable requirements, apply for a **10-year-validity passport**. Police-verification requirements depend on the category and circumstances of the application.

Passport services are administered by the **Ministry of External Affairs** through the Passport Seva system, including Passport Offices, Passport Seva Kendras (PSKs) and Post Office Passport Seva Kendras (POPSKs).

TRAI Expands Voice-and-SMS-Only Prepaid Plans

What's the News?

- The **Telecom Regulatory Authority of India (TRAI)** has notified the **Telecom Consumer Protection (Thirteenth Amendment) Regulations, 2026**.
- The amendment requires telecom service providers (TSPs) to offer a wider range of **voice-and-SMS-only Special Tariff Vouchers (STVs)** for consumers who do not require mobile data.
- It particularly addresses the shortage of **affordable short-duration non-data plans**, which affected low-income and basic-connectivity users.

What are the New STV Rules?

- For **every bundled Voice + SMS + Data STV having a validity of 30 days or less**, telecom operators must provide a corresponding **Voice + SMS-only STV**.
- Operators must provide at least one Voice + SMS-only STV that:
 - Is **renewable on the same date every month**.
 - Renews on the **last day of the month** if the corresponding date does not exist in that month.
- They must also provide **at least one longer-validity Voice + SMS-only STV**, corresponding to a longer-validity bundled STV.
- Prices of the mandated non-data STVs must have an **appropriate and largely proportional reduction** compared with bundled plans containing data.

Why was the Amendment Needed?

- The **Telecom Consumer Protection (Twelfth Amendment) Regulations, 2024** had already required every TSP to provide **at least one Voice + SMS-only STV**.
- TRAI subsequently found that:
 - Only a limited number of such plans were being offered.
 - Available plans were largely concentrated in **longer validity periods**.
 - Consumers needing only basic connectivity had limited access to **lower-cost, shorter-duration plans**.
- The Thirteenth Amendment therefore shifts from merely requiring one standalone plan to requiring **multiple options linked to the validity periods of bundled plans**.

Consumer Impact

- **Greater choice:** Consumers can select voice-and-SMS plans without being compelled to purchase data.

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- **Affordability:** Proportional tariff reduction is intended to reflect the exclusion of mobile-data services.
- **Predictable recharge cycle:** Same-date monthly renewal reduces dependence on shorter cycles such as traditional **28-day plans**.
- **Financial inclusion:** The changes are particularly relevant for **low-income consumers and users primarily dependent on voice and SMS services**.

Consultation Process

- TRAI issued a draft amendment before finalising the regulations.
- It received **1,132 stakeholder responses** and also conducted an **Open House Discussion (OHD)**.
- The final regulations incorporated stakeholder feedback along with TRAI's regulatory analysis.

Additional Info

- **Telecom Regulatory Authority of India (TRAI)**
 - Established under the **Telecom Regulatory Authority of India Act, 1997**.
 - It is a **statutory regulatory body** for India's telecom sector.
 - Major functions include regulation of **telecom tariffs, interconnection and quality of service**, along with protection of consumer interests.
- **Special Tariff Voucher (STV)**
 - A prepaid tariff product designed for specified services such as **voice, SMS or data** for a defined validity period.
 - Unlike a general bundled recharge, an STV can target specific telecom services and consumer requirements.
- **Key Change: 2024 vs 2026**
 - **Twelfth Amendment, 2024:** At least **one Voice + SMS-only STV** was required.
 - **Thirteenth Amendment, 2026:** Requires **multiple Voice + SMS-only options**, including corresponding short-duration plans, a calendar-month renewal option and at least one longer-validity option.

Government Dissolves Digital Communications Commission After 37 Years

What's the News?

- The **Government of India has dissolved the Digital Communications Commission**

(DCC), the apex inter-departmental decision-making body of the **Department of Telecommunications (DoT)**.

- The DCC had functioned for around **37 years**, dealing with major telecom policy, administrative and financially significant matters.
- It was originally established as the **Telecom Commission in 1989** and renamed the Digital Communications Commission in 2018.
- The dissolution restructures the internal decision-making mechanism of the DoT, with matters now moving more directly through the departmental, ministerial and Cabinet approval framework where required.

What was the Digital Communications Commission?

- The **Telecom Commission** was constituted in **1989** to deal with various aspects of India's telecommunications sector.
- It was redesignated as the **Digital Communications Commission (DCC)** in 2018 as India's telecom policy framework expanded towards broader digital communications.
- It functioned as the **apex decision-making body within the DoT** for important telecom matters.

Major Functions

- Considered **telecommunication and digital communication policies**.
- Examined proposals having **significant financial implications**.
- Considered issues relating to **spectrum pricing and allocation**.
- Examined recommendations made by the **Telecom Regulatory Authority of India (TRAI)**.
- Helped resolve **inter-departmental issues** before major proposals were placed before the Union Cabinet.

Why was the DCC Dissolved?

- The institutional structure had developed **overlaps between DCC members and departmental advisers within the DoT**.
- Several key member posts were vacant, affecting the effectiveness of the existing structure.
- Some financial approval functions had already shifted to the **Ministry of Finance**, reducing the need for a separate institutional layer for such matters.
- The restructuring is therefore aimed at reducing duplication and simplifying the telecom decision-making process.

Decision-Making After DCC

- Policy and administrative matters previously handled through the DCC will move more directly through the **Telecom Secretary**.
- Matters requiring higher approval will continue to be placed before the **Minister of Communications and the Union Cabinet**, as applicable.
- The dissolution affects the **internal decision-making structure of the DoT**; it does **not dissolve or replace TRAI**, which remains India's statutory telecom regulator.

Last Major Decision: Satcom Spectrum

- The DCC's final major deliberations concerned the allocation of spectrum for **satellite communication (satcom) services**.
- It approved most of TRAI's recommendations relating to satcom spectrum.
- The proposal subsequently required **Cabinet approval**.
- **Starlink, Eutelsat OneWeb and Jio Satellite Communications** have received permission to provide satcom services in India, but commercial rollout requires **spectrum allocation and the required security clearance**.

Additional Info

- **Department of Telecommunications (DoT)**
 - Functions under the **Ministry of Communications**.
 - Responsible for telecom policy, licensing, spectrum management and administration of the telecommunications sector.
- **Telecom Regulatory Authority of India (TRAI)**
 - Established under the **TRAI Act, 1997**.
 - It is a **statutory regulatory body**.
 - Advises on matters such as spectrum, licensing and competition, while also regulating tariffs and quality of telecom services.
 - DCC, in contrast, was an **internal government decision-making body under DoT**.
- **National Digital Communications Policy (NDCP), 2018**
 - Replaced the earlier **National Telecom Policy, 2012**.
 - Reflected the transition from conventional telecommunications towards a broader ecosystem covering **digital communications**,

broadband infrastructure and emerging technologies.

- The Telecom Commission was renamed the **Digital Communications Commission** in the same policy period.

Supreme Court Refers CEC-EC Appointment Law Challenge to Constitution Bench

What's the News?

The Supreme Court has referred petitions challenging the **Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023** to a **five-judge Constitution Bench**.

A two-judge Bench of **Justices Dipankar Datta and Satish Chandra Sharma** differed on whether a larger Bench was necessary. However, both agreed to place the matter before the Chief Justice of India for constitution of a Constitution Bench rather than first sending the disagreement to a three-judge Bench. The **2023 Act continues to remain in force**; the Supreme Court has neither upheld nor struck down the disputed appointment mechanism.

What Does the 2023 Act Provide?

The Act was enacted under Parliament's law-making power contemplated by **Article 324(2)** of the Constitution. It provides that the President appoints the CEC and Election Commissioners on the recommendation of a three-member **Selection Committee** comprising:

- **Prime Minister** – Chairperson
- **Leader of Opposition in the Lok Sabha** – Member
- **Union Cabinet Minister nominated by the Prime Minister** – Member

If no Leader of Opposition is formally recognised, the leader of the **single largest opposition party in the Lok Sabha** is treated as the Leader of Opposition for this purpose.

A **Search Committee**, headed by the Union Minister of Law and Justice and including two Secretary-rank members, prepares a panel of **five candidates**. However, the Selection Committee may also consider a person **outside the Search Committee's panel**.

Candidates must be serving or former officers equivalent to the rank of **Secretary to the Government of India**, possess integrity, and have knowledge and experience in election management. Their tenure is **six years or until the age of 65 years, whichever is earlier**, with no reappointment.

Why Has the Law Been Challenged?

The dispute principally concerns **Sections 6, 7 and 8(2)** of the Act.

Petitioners argue that replacing the Chief Justice of India with a Union Cabinet Minister gives the executive **two positions in the three-member Selection Committee**, potentially affecting the institutional independence of the Election Commission. They have linked the issue to the constitutional requirement of free and fair elections and the independence of the electoral body.

Justice Datta considered that a two-judge Bench could examine the challenge on the basis of existing constitutional principles. He also made preliminary observations about the executive-heavy composition of the committee, while expressly clarifying that these did **not constitute a final ruling on the Act's validity**.

Justice Sharma held that the case raises a **fresh substantial question of constitutional interpretation**, warranting consideration by at least five judges under **Article 145(3)**.

Anoop Baranwal Judgment

In **Anoop Baranwal v. Union of India (2023)**, a five-judge Constitution Bench addressed the absence of a parliamentary law governing appointments of the CEC and ECs.

It prescribed an interim Selection Committee consisting of the:

Prime Minister + Leader of Opposition in Lok Sabha + Chief Justice of India

This arrangement was expressly intended to operate **until Parliament enacted a law**. Parliament subsequently enacted the 2023 Act and replaced the CJI with a Union Cabinet Minister nominated by the Prime Minister.

The new Constitution Bench will therefore examine the interaction between **Parliament's authority under Article 324(2)** and constitutional requirements concerning the independence of the Election Commission.

Constitution Bench

Article 145(3) requires a minimum of **five Supreme Court judges** to decide a case involving a substantial question of law concerning interpretation of the Constitution or to hear a Presidential Reference under Article 143.

The two-judge Bench also requested the Chief Justice of India to consider establishing a **permanent five-judge Bench** for constitutional questions, noting delays in adjudication of constitutional references.

Additional Info

• Election Commission of India

- A **permanent constitutional body** established under **Article 324**.
- It exercises superintendence, direction and control over elections to **Parliament, State Legislatures, and the offices of President and Vice-President of India**.
- It presently consists of the **Chief Election Commissioner and two Election Commissioners**.

• Article 324

- **Article 324(1)**: Vests the superintendence, direction and control of elections in the Election Commission.
- **Article 324(2)**: Appointment of the CEC and ECs is made by the President, subject to any law enacted by Parliament.
- **Article 324(5)**: The CEC receives constitutional protection in removal comparable to a Supreme Court judge; an Election Commissioner cannot be removed except on the recommendation of the CEC.

Centre Notifies Paradip as a Mega Port

What's the News?

- The **Central Government** has notified **Paradip Port in Odisha** as a **"Mega Port"** under **Section 73 of the Indian Ports Act, 2025**.
- **Deendayal Port (Kandla), Jawaharlal Nehru Port (Nhava Sheva), Paradip Port and Mundra Port** have been notified as Mega Ports after meeting the prescribed cargo-throughput criteria.
- **Paradip is the only Mega Port on India's eastern coast** among the ports notified.
- Of the four, **Mundra is a port other than a major port**, while the other three are Major Ports.

Mega Port Classification

Under **Section 73 of the Indian Ports Act, 2025**, the Central Government may prescribe criteria and notify qualifying ports as Mega Ports.

A port is eligible if, in the preceding financial year, it handles:

- **Bulk port**: at least **150 Million Metric Tonnes (MMT)** of cargo.
- **Container port**: at least **7.5 million TEUs (Twenty-Foot Equivalent Units)**.

- For ports handling both bulk and container cargo, container traffic is converted into MMT using the port's standard conversion methodology.
- Once notified, Mega Port status remains valid for **five years**, even if throughput subsequently falls below the threshold; the status is reviewed thereafter.

Paradip Port Performance

- Paradip Port handled a record **156.45 MMT of cargo in FY2025-26**, exceeding the 150-MMT Mega Port threshold.
- This represented **4.02% year-on-year growth** and was its highest-ever annual cargo throughput.
- It ranked as the **second-highest cargo-handling Major Port in India** during FY2025-26.
- Its berth productivity was about **35,100 tonnes per berth-day**, nearly twice the national average.
- **Coastal cargo:** 65.81 MMT.
- Major commodities handled include **coal, iron ore, fertilisers, crude oil/POL, steel and other bulk cargo**.

Paradip Port

- **Location:** Odisha, on the Bay of Bengal.
- **Administration:** Paradip Port Authority under the **Ministry of Ports, Shipping and Waterways**.
- It is an important maritime gateway serving the mineral- and industry-intensive hinterland of **eastern and central India**.
- The port can handle large **Capesize vessels**; its infrastructure supports vessels with drafts of around **16.5 metres**.

Indian Ports Act, 2025

- The Act provides the statutory framework for administration, development, safety and regulation of ports in India.
- **Section 73:** Deals specifically with notification of **Mega Ports**.
 - **Section 73(1):** Central Government, in consultation with State Governments, may prescribe Mega Port criteria.
 - **Section 73(2):** Centre may notify a qualifying **Major Port** as a Mega Port.
 - **Section 73(3):** A qualifying **port other than a Major Port** may be notified after consultation with the concerned State Government.
 - **Section 73(4):** Mega Port designation **does not change a port's underlying status** as a Major Port or a port other than

a Major Port; the applicable legal framework continues to govern it.

Additional Info

- **Major Ports:** Come under the Union Government and are principally governed by the **Major Port Authorities Act, 2021**.
- **Ports other than Major Ports:** Generally fall within the jurisdiction of State Governments/State Maritime Boards.
- The new **Mega Port** classification therefore functions as an additional statutory category based principally on cargo scale; it does not replace the Major Port/non-Major Port distinction.
- Among the newly notified Mega Ports:
 - **Paradip Port** – Odisha
 - **Deendayal Port (Kandla)** – Gujarat
 - **Jawaharlal Nehru Port (Nhava Sheva)** – Maharashtra
 - **Mundra Port** – Gujarat

Centre Orders Captive Coal Plants to Maximise Power Output

What's the News?

- The **Ministry of Power** has directed more than **100 captive coal-based power plants** to maximise electricity generation during the **October-December quarter** amid high power demand.
- The direction, issued under **Section 11 of the Electricity Act, 2003**, applies to captive plants with an installed capacity of **50 MW or more**.
- The order covers **112 plants**, including units operated by companies such as Vedanta, Tata Steel, Hindalco Industries, JSW Steel, UltraTech Cement, Reliance Industries and Indian Oil.
- Generators have been directed to offer **surplus electricity through power exchanges** after meeting captive requirements.

Directions

- Plants must generate electricity to the **maximum extent of their available capacity**.
- They must maintain **adequate coal stocks** to support sustained generation.
- Surplus electricity is to be sold through **power exchanges and other permitted avenues**.
- Each plant must submit **weekly reports to the Central Electricity Authority (CEA)** covering:
 - Electricity generation
 - Captive consumption
 - Surplus power sales

- Available generating capacity
- Coal-stock position
- The government has also extended the emergency direction requiring **Tata Power's 4,000-MW Mundra imported-coal plant** in Gujarat to operate at full capacity through the year-end.

Why Was the Order Issued?

- India's electricity consumption rose by **over 14% during September**, driven largely by **cooling and irrigation demand**.
- Peak power demand crossed the projected **271 GW**, an unusually high level for this period.
- Nearly **40% of coal-fired plants** were reported to have critically low fuel stocks.
- In the high-price segment of the **Indian Energy Exchange (IEX)**, day-ahead electricity prices during some non-solar hours touched the ceiling of **₹20 per unit**.
- Maximising captive generation is expected to increase electricity available in the short-term power market and help distribution utilities procure additional supply.

Captive Power Plant

Under the **Electricity Act, 2003**, a *captive generating plant* is a power plant established primarily to generate electricity for the owner's own use. It can also include plants established by cooperative societies or associations of persons primarily for their members. Under **Rule 3 of the Electricity Rules, 2005**, a plant generally qualifies for captive status when:

- Captive users hold at least **26% ownership**; and
- At least **51% of the electricity generated annually** is consumed for captive use.

Captive power plants are particularly common in electricity-intensive industries such as **aluminium, steel, cement and petroleum refining**.

Section 11 of the Electricity Act, 2003

- **Section 11(1):** The appropriate government can direct a generating company to operate and maintain a generating station according to government directions during **extraordinary circumstances**.
- Such circumstances include:
 - Threat to security of the State
 - Public-order situations
 - Natural calamities

- Other circumstances arising in the **public interest**

- **Section 11(2):** The appropriate electricity regulatory commission may offset any **adverse financial impact** arising from such government directions.
- The present intervention marks the **first invocation of Section 11 specifically for captive coal-based power plants**.

Central Electricity Authority

- The **Central Electricity Authority (CEA)** is a statutory body constituted under **Section 70 of the Electricity Act, 2003**.
- It functions under the **Ministry of Power**.
- It performs technical, planning and advisory functions relating to India's electricity system.
- Under the present direction, the CEA will receive weekly operational and coal-stock data from the affected captive plants.

Additional Info

- **Electricity Act, 2003**
 - Provides the principal statutory framework for generation, transmission, distribution, trading and use of electricity in India.
 - **Section 2(8):** Defines a captive generating plant.
 - **Section 11:** Government directions to generating companies in extraordinary circumstances.
 - **Section 70:** Constitution of the Central Electricity Authority.
- **Power Exchanges**
 - Electronic platforms for market-based electricity trading.
 - They allow generators with surplus power and electricity buyers such as distribution companies to transact electricity in short-term markets.
- **Thermal power**
 - Coal-based stations remain important for meeting high demand, particularly during **non-solar hours**, when solar generation falls but electricity demand may remain elevated.



AFSPA Extended in Parts of Manipur, Nagaland and Arunachal Pradesh

What's the News?

- The **Ministry of Home Affairs (MHA)** has extended the **Armed Forces (Special Powers) Act, 1958 (AFSPA)** for another **six months** in specified areas of **Manipur, Nagaland and Arunachal Pradesh**, after reviewing the law-and-order situation.
- The notified areas are declared **"disturbed areas"** under **Section 3 of AFSPA**.
- The latest order broadly continues the existing geographical coverage of the Act in the three States.

Where Has AFSPA Been Extended?

Manipur

- AFSPA applies to **the entire State except areas under 13 police stations in five districts**.
- Excluded police stations:
 - **Imphal West:** Imphal, Lamphel, City, Singjamei, Patsoi and Wangoi
 - **Imphal East:** Porompat, Heingang and Irilbung
 - **Thoubal:** Thoubal
 - **Bishnupur:** Bishnupur and Nambol
 - **Kakching:** Kakching

Nagaland

- AFSPA continues in **nine entire districts**:
 - Dimapur
 - Niuland
 - Chümoukedima
 - Mon
 - Kiphire
 - Noklak
 - Phek
 - Peren
 - Meluri
- It also applies to areas under **21 police stations in five other districts** – **Kohima, Mokokchung, Longleng, Wokha and Zunheboto**.

Arunachal Pradesh

- AFSPA continues in:
 - **Tirap**
 - **Changlang**
 - **Longding**
- It also covers areas under **Namsai, Mahadevpur and Chowkham police stations** in Namsai district bordering Assam.

What is AFSPA?

- The **Armed Forces (Special Powers) Act, 1958** provides special powers to members

of the armed forces deployed in an area formally declared a **"disturbed area."**

- It was originally enacted in the context of security disturbances in parts of the Northeast.
- **Section 3:** The **Central Government, State Governor or Union Territory Administrator** may declare the whole or part of a State/UT a disturbed area when the use of armed forces **in aid of civil power** is considered necessary.

Powers under AFSPA

Under **Section 4**, specified armed-forces personnel in a disturbed area may, subject to the conditions laid down in the Act:

- Use force, including force that may cause death, in specified circumstances after due warning.
- **Arrest without warrant** on reasonable suspicion concerning a cognizable offence.
- **Enter and search premises without warrant** for specified purposes.
- Destroy arms dumps, fortified positions, shelters or structures used by armed groups where statutory conditions are met.

Under Section 5:

- A person arrested must be handed over to the **nearest police station with the least possible delay**.

Under Section 6:

- **Previous sanction of the Central Government** is required before prosecution, suit or other legal proceedings can be instituted for acts done or purported to be done in exercise of powers under AFSPA.

Disturbed Area

- A **disturbed-area declaration** is a prerequisite for applying AFSPA.
- Such a declaration does not transfer ordinary civil administration to the armed forces; the armed forces operate **in aid of civil power**.
- The current declarations in the three States are valid for **six months unless withdrawn earlier**.

Additional Info

- **Constitutional position**
 - Deployment of the Union armed forces in a State **in aid of civil power** is covered by **Entry 2A of the Union List (List I), Seventh Schedule**.
 - **Public order** is primarily a State subject under **Entry 1 of the State List (List II)**.
- **Naga People's Movement of Human Rights v. Union of India (1997)**

- A Constitution Bench of the **Supreme Court upheld the constitutional validity of AFSPA.**
- It held that armed forces deployed under the Act assist, rather than replace, the civil administration.
- It also required compliance with safeguards and operational “Do’s and Don’ts”; allegations of misuse must be properly investigated.
- **Extra Judicial Execution Victim Families Association (EEVFAM) v. Union of India**
 - The Supreme Court held that AFSPA does **not provide blanket immunity for excessive or retaliatory use of force** and allegations of unlawful killings require investigation.

PRAHAAR: India’s National Counter-Terrorism Policy and Strategy

What’s the News?

- Union Home Minister **Amit Shah** inaugurated a national conference on “**PRAHAAR – CT Policy and Strategy**” in New Delhi, focusing on institutionalising India’s counter-terrorism framework.
- PRAHAAR is India’s **first comprehensive National Counter-Terrorism Policy and Strategy**, designed around coordinated **whole-of-government** and **whole-of-society** approaches.
- The government has proposed developing a strong institutional mechanism under PRAHAAR for the **next 10 years**, with implementation extending to the **police-station (thana) level**.
- A new **Extradition Portal** was also launched to improve coordination for bringing fugitives located abroad back to India.

What is PRAHAAR?

PRAHAAR provides a unified national framework for **preventing, responding to and recovering from terrorism and radicalisation**. It emphasises proactive intelligence, inter-agency coordination, institutional capacity and community participation.

Its name corresponds to its **seven pillars**:

1. **P – Prevention:** Prevent terrorist attacks and protect Indian citizens and interests.

2. **R – Response:** Ensure swift and proportionate response to terrorist threats.
3. **A – Aggregating Internal Capacities:** Integrate capacities of different agencies through a whole-of-government approach.
4. **H – Human Rights:** Counter terrorism while following human rights and the **Rule of Law**.
5. **A – Attenuating Conditions for Terrorism:** Address conditions conducive to terrorism, including radicalisation.
6. **A – Aligning International Efforts:** Coordinate and shape international counter-terrorism efforts.
7. **R – Recovery and Resilience:** Strengthen society’s ability to recover from terrorist incidents through a whole-of-society approach.

Implementation Framework

- **Proactive approach:** Continuous analysis of terrorist incidents and emerging threats.
- **Local implementation:** PRAHAAR principles are intended to reach down to the **police-station level**.
- **Automated response:** The government has called for institutionalising an **automated counter-terrorism response** at different levels.
- **Inter-agency coordination:** Central agencies, state police, Anti-Terrorism Squads (ATS), intelligence organisations and security forces are expected to operate through coordinated mechanisms.
- The conference involved **DGPs of 15 states**, ATS chiefs from all states and Union Territories, CAPF/CPO heads and senior Union government officials.

Extradition Portal

- The new portal seeks to **coordinate and expedite extradition and fugitive-repatriation efforts**.
- State police forces have been asked to create **dedicated teams for tracking fugitives abroad**, working with Central agencies.
- During **2019–2026**, India brought back **288 fugitive criminals from 36 countries**.

Counter-Terror Coordination

Improved coordination among agencies was cited in action against the **Shahzad Bhatti network**, allegedly involved in cross-border trafficking of weapons, explosives and narcotics:

- **40+ modules** busted.

- **100+ FIRs** registered.
- **350 individuals** arrested.
- Operations extended across **15 states**.

Additional Info

- **Unlawful Activities (Prevention) Act, 1967 (UAPA)**
 - India's principal legislation dealing with unlawful activities and terrorism.
 - Enables the Central Government to designate specified **organisations and individuals as terrorists**, subject to statutory provisions.
- **National Investigation Agency (NIA)**
 - Established under the **NIA Act, 2008**.
 - Investigates specified scheduled offences, including terrorism-related cases with national and transnational implications.
- **Multi Agency Centre (MAC)**
 - Functions as a mechanism for **intelligence sharing and coordination** among security and intelligence agencies.
 - PRAHAAR places emphasis on timely intelligence sharing and coordinated response.
- **National Security Guard (NSG)**
 - A specialised Central force used for counter-terrorism and certain specialised security operations.
- **Extradition**
 - Refers to the formal process through which one country surrenders a person to another country for prosecution or enforcement of a sentence, subject to applicable treaties, domestic law and other legal arrangements.

ASCI Issues Guidelines for Labelling AI-Generated Content in Advertising

What's the News?

- The **Advertising Standards Council of India (ASCI)** has released the **Guidelines for Responsible Labelling of Synthetically Generated Content (SGC) in Advertising**.
- The guidelines specify when AI-generated or AI-altered advertising content must be **disclosed to consumers**, when disclosure is unnecessary, and which practices remain prohibited.
- The framework focuses on whether synthetic content can **materially**

influence consumer decision-making, rather than merely whether AI was used during production.

- The guidelines will come into effect **three months after publication**, following stakeholder consultations on the draft framework released earlier.

What is Synthetically Generated Content?

SGC refers to advertising content created or materially altered using **Artificial Intelligence or similar technologies**, including synthetic images, video, audio, voices, persons, events and settings.

The key test is **consumer impact**: disclosure becomes necessary when synthetic content could affect how consumers understand the advertised product or service.

When is AI Labelling Mandatory?

Labelling is required when SGC **materially influences consumer decisions** and non-disclosure could mislead consumers. It includes:

- **Synthetic influencers or ambassadors.**
- Replication of a real person's **likeness or voice**, even when done with consent for personalised messaging.
- Fabricated events, situations or settings relevant to understanding a product or service.
- Synthetic demonstrations of **products that do not currently exist**.
- AI-generated sound effects materially related to a product's core feature, such as the sound quality of headphones.
- Paid or sponsored AI-generated product recommendations, which must specifically disclose **"Sponsored by [Brand]"**.

Permitted disclosures include labels such as **"Audio/Video created using AI"** and **"Audio/Video enhanced using AI"**, or equivalent platform labels that clearly communicate the synthetic nature of the content.

When is Labelling Not Required?

Disclosure is generally unnecessary where AI use has **no material impact on informed consumer choice**, such as:

- Colour correction and lighting adjustments.
- Noise reduction and minor blemish removal.
- Decorative or ambient elements.
- Obviously fantastical effects.
- AI-assisted generation of advertising copy.

- Accessibility functions such as subtitles, translations and accurate audio descriptions.

What Remains Prohibited?

An AI disclosure **does not make an otherwise misleading advertisement permissible.** Prohibited practices include:

- Fabricated endorsements or testimonials.
- Misleading exaggeration of product performance or features.
- Presenting non-existent locations or settings as real in a misleading manner.
- Unauthorised use of copyrighted material.
- **Deepfakes or use of an individual's likeness without consent.**
- Any advertisement that is illegal or otherwise violates the **ASCI Code.**

About ASCI

- **Advertising Standards Council of India (ASCI)** was established in **1985.**
- It is a **voluntary, self-regulatory organisation** of India's advertising industry, rather than a statutory government regulator.
- Its self-regulatory code seeks to ensure truthful and honest advertisements, prevent misleading claims, protect consumers and maintain fairness in advertising competition.

Related Regulatory Framework

- **Consumer Protection Act, 2019**
 - Provides the statutory framework for protecting consumers against unfair trade practices and misleading advertisements.
 - Established the **Central Consumer Protection Authority (CCPA).**
- **CCPA Guidelines for Prevention of Misleading Advertisements and Endorsements for Misleading Advertisements, 2022**
 - Prescribe conditions for valid advertisements and responsibilities of manufacturers, advertisers, agencies and endorsers.
 - Disclaimers cannot be used to conceal material information or correct an inherently misleading claim.
- The ASCI framework complements India's broader approach towards **transparency, consent, consumer protection and responsible use of AI-generated media.**

Indian Railways Approves ₹170 Crore for Kavach 4.0 in Moradabad Division

What's the News?

- Indian Railways has approved **₹170 crore** for deployment of **Kavach Version 4.0** across the remaining **712 Route Kilometres (Rkm)** of **Moradabad Division, Northern Railway.**
- The project aims to strengthen railway safety through India's indigenous **Automatic Train Protection (ATP)** system.
- Kavach helps prevent **Signal Passing at Danger (SPAD)**, regulates train speed and automatically applies brakes in potentially unsafe situations, thereby reducing collision risks.

Kavach 4.0?

- **Kavach** is an indigenously developed **Automatic Train Protection system** of Indian Railways.
- Version 4.0 incorporates improvements such as:
 - Higher **location accuracy.**
 - Better information on **signal aspects in large railway yards.**
 - **Station-to-station communication through Optical Fibre Cable (OFC).**
 - Direct interface with existing **Electronic Interlocking systems.**
- It assists loco pilots by automatically intervening when prescribed speed or signalling conditions are violated.

Kavach Deployment

- By end-July 2026, Kavach 4.0 had been commissioned over **2,633 Rkm**:
 - **Delhi-Mumbai corridor:** 1,423 Rkm.
 - **Delhi-Howrah corridor:** 1,210 Rkm.
- Trackside Kavach implementation has been taken up over **21,794 Rkm**, covering the **Golden Quadrilateral, Golden Diagonal, High-Density Network** and other identified sections.
- Supporting infrastructure includes:
 - **11,547 km** of Optical Fibre Cable.
 - **1,721** telecom towers.
 - Station data centres at **1,009 stations.**
 - Trackside equipment over **7,726 Rkm.**
 - Kavach fitted in **6,290 locomotives.**
- Work is also underway to equip another **7,190 locomotives** and **1,200 EMU/MEMU trains.**

Additional Info

- **SPAD – Signal Passing at Danger**
 - Occurs when a train passes a stop signal without authorisation.
 - Kavach can automatically apply brakes to prevent such incidents.
- **Electronic Interlocking**
 - A computer-based railway signalling system that controls signals and track points while preventing conflicting train movements.
- **RKm – Route Kilometre**
 - Measures the length of a railway route irrespective of the number of parallel tracks.

Centre Plans Stricter Social Media Account Rules for Children Below 18

What's the News?

- The **Union Government** has told the Supreme Court that it plans to strengthen the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021** to prevent persons below **18 years** from independently opening social-media accounts.
- The proposed framework would place a **statutory obligation on social-media intermediaries** to enforce the age restriction instead of relying primarily on platforms' own terms and voluntary safeguards.
- The matter arose from a petition by **Just Rights for Children Alliance**, which raised concerns over online grooming, sexual exploitation, cyberbullying, behavioural profiling, misuse of personal data and exposure to age-inappropriate material.
- **Important:** A blanket statutory prohibition has **not yet been notified**. The Centre has indicated its intention to amend the rules following the Supreme Court proceedings.

What is Being Proposed?

The proposed changes would require social-media platforms to design their registration systems in conformity with Indian laws applicable to minors.

- Independent social-media account creation would be restricted to persons **18 years or above**.
- Platforms could be required to introduce mechanisms to prevent minors from bypassing the age threshold.

- **Educational websites** could continue allowing children to register with appropriate **parental consent**.
- The restriction concerns independent creation of social-media accounts; it is **not a general prohibition on internet access by children**.

Supreme Court Proceedings

The case was heard by a Bench comprising:

- **Chief Justice of India Surya Kant**
- **Justice Joymalya Bagchi**
- **Justice V. Mohana**

Solicitor General Tushar Mehta, representing the Centre, stated that a statutory framework could be introduced requiring intermediaries to comply with Indian law relating to minors. The Court also emphasised that platforms operating in India must configure their systems according to **Indian legal requirements**, rather than merely importing age-related policies used in other jurisdictions.

IT Rules, 2021

The **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021** are framed under the **Information Technology Act, 2000**.

- They prescribe **due-diligence obligations** for intermediaries.
- Social-media intermediaries must publish rules, privacy policies and user agreements and comply with prescribed grievance and content-governance requirements.
- The updated Rules define a **“child” as a person below 18 years**.
- The proposed amendment would add a more specific obligation concerning **registration of minors on social-media platforms**.

Why Contract Law is Relevant

Opening a social-media account normally involves accepting the platform's **Terms of Service/User Agreement**, creating a contractual relationship.

- **Section 11 of the Indian Contract Act, 1872:** A person must have attained the **age of majority** to be competent to contract.
- **Majority Act, 1875:** A person ordinarily attains majority on completing **18 years**.
- Indian contract law has long recognised that an agreement entered into by a minor lacks ordinary contractual enforceability.

This contractual-capacity issue formed an important part of the discussion before the Supreme Court.

Link with Digital Personal Data Protection Framework

The **Digital Personal Data Protection (DPDP) Act, 2023** separately regulates the processing of children's personal data.

- It treats a person below **18 years** as a child.
- Its child-data framework provides for **verifiable parental consent** before processing children's personal data, subject to specified exemptions.
- The **DPDP Rules, 2025** prescribe mechanisms for verifying that the person providing consent is the child's parent or lawful guardian.
- Relevant substantive child-data provisions of the DPDP Act have a **deferred commencement** and are distinct from the proposed IT Rules restriction on opening social-media accounts.

Additional Info

- **Social Media Intermediary**
 - An intermediary that primarily enables online interaction between users and allows them to create, upload, share, disseminate or access information.
- **MeitY**
 - **Ministry of Electronics and Information Technology.**
 - Administers the intermediary due-diligence provisions under the IT Rules.
- **Distinction**
 - **DPDP framework:** primarily concerns the **processing of children's personal data.**
 - **Proposed IT Rules amendment:** concerns whether persons below 18 can **independently register social-media accounts.**

UIDAI Unveils Five New Aadhaar Initiatives

What's the News?

- The **Unique Identification Authority of India (UIDAI)** unveiled **five initiatives** at the **Aadhaar Samvaad** stakeholders' conference in Kolkata, coinciding with the **17th Aadhaar Day**.
- The initiatives aim to improve **Aadhaar authentication, accessibility, resident services, security and digital governance.**
- More than **600 policymakers, industry representatives, technocrats and professionals** participated in the conference.

Five Initiatives

1. Face Authentication for ePDS

- Introduces **consent-based and contactless face authentication** for the **Electronic Public Distribution System (ePDS).**
- Jointly developed by:
 - **UIDAI**
 - **Department of Food and Public Distribution (DFPD)**
 - **National Informatics Centre (NIC)**
- Provides an additional authentication option where **fingerprint authentication is difficult.**
- States and Union Territories can integrate it into their ePDS systems for delivery of subsidised foodgrains.

2. SWIK Portal 2.0

- Streamlines approval for Aadhaar authentication under the **Aadhaar Authentication for Good Governance framework.**
- Eligible **non-government entities** can submit proposals for permissible Aadhaar authentication use cases directly to the concerned **Ministry/Department.**
- It provides a structured digital workflow for processing such proposals.

3. Sub-AUA/Sub-KUA (LITE) Framework

- Designed for **government and eligible non-government entities with low-volume authentication requirements.**
- Such entities can use the infrastructure of an existing **AUA/KUA**, avoiding the need to establish separate authentication infrastructure.
- It enables faster and lower-cost onboarding while retaining UIDAI's **security, privacy and regulatory requirements.**
 - **AUA:** Authentication User Agency.
 - **KUA:** KYC User Agency.

4. Token Management System

- A new system for residents visiting **UIDAI State and Regional Offices** for applicable services.
- It is intended to streamline visitor handling and improve delivery of in-person Aadhaar services.

5. Revamped UIDAI Website & Career Portal

- The redesigned website organises services around four resident requirements:
 - Understanding Aadhaar
 - Accessing a service
 - Finding a document
 - Seeking assistance

- Accessibility features include **screen-reader compatibility, adjustable font size, better colour contrast and keyboard navigation.**
- Integration with **BHASHINI** enables support for **13 languages**, with expansion to **23 languages** planned.
- A new **UIDAI Career Portal** allows online applications for deputation opportunities.

UIDAI

- **Unique Identification Authority of India (UIDAI)** is a **statutory authority** under the **Ministry of Electronics and Information Technology (MeitY).**
- It was established under **Section 11 of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016.**
- UIDAI is responsible for:
 - Aadhaar enrolment and authentication.
 - Issuing Aadhaar numbers.
 - Managing the Aadhaar lifecycle.
 - Protecting identity information and authentication records.
- **Aadhaar** is a **12-digit unique identification number** issued to residents of India.
- UIDAI's dashboard reports more than **145 crore Aadhaar enrolments.**

Additional Info

- **Aadhaar Day**
 - Observed on **29 September.**
 - It commemorates the issuance of India's first Aadhaar number in 2010.
- **Aadhaar Face Authentication**
 - It is a **1:1 biometric match** between the live facial image and the facial biometric stored against the Aadhaar number.
 - It is **consent-based** and differs from general facial recognition, which may involve one-to-many matching.
- **BHASHINI**
 - Government of India's language-technology platform aimed at reducing digital language barriers and enabling access to digital services in Indian languages.

Social Issues

India Ranks 131st in Global Gender Gap Index 2026

What's the News?

- India has retained the **131st position among 145 economies** in the **Global Gender Gap Index 2026**, released by the **World Economic Forum (WEF)**.
- India's overall gender parity score improved marginally to **64.5%**, meaning it has closed 64.5% of the measured gender gap.
- India's rank remains unchanged from the previous edition, while its score has improved slightly.
- **Iceland** retained the top position globally with **93% gender parity**, followed by **Finland** and **Norway**.

Global Gender Gap Index 2026

- The index is published by the **World Economic Forum** and was first introduced in **2006**.
- The 2026 report is the **20th edition** and covers **145 economies**. Of these, **97 economies** have appeared in every edition since the index began.
- Countries are scored from **0 to 1**, where **1 represents full gender parity**. Scores are also expressed as the percentage of the gender gap closed.
- The index consists of **14 indicators** across four dimensions:
 - **Economic Participation and Opportunity**
 - **Educational Attainment**
 - **Health and Survival**
 - **Political Empowerment**

India's Performance

India recorded an overall parity score of **64.5%**, an improvement of about **4.3 percentage points since 2006**.

- **Economic Participation and Opportunity – 41.2%**
 - Improved by **0.5 percentage points** over the previous edition.
 - Parity among professional and technical workers reached **49.9%**.
 - Parity among legislators, senior officials and managers stood at only **13.1%**.
 - Labour-force participation parity was **44.1%**.
- **Educational Attainment – 96.6%**
 - India achieved full parity in **secondary and tertiary enrolment**.
 - Adult literacy parity stood at **82.5%**.

- Educational parity has improved by about **14.7 percentage points since 2006**.
- **Health and Survival – 95.6%**
 - The score improved over the previous edition.
 - However, gender parity in the **sex ratio at birth** remains below its 2006 level.
- **Political Empowerment – 24.5%**
 - This is India's **highest-ranked sub-index**, where it stood **67th globally**.
 - Parliamentary representation parity stood at **16.1%**.
 - Ministerial representation parity was **5.9%**.

Global Rankings

The leading economies were:

- **1st – Iceland:** 93.0%
- **2nd – Finland:** 87.2%
- **3rd – Norway:** 85.7%
- **4th – Namibia:** 84.5%
- **5th – United Kingdom:** 84.2%

Iceland has remained at the top for **17 consecutive years** and is the only economy to have closed more than **90%** of its overall gender gap.

At the lower end:

- **Chad – 145th**
- **Iran – 144th**
- **Pakistan – 143rd**
- **Democratic Republic of the Congo – 142nd**
- **Algeria – 141st**

Global Gender Parity

- Globally, **69.2% of the gender gap has been closed** across the 145 economies covered.
- Among economies appearing in both editions, global parity improved by about **0.4 percentage points**.
- At the pace of progress observed over the past two decades, the WEF estimates that **full global gender parity is about 120 years away**.

Global parity by major dimension is approximately:

- **Health and Survival:** 96.2%
- **Educational Attainment:** about 96.9%
- **Economic Participation and Opportunity:** 61.7%
- **Political Empowerment:** 22.1%

Political Empowerment therefore remains the dimension with the **largest gender gap globally**.

Southern Asia

- **Southern Asia** recorded an overall gender parity score of **64.5%**, ranking **7th among eight global regions**.
- At the current pace, the region is estimated to require about **149 years** to reach parity.
- Its weakest dimension is **Economic Participation and Opportunity**, with only **40.9%** of the gap closed.
- Regional Educational Attainment parity stood at **95.9%**, Health and Survival at **95.7%**, and Political Empowerment at **25.4%**.

Additional Info

- **World Economic Forum**
 - An international organisation for public-private cooperation.
 - Headquarters: **Cologny/Geneva, Switzerland**.
 - Known for reports such as the **Global Gender Gap Report**, **Global Risks Report** and other economic and competitiveness studies.
- **How the Index Works**
 - It measures **gaps between women and men**, rather than the absolute level of development of a country.
 - Indicator ratios are generally capped at **1**, so women outperforming men on an indicator does not push the score beyond full parity.
 - An economy needs recent data for at least **12 of the 14 indicators** to be included.
- **India's Long-Term Trend**
 - Overall parity has improved by **4.3 percentage points since 2006**.
 - Most long-term progress has come from **Educational Attainment**.
 - Economic and political participation continue to account for a substantial share of India's remaining measured gender gap.

Empowerment

Deen Dayal Upadhyaya Grameen Kaushalya Yojana 2.0

What's the News?

The **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) 2.0** is being expanded across India under revised guidelines aimed at making rural skilling more **industry-led, employment-oriented and digitally monitored**.

DDU-GKY 2.0 places greater emphasis on **sustained employment, longer placement support, post-placement tracking, migration assistance, and upskilling/reskilling** of rural youth.

The programme currently operates across **31 States and Union Territories**, with over **749 approved projects, 760 active training centres and 455 Project Implementing Agencies (PIAs)**.

DDU-GKY

DDU-GKY is a placement-linked skill development programme of the **Ministry of Rural Development (MoRD)**.

- Launched in **2014** under the **National Rural Livelihoods Mission**, now DAY-NRLM.
- Target group: Rural youth from poor and vulnerable households.
- Age group: **15-35 years**.
- Objective: Provide market-oriented skills and connect rural youth with sustainable employment.
- Training spans **36 economic sectors** and over **800 job roles**.

Mandatory social inclusion norms include:

- **SC/ST: 50%**
- **Women: 33%**
- **Persons with Disabilities: 5%**

What is New in DDU-GKY 2.0?

The upgraded guidelines were notified in **2025**.

Training

- Minimum training duration retained at **576 hours**.
- A three-month course includes:
 - **396 hours** – domain-specific training
 - **180 hours** – non-domain training
 - English Communication: **60 hours**
 - Employability & Life Skills: **60 hours**
 - Digital Literacy: **30 hours**
 - Entrepreneurship: **30 hours**

Priority sectors include **green jobs, healthcare, agriculture, aerospace & aviation, renewable energy, logistics, hospitality, retail and the care economy**.

Employment Support

- Minimum placement duration increased from **3 months to 6 months**.
- Covers **wage employment, self-employment and gig employment**.
- Candidates are tracked for **12 months after placement**.
- Post-placement financial assistance: **₹7,620**, paid at **₹1,270 per month for six months**.
- **₹5,000 retention support** for candidates remaining employed for **365 days**, allowing a maximum employment break of 60 days.
- Upskilling and reskilling opportunities are available after 12 months of placement.

Migration Support Centres

State Rural Livelihoods Missions (SRLMs) can establish Migration Support Centres in locations with a high concentration of placed candidates.

They provide:

- Accommodation assistance
- Counselling
- Placement support
- Employer coordination
- Employment-related information
- Alumni networking and support for migrant workers

Annual financial support for each centre has been increased from **₹10 lakh to up to ₹30 lakh** under DDU-GKY 2.0.

Digital Implementation

DDU-GKY 2.0 uses an **end-to-end digital platform** covering:

- Registration and onboarding of PIAs
- Project evaluation
- Candidate and training-centre management
- Assessment and certification
- Financial management
- Placement and employment tracking
- Face-authentication-based attendance
- Real-time monitoring dashboards
- Grievance redressal and certificate verification
- Integration with the **Skill India Digital Hub**

Special Initiatives

- **Roshni**
 - Focuses on **Left-Wing Extremism-affected districts**.
 - Provides residential skill training.
 - Requires at least **40% participation by women**.

- Its coverage has also been extended to Aspirational Districts.
- **Himayat**
 - Special skilling initiative for **Jammu & Kashmir and Ladakh**.
 - Covers eligible rural and urban youth, including BPL and APL categories.
 - Supports wage, self and gig employment.
 - **100% centrally funded**.
- **North-Eastern States**
 - **10% of DDU-GKY allocation** is earmarked for the North-East.
- **Hard-to-Reach Areas**
 - PIAs can receive an additional **10% of the base training cost per candidate** as Special Area Allowance.

Progress

Since the programme's inception:

- **18.47 lakh+ candidates trained**
- **12.43 lakh+ candidates placed**
- **9.71 lakh+ women trained**
- **6.34 lakh+ women placed**
- **800+ job roles** covered

The **Union Budget 2026-27** allocated **₹750 crore** to DDU-GKY.

For the next major rollout, **34,920 rural youth** are scheduled to enter training through **1,164 batches** across **14 States/UTs**, while the sanctioned training target for these States/UTs is **3,57,112 candidates**.

Additional Info

- **DAY-NRLM**
 - Full form: **Deendayal Antyodaya Yojana-National Rural Livelihoods Mission**.
 - Implemented by the **Ministry of Rural Development**.
 - Seeks poverty reduction through sustainable livelihoods, institution-building and financial inclusion of rural households.
 - DDU-GKY functions as its major **placement-linked rural skilling component**.
- **RSETI**
 - **Rural Self Employment Training Institutes** complement DDU-GKY by promoting self-employment and entrepreneurship.
 - **647 RSETIs** operate across **634 districts**.

- They have trained about **63.47 lakh candidates**, with **45.60 lakh settled** in livelihoods.

Culture & Arts

Gollala Gudi Temple Declared Monument of National Importance

What's the News?

- The **Gollala Gudi Temple** at **Palampet village in Mulugu district, Telangana**, has been declared a **Monument of National Importance** by the Union Government through a Gazette notification.
- The **Kakatiya-era temple** lies south-west of the UNESCO World Heritage-listed **Kakatiya Rudreshwara (Ramappa) Temple**.
- It will now receive Central protection and conservation through the **Archaeological Survey of India (ASI)** under the **Ancient Monuments and Archaeological Sites and Remains (AMASR) Act, 1958**.
- With its inclusion, the number of **ASI-protected monuments in Telangana** has increased to **10**.

Gollala Gudi Temple

- **Location:** Palampet, Venkatapur mandal, Mulugu district, Telangana.
- **Period:** **Kakatiya era**, broadly associated with the 12th–13th centuries CE.
- **Architectural type:** **Trikutalaya** – a temple with **three sanctums (garbhagrihas)**.
- Its layout includes:
 - An **east-facing mandapa** or pillared hall.
 - Three garbhagrihas towards the north, south and west.
 - A **Shiva lingam in the central sanctum**.
 - Two detached shrines with carved **dvarapalas**.

Architectural Features

- Parapets decorated with sculptures.
- Doorways and entablatures featuring rows of **hamsas (swans)**.
- Intricate **jali or lattice work**.
- A high plinth decorated with **animal figures and floral motifs**.
- Wall niches containing representations of:
 - **Vishnu**
 - **Lakshmi**
 - **Ganesha**
 - **Mahishasuramardini**.

What Does 'Monument of National Importance' Mean?

- Such monuments are protected under the **AMASR Act, 1958**.

- **Section 4** empowers the **Central Government** to declare an ancient monument or archaeological site to be of national importance.
 - The government first issues a preliminary Gazette notification.
 - A **two-month period** is provided for objections.
 - After considering objections, a final Gazette notification may declare the site nationally important.
- After declaration, the **ASI** is responsible for measures relating to its **protection, conservation and maintenance**.

Protection Zones

Under the AMASR Act:

- **Prohibited Area:** ordinarily **100 metres** from the boundary of a protected monument.
- **Regulated Area:** extends for the next **200 metres beyond the prohibited area**.
- Construction is tightly restricted in the prohibited zone, while activities in the regulated zone require prescribed permissions.

Ramappa Temple

- Officially called the **Kakatiya Rudreshwara (Ramappa) Temple**.
- **Location:** Palampet, Telangana.
- It represents the distinctive temple-building traditions of the **Kakatiya dynasty**.
- It was inscribed on the **UNESCO World Heritage List in 2021**.
- UNESCO recognition is under:
 - **Criterion (i):** Masterpiece of human creative genius.
 - **Criterion (iii):** Exceptional testimony to a cultural tradition/civilisation.

Additional Info

Archaeological Survey of India (ASI)

- **Under:** Ministry of Culture.
- **Established:** **1861**.
- **Founder:** **Alexander Cunningham**, regarded as the first Director-General of ASI.
- Major functions:
 - Conservation of monuments of national importance.
 - Archaeological excavations and surveys.
 - Epigraphical research.

- Regulation and protection of antiquities and archaeological heritage.
- Implementation of the **AMASR Act, 1958** and **Antiquities and Art Treasures Act, 1972**.

Kakatiya Dynasty

- A major medieval Deccan dynasty centred in present-day **Telangana**.
- **Capital:** Orugallu, present-day **Warangal**.
- Important rulers included **Ganapati Deva, Rudrama Devi and Prataparudra II**.
- Kakatiya architecture is particularly known for **ornate stone carving, elaborate pillars, sculptural decoration and distinctive temple planning**.

Kumik Declared Ladakh's First Heritage Village

What's the News?

- **Kumik village in Zaskar** has been declared **Ladakh's first designated Heritage Village** by Lieutenant Governor **Vinai Kumar Saxena**.
- The announcement was made during the **Ladakh Zaskar Festival 2026**.
- The recognition seeks to conserve Kumik's **traditional architecture, Buddhist textual heritage, sacred spaces, agricultural practices and living cultural traditions**.
- The designation also draws attention to the village's prolonged **water scarcity**, which has caused residents to relocate from the historic settlement.

Kumik Village

- **Location:** Zaskar region, Ladakh.
- Kumik is a high-altitude Himalayan settlement characterised by:
 - traditional **mud, stone and timber houses**;
 - Buddhist sacred spaces;
 - traditional farming practices;
 - community customs adapted to the cold-desert environment.
- It has preserved important **Kanjur/Kangyur manuscripts** and other Tibetan Buddhist materials, making the village significant for both cultural and textual heritage.

Kanjur Manuscripts

- **Kanjur**, also written **Kangyur**, is a major collection within the **Tibetan Buddhist canon**.
- It primarily consists of texts traditionally regarded as the **translated words of the Buddha**, covering teachings such as:

- Buddhist discourses;
- monastic discipline; and
- tantric literature.

- Many Buddhist works originally transmitted from India survive through their Tibetan translations, giving such collections religious as well as historical importance.

Why Heritage Village Status?

The designation treats Kumik as a form of **living heritage**, where heritage includes not only monuments but also traditional homes, manuscripts, farming systems, religious practices and community knowledge.

- It is linked to the broader approach of **"Vikas Bhi, Virasat Bhi"**, combining development with heritage conservation.
- Heritage recognition may support conservation awareness and sustainable cultural tourism.
- The announcement itself does **not specify a dedicated restoration budget, conservation timetable or funded water-security programme** for Kumik.

Water Scarcity in Kumik

- Kumik traditionally depended on **glacier- and snowmelt-fed water** for irrigation and daily needs.
- Declining reliability of this supply has affected agriculture and habitation, prompting several families to move towards **Lower Kumik**, where water availability is comparatively better.
- Earlier studies and reports linked the problem to changing cryospheric and climatic conditions in the Zaskar region.
- A community-linked proposal has envisaged diverting meltwater from a neighbouring glacier through a roughly **300-yard canal at about 18,000 feet**; however, the proposal should not be treated as a completed water-security project.

Zaskar

- Zaskar is a high-altitude region of the **Union Territory of Ladakh**, known for Tibetan Buddhist monasteries, mountain settlements, trekking routes and distinctive cold-desert culture.
- The **Ladakh Zaskar Festival** showcases the region's traditional culture, handicrafts, products and tourism potential.
- The 2026 edition was the first major Zaskar Festival after **Zaskar received district status**, and the

festival forms part of Ladakh's official tourism calendar.

Additional Info

- **Ladakh**
 - Became a **Union Territory in 2019** following the reorganisation of the former State of Jammu and Kashmir.
 - Its fragile cold-desert ecology makes glacier and snowmelt particularly important for water security.
- **Heritage Village vs UNESCO World Heritage Site**
 - Kumik's recognition is a **UT-level Heritage Village designation**.
 - It should not be confused with inscription on the **UNESCO World Heritage List**.
 - The significance of the designation lies primarily in recognising and conserving the village's **living cultural landscape and community heritage**.

Booker Prize 2026 Shortlist Announced

What's the News?

- The **Booker Prize 2026 shortlist** has been announced, featuring **six novels** selected from a longlist of 13.
- The works were chosen from **163 eligible submissions** of long-form fiction written in English and published in the **UK and/or Ireland**.
- The shortlist includes two former Booker Prize winners – **Marlon James** and **Douglas Stuart**.
- The eventual winner will receive **£50,000**, while each shortlisted author receives **£2,500**.

2026 Shortlist

Book	Author
The End of Everything	M. John Harrison
The Disappearers	Marlon James
Black Bag	Luke Kennard
May We Feed the King	Rebecca Perry
The Things We Never Say	Elizabeth Strout
John of John	Douglas Stuart

The shortlist spans dystopian fiction, historical themes, family relationships, identity, violence and contemporary social issues.

Judging Panel

- **Chair:** Mary Beard – classicist, writer and broadcaster.
- Other judges:

- Raymond Antrobus – poet and writer
- Jarvis Cocker – musician and writer
- Rebecca Liu – journalist and critic
- Patricia Lockwood – novelist, poet and essayist

- The five judges considered **163 books** before narrowing the field to 13 longlisted and then six shortlisted titles.

Former Winners on the Shortlist

- **Marlon James**
 - Won the **2015 Booker Prize** for *A Brief History of Seven Killings*.
 - Shortlisted in 2026 for *The Disappearers*.
- **Douglas Stuart**
 - Won the **2020 Booker Prize** for *Shuggie Bain*.
 - Shortlisted in 2026 for *John of John*.
- A second victory for either would place them among the small group of authors to have won the Booker Prize twice. Existing two-time winners include **J.M. Coetzee, Peter Carey, Hilary Mantel and Margaret Atwood**.

Booker Prize

- **Established:** 1969.
- **Administered by:** Booker Prize Foundation.
- Awarded annually to an eligible work of **long-form fiction**.
- The work must:
 - be **originally written in English**;
 - be written by an author of **any nationality**; and
 - be published in the **UK and/or Ireland**.
- **Winner's prize:** £50,000.
- **Each shortlisted author:** £2,500.
- The winner also receives the Booker Prize trophy named **"Iris"**.

Additional Info

Booker Prize vs International Booker Prize

- **Booker Prize:** For fiction originally written in English and published in the UK or Ireland.
- **International Booker Prize:** Primarily recognises fiction **translated into English** and published in the UK or Ireland; the prize recognises both the author and translator.
- They are **separate literary prizes** administered by the Booker Prize Foundation.

Indian Connection

- Indian and Indian-origin writers who have won the Booker Prize include

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Salman Rushdie, Arundhati Roy, Kiran Desai and Aravind Adiga.

- **Geetanjali Shree's *Tomb of Sand***, translated from Hindi by **Daisy Rockwell**, won the **International Booker Prize 2022**.

Lalit Kala Akademi Announces 20 Awards at 65th National Exhibition of Art

What's the News?

- **Lalit Kala Akademi**, India's National Academy of Art, has announced **20 Lalit Kala Akademi Awards** at the **65th National Exhibition of Art (NEA)**.
- The Akademi received **6,175 artworks** from **2,495 artists** representing **27 States and Union Territories**.
- A **First-Tier Jury** selected **270 artworks** for exhibition, while a **Second-Tier Jury** chose **20 artworks by 20 artists** for the awards.
- The selected works cover **painting, sculpture, drawing, printmaking and mixed media**, reflecting a wide range of contemporary visual-art practices.

65th National Exhibition of Art

- **Organiser:** Lalit Kala Akademi
- **Venue:** Lalit Kala Akademi Art Gallery, **Rabindra Bhawan, New Delhi**.
- **Artworks received:** 6,175
- **Participating artists:** 2,495
- **States/UTs represented:** 27
- **Works selected for exhibition:** 270
- **Award-winning works/artists:** 20
- The exhibition also facilitates the **display and sale of artworks**, giving participating artists greater visibility and direct economic opportunities.

Awardees

Artist	Awarded Artwork	Category
Chandra Shekhar Sain	<i>My Entire World – I</i>	Sculpture
Gopal Chandra Naskar	<i>The Tune of The Srimad Bhagavad Gita</i>	Painting
Kishor Kumar Narkhadiwala	<i>Paryavaran</i>	Painting
Mrinal Dey	<i>Hopeless Settlement</i>	Painting
Nidhi Chopra	<i>Tangible Dreams</i>	Sculpture
Nimai Singh Sarungbam	<i>Mudra – I</i>	Sculpture

Pankaj Kumar Sharma	<i>Haloed Traveler – II</i>	Drawing
Pooja Rajpoot	<i>Prakriti Shoshan</i>	Sculpture
Praveen Kumar	<i>Where The Walls Remember</i>	Painting
Pritam Madhukar Deuskar	<i>Of Time and The City</i>	Printmaking
Rajendra Prasad	<i>Sujata With Buddha</i>	Painting
Ramesh Vithal Thorat	<i>Untitled – II</i>	Painting
Raviram Ramakrishnan	<i>Fisherwoman</i>	Sculpture
Sanjay Kumar	<i>When Memories Come Back – 7</i>	Painting
Sanjay Kumar Sahani	<i>Youth</i>	Painting
Sanjib Kumar Gogoi	<i>Aakar Nirankar – II</i>	Painting
Santa Deb	<i>Attraction of Simplicity</i>	Sculpture
Siddharth Shahjirao Shingade	<i>Trees</i>	Painting
Usharanjan Mandal	<i>Wheel of A Crowded City</i>	Any Other Medium
Vijendra Sharma	<i>Life 2025</i>	Painting

National Exhibition of Art

- It is the **principal annual national exhibition** organised by Lalit Kala Akademi for contemporary visual arts.
- The National Exhibition of Art began in **1955**.
- In its inaugural edition, **280 works from 1,200 entries** were selected for display and **10 awards of ₹1,000 each** were given.
- Over the decades, the exhibition has been hosted in different Indian art centres, including **Kolkata, Mumbai, Chennai, Jaipur, Amritsar, Lucknow, Guwahati, Patna and Hyderabad**.

Additional Info

- **Lalit Kala Akademi**
 - Also known as the **National Academy of Art**.
 - Established by the **Government of India in 1954**.

- It was inaugurated by the then Union Education Minister **Maulana Abul Kalam Azad**.
- Registered under the **Societies Registration Act, 1860** in 1957.
- It is an **autonomous body fully funded by the Ministry of Culture**.
- It is the Government of India's apex cultural body concerned with **visual arts**.
- **Major Functions**
 - Promotes modern and contemporary Indian visual arts.
 - Organises national and international exhibitions, art camps and workshops.
 - Supports artists through **scholarships, grants and professional platforms**.
 - Maintains art collections, archives and publications related to Indian visual arts.

Jharkhand's Mandar Folk Drum Receives GI Tag What's the News?

- **Mandar**, a traditional folk percussion instrument of **Jharkhand**, has been registered as a **Geographical Indication (GI)**.
- The registration was granted by the **Geographical Indications Registry, Chennai**.
- The GI application was filed in **2021** by **Raidih Mandar Producer Company Limited**, Gumla district, under **Application No. 777**.
- The traditional craft is particularly associated with **Jarjatta village in Raidih block of Gumla district**.

Mandar

- Mandar is a **double-headed, barrel-shaped percussion instrument** central to Jharkhand's tribal and folk traditions.
- **Construction:**
 - Body is traditionally made from **red clay**.
 - Both ends are covered with hide and are of **unequal sizes**.
 - The smaller side produces a relatively **higher pitch**, while the broader side produces a **deeper bass sound**.
 - The smaller drum-head is traditionally treated with a black tuning paste called **Kiran**.

- It is generally carried from the shoulder, allowing musicians to play it while participating in group dances.
- It is used during **Sarhul, Karma, Jhumar, weddings and other community celebrations** and is associated particularly with communities of the **Chotanagpur region**, including the Oraon community.

GI Registration

- **GI name:** Mandar of Jharkhand
- **Application No.:** 777
- **Applicant:** Raidih Mandar Producer Company Limited
- **Geographical area:** Jharkhand
- **Major production centre:** Jarjatta village, Raidih block, Gumla district
- **Category:** Handicraft; registered under **Class 15**, relating to musical instruments.
- The official GI database currently lists the application status as **Registered**.

Geographical Indications in India

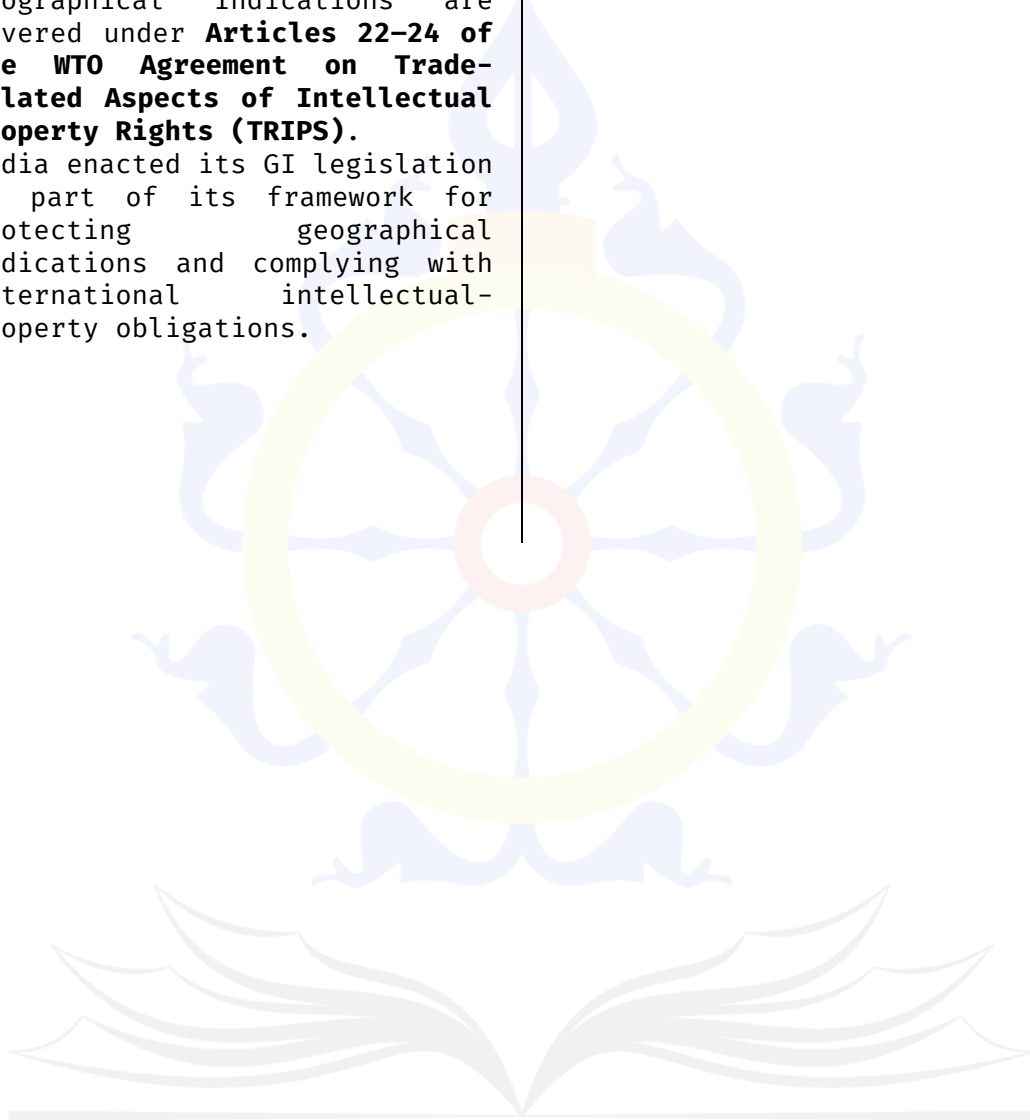
- A **Geographical Indication** identifies goods whose **quality, reputation or other characteristics are essentially attributable to their geographical origin**.
- GI protection in India is governed by the **Geographical Indications of Goods (Registration and Protection) Act, 1999**.
- The **Geographical Indications Registry is located in Chennai** and functions under the **Controller General of Patents, Designs and Trade Marks (CGPDTM)**.
- CGPDTM functions under the **Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry**.
- GI registration is valid for **10 years** and can be renewed for successive periods of 10 years.
- Registration enables the registered proprietor and authorised users to seek legal remedies against infringement; authorised users have the exclusive right to use the GI for the registered goods.

Additional Info

- **Historical documentation of Mandar**
 - References to the instrument and related traditions occur in ethnographic and archival works dating to the early 20th century.
 - The GI application cited works associated with **Sarat Chandra Roy, Tarak Chandra Das and W.G.**

Archer, along with archival records.

- **Other GI-linked products of Jharkhand**
 - **Sohrai-Khovar painting** – associated with Hazaribagh.
 - **Kuchai Silk** – associated with Seraikela-Kharsawan.
 - **Bhagaiya Silk** – associated with Godda.
 - Other recently recognised traditional products include **tribal jewellery and bamboo crafts of Jharkhand**.
- **International framework**
 - Geographical Indications are covered under **Articles 22–24 of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)**.
 - India enacted its GI legislation as part of its framework for protecting geographical indications and complying with international intellectual-property obligations.



Environment

National Biodiversity Authority Disburses ₹5.68 Crore under ABS Mechanism

What's the News?

- The **National Biodiversity Authority (NBA)** has disbursed **₹5.68 crore (₹5,68,18,277)** under the **Access and Benefit-Sharing (ABS)** mechanism arising from the utilisation of India's biological resources.
- The funds were distributed to **State Biodiversity Boards (SBBs)**, **Union Territory Biodiversity Councils (UTBCs)** and a national research institution.
- The disbursement primarily relates to commercial utilisation of **Okra, Cucumber and Watermelon**, along with specified microbial and agricultural biological resources.
- With this release, the cumulative ABS amount disbursed by the NBA has crossed **₹191 crore**.

Access and Benefit-Sharing (ABS)

- ABS ensures the **fair and equitable sharing of benefits** arising from the utilisation of biological resources and associated knowledge.
- Benefits may be:
 - Monetary:** royalties, licence fees, access fees, milestone payments, research funding, etc.
 - Non-monetary:** technology transfer, sharing of research results, training and collaborative research.
- ABS supports:
 - Biodiversity conservation.
 - Sustainable use of biological resources.
 - Institutional capacity-building.
 - Communities and stakeholders involved in conservation.
- The concept is also central to the **Nagoya Protocol on Access and Benefit-sharing** under the Convention on Biological Diversity (CBD).

Crop-wise ABS Disbursement

- Okra (Abelmoschus esculentus)**
 - Largest component: **₹3.51 crore**.
 - Covers **139 varieties and 28 hybrids**.
 - Distributed among **32 SBBs/UTBCs**.
 - ABS amount was received from **Nunhems India Pvt. Ltd.**
- Watermelon (Citrullus lanatus)**
 - Covers **662 varieties and 15 hybrids**.

- Cucumber (Cucumis sativus)**
 - Covers **1,009 varieties and 14 hybrids**.
- Companies associated with access to these biological resources include **Nunhems India Pvt. Ltd., East West Seeds India Pvt. Ltd. and Bayer Science and Innovation Pvt. Ltd.**

Major State-wise Allocation

State	Amount Released
Gujarat	₹88.79 lakh
West Bengal	₹78.08 lakh
Madhya Pradesh	₹64.90 lakh
Odisha	₹59.02 lakh
Bihar	₹45.60 lakh
Uttar Pradesh	₹36.91 lakh
Tamil Nadu	₹34.11 lakh
Andhra Pradesh	₹30.58 lakh
Chhattisgarh	₹24.83 lakh
Maharashtra	₹17.57 lakh

- Since many biological resources were procured through **markets and traders**, tracing them to individual farmers, communities or a single geographic source was not feasible.
- The funds were therefore distributed among States/UTs using relevant crop-production/cultivation data.

Additional Info

- National Biodiversity Authority (NBA)**
 - Statutory body under the **Ministry of Environment, Forest and Climate Change (MoEFCC)**.
 - Established under **Section 8 of the Biological Diversity Act, 2002**.
 - India follows a three-tier biodiversity governance structure:
 - National level:** National Biodiversity Authority.
 - State level:** State Biodiversity Boards.
 - Local level:** Biodiversity Management Committees (BMCs).
- Biological Diversity Act, 2002**
 - Provides for:
 - Conservation of biological diversity.
 - Sustainable use of its components.
 - Fair and equitable benefit-sharing from biological resources and associated knowledge.

- It was amended through the **Biological Diversity (Amendment) Act, 2023**, which came into force in 2024.
- The **Biological Diversity Rules, 2024** replaced the Biological Diversity Rules, 2004 and operationalise the amended framework.
- **Section 27**
 - Provides the framework for the **National Biodiversity Fund**.
 - ABS amounts realised by the NBA are channelled to identified benefit claimers; where specific beneficiaries cannot be identified, the funds can support conservation and socio-economic development connected with the biological resources concerned.
- **Nagoya Protocol**
 - Supplementary agreement to the **Convention on Biological Diversity (CBD)**.
 - Objective: **fair and equitable sharing of benefits arising from the utilisation of genetic resources**.
 - Entered into force in **2014**.

5th Edition of Swachh Sagar, Surakshit Sagar 2026 Launched

What's the News?

- Union Minister **Dr Jitendra Singh**, Minister of State (Independent Charge) for Earth Sciences, launched the **5th edition of Swachh Sagar, Surakshit Sagar (SSSS v.5.0)**.
- Led by the **Ministry of Earth Sciences (MoES)**, it is a nationwide campaign for **marine-litter reduction, beach cleanliness and ocean conservation**.
- It seeks to transform coastal conservation into a **Jan Bhagidari** movement involving citizens, students, youth, coastal communities, NGOs and volunteer organisations.
- The week-long campaign will cover **100+ coastal locations** across India.

Swachh Sagar, Surakshit Sagar 5.0

- The annual campaign was **started in 2022** and the 2026 programme is its **5th edition**.
- It is inspired by the **Swachh Bharat vision** and is also linked with the broader objectives of India's **Deep Ocean Mission**.
- Major activities include:
 - Beach clean-up drives at **100+ locations**.

- **Ocean Conservation Pledge**.
- Human chains and community mobilisation.
- Cycling rallies and marathons.
- Youth-focused activities.
- Programmes associated with **World Ozone Day**.
- The campaign culminates in conjunction with **International Coastal Cleanup Day**.

National Ocean Olympiad

- SSSS v.5.0 introduces India's **first-ever national Ocean Olympiad**.
- It is designed primarily for **students and youth** to:
 - Improve ocean literacy.
 - Build awareness about marine ecosystems and pollution.
 - Encourage participation in ocean and coastal conservation.
- A dedicated campaign website, Ocean Conservation Pledge portal and digital outreach material have also been launched.

SAGAR PRAHARI App

- The campaign is supported by the **SAGAR PRAHARI mobile application**.
- It provides a digital interface for participation and engagement with SSSS v.5.0 activities.
- The initiative therefore combines **on-ground coastal action with digital citizen participation**.

Additional Info

India's Coastline

- India's officially reassessed coastline measures **11,098.81 km**, replacing the earlier figure of 7,516.6 km.
- The revised measurement was undertaken by the **National Hydrographic Office (NHO)** in coordination with the **Survey of India (SoI)** using modern GIS and high-resolution High-Water Line data.

Deep Ocean Mission

- **Ministry:** Ministry of Earth Sciences.
- **Launched:** 2021.
- **Outlay:** ₹4,077 crore.
- Major components include:
 - Deep-sea mining technologies and underwater vehicles.
 - Ocean climate-change advisory services.
 - Deep-sea biodiversity exploration and conservation.
 - Deep-ocean survey and exploration.
 - Energy and freshwater technologies from the ocean.
 - Advanced marine biology and engineering.

PRITHVI Scheme

- **PRITHvi VIGyan (PRITHVI)** is the umbrella Central Sector Scheme of the Ministry of Earth Sciences.
- It integrates major programmes covering the **atmosphere, ocean, cryosphere, geosphere and Earth-system sciences**.
- Its major components include **ACROSS, O-SMART, PACER, SAGE and REACHOUT**.

Days & Themes

- **International Coastal Cleanup Day:** Observed annually on the **third Saturday of September** to promote removal and monitoring of marine debris.
- **World Ozone Day: 16 September;** formally known as the **International Day for the Preservation of the Ozone Layer**.

Sikkim Identifies 40 High-Hazard Glacial Lakes

What's the News?

- **Sikkim has identified 40 high-hazard glacial lakes** that require detailed investigation because of their potential **Glacial Lake Outburst Flood (GLOF)** risk.
- Of these, **16 are in Category A**, representing the highest-risk group.
- The assessment is part of efforts to protect **downstream settlements and infrastructure** from glacial hazards as Himalayan glaciers retreat and glacial lakes expand.
- Sikkim is also developing what could become **India's first dedicated GLOF Risk Mitigation Protocol**.

Risk Classification

Of the **40 identified high-hazard lakes**:

- **Category A:** 16 – highest risk
- **Category B:** 2 – high risk
- **Category C:** 9 – moderate to low risk
- **Unclassified:** 13 – require further scientific assessment

Sikkim has more than **400 glacial lakes**, while national-level assessments have identified **189 vulnerable glacial lakes across India**.

GLOF?

- **Glacial Lake Outburst Flood (GLOF)** is the sudden release of a large volume of water from a glacial lake.
- It can result from:
 - Failure or breach of a natural **moraine/ice dam**
 - Avalanches or landslides entering the lake
 - Ice collapse
 - Excessive water accumulation

- Earthquakes or other destabilising events

- GLOFs can generate **flash floods, debris flows and severe downstream erosion**, threatening settlements, roads, bridges and hydropower infrastructure.

Monitoring & Mitigation

- **Sikkim Department of Science and Technology (DST)** is the nodal department for GLOF hazard assessment and mitigation.
- Monitoring and field investigations use:
 - Satellite imagery and **remote sensing**
 - Water-level and discharge monitoring
 - **Bathymetric surveys**
 - Electrical Resistivity Tomography
 - Geophysical and differential GPS surveys
 - Flood modelling
- The main mitigation approaches include:
 - **Reducing lake volume**
 - **Stabilising natural lake dams**
 - Constructing **flood-retention structures**
 - Installing **Early Warning Systems (EWS)**.

High-Risk Lakes & Proposed Measures

- **Shako Chho**
 - Identified as **Sikkim's most vulnerable glacial lake**.
 - A DPR has been submitted to the **National Disaster Management Authority (NDMA)**.
 - Solar-powered pumping has been proposed to lower its water level.
- **Lhonak Complex**
 - A flood-retention structure is proposed at **Dolma Sampa near Muguthang**.
 - The **Central Water Commission (CWC)** and Sikkim government are working on its DPR.
- **Gurudongmar Complex**
 - A **moraine plug wall** has been proposed at the outlet.
 - The project involves the Sikkim DST and **Brahmaputra Board**.

Additional Info

- **South Lhonak Lake**
 - A GLOF originating from the South Lhonak system caused a major disaster in Sikkim in **2023**.
 - It caused at least **60 deaths**, affected **Mangan, Gangtok**,

Pakyong and Namchi districts, and destroyed the **Chungthang dam**.

- **GLOF Risk Mitigation Protocol**
 - Sikkim is working on a dedicated protocol to standardise **hazard assessment, preparedness and mitigation**.
 - It could serve as a framework for other vulnerable **Himalayan states and regions**.

National Biodiversity Authority Crosses ₹200-Crore ABS Disbursement Milestone

What's the News?

- The **National Biodiversity Authority (NBA)** has crossed **₹200 crore in cumulative Access and Benefit-Sharing (ABS) disbursements**, marking a major milestone in India's biodiversity governance framework.
- In the latest round, **₹8.23 crore** was sanctioned to **27 State Biodiversity Boards (SBBs)** and **5 Union Territory Biodiversity Councils (UTBCs)**.
- The proceeds arose from the research and commercial utilisation of biological resources associated with:
 - **Bitter gourd** (*Momordica charantia*)
 - **Okra** (*Abelmoschus esculentus*)
 - **Chilli** (*Capsicum annuum*)
 - **Onion** (*Allium cepa*)

What is Access and Benefit-Sharing (ABS)?

- **ABS** ensures the **fair and equitable sharing of benefits** arising from the utilisation of biological resources and associated traditional knowledge.
- Benefits may be:
 - **Monetary:** royalties, licence fees, upfront payments, research funding, etc.
 - **Non-monetary:** technology transfer, research collaboration, training and participation in product development.
- In India, ABS is implemented principally through the **Biological Diversity Act, 2002**, as amended.

Latest ABS Distribution

- The ₹8.23-crore proceeds were realised from seed companies including:
 - **Nunhems India Pvt. Ltd.**
 - **East West Seeds India Pvt. Ltd.**
 - **Bayer Science and Innovation Pvt. Ltd.**
- As the biological resources were procured through **open markets/traders**,

specific farmers or source communities could not be identified.

- Therefore, funds were allocated among States/UTs based on the **area under cultivation of the concerned crops**, using Ministry of Agriculture and Farmers Welfare data.

Major Beneficiaries

- **Madhya Pradesh:** ₹1.17 crore – highest allocation.
- **Maharashtra:** ₹1.01 crore.
- **Andhra Pradesh:** ₹75.55 lakh.
- **Karnataka:** ₹65.23 lakh.
- **Gujarat:** ₹64.06 lakh.
- **Odisha:** ₹57.63 lakh.
- Maharashtra accounted for **over 49% of India's onion cultivation area** considered for the allocation, contributing substantially to its share.

Use of ABS Funds

Under **Section 32(2) of the Biological Diversity Act**, the recipient biodiversity boards/councils can use such funds for activities including:

- Preparation and updating of **People's Biodiversity Registers (PBRs)**.
- **In-situ and ex-situ conservation** of biological resources.
- Restoration of degraded ecosystems.
- Strengthening **Biodiversity Heritage Sites**.
- Capacity building of **Biodiversity Management Committees (BMCs)**.
- Improvement of biodiversity-linked community livelihoods.

Additional Info

- **National Biodiversity Authority**
 - A **statutory body** under the Ministry of Environment, Forest and Climate Change.
 - Established under **Section 8 of the Biological Diversity Act, 2002**.
 - Functions at the national level in matters relating to access to biological resources and fair and equitable benefit sharing.
- **Three-tier Biodiversity Governance**
 - **National level:** National Biodiversity Authority.
 - **State level:** State Biodiversity Boards.
 - **Local level:** Biodiversity Management Committees under **Section 41**.
 - BMCs are important for documenting local biodiversity through **People's Biodiversity Registers** and facilitating ABS.
- **Updated Legal Framework**

- Biological Diversity Act, 2002 was amended through the **Biological Diversity (Amendment) Act, 2023**.
- **Biological Diversity Rules, 2024** provide the updated procedural framework.
- The **Biological Diversity (Access to Biological Resources and Knowledge Associated thereto and Fair and Equitable Sharing of Benefits) Regulations, 2025** replaced the earlier 2014 ABS regulations.
- **International Linkages**
 - **Convention on Biological Diversity (CBD):** Conservation, sustainable use and fair/equitable benefit sharing are its three core objectives.
 - **Nagoya Protocol:** International framework dealing specifically with Access and Benefit-Sharing; India ratified it in **2012**.
 - **Kunming-Montreal Global Biodiversity Framework – Target 13:** Seeks effective measures for fair and equitable sharing of benefits from genetic resources, digital sequence information and associated traditional knowledge.

NITI Aayog Launches PACT to Accelerate Zero-Emission Freight

What's the News?

- **NITI Aayog** has launched the **Platform for Aggregating Clean Transport (PACT)** at the **5th e-FAST India Summit** in New Delhi.
- PACT aims to accelerate the deployment of **zero-emission trucks (ZETs)** by aggregating freight demand and converting it into commercially viable deployment opportunities along identified freight corridors.
- The summit also introduced the **Zero Emission Truck (ZET) Marketplace**, connecting manufacturers, logistics firms, charging operators, financiers and technology providers.
- The initiatives seek to address major barriers to electric trucking, including **high financing costs, fragmented freight demand and inadequate corridor-based charging infrastructure**.

What is PACT?

PACT – Platform for Aggregating Clean Transport is a flagship initiative under the **e-FAST India platform**.

Its major functions include:

- Aggregating freight demand from **shippers and Logistics Service Providers (LSPs)**.
- Identifying high-potential freight corridors for zero-emission truck deployment.
- Improving demand visibility for manufacturers and investors.
- Supporting planning of **charging infrastructure** along freight corridors.
- Bringing together:
 - Shippers
 - LSPs
 - Vehicle manufacturers
 - Financiers
 - Charge Point Operators (CPOs)
- Strengthening the commercial case for **electric medium- and heavy-duty vehicles (e-MHDVs)**.

ZET Marketplace

- The **Zero Emission Truck Marketplace** is an interactive business-engagement platform for the electric freight ecosystem.
- It connects:
 - Electric-truck manufacturers
 - Logistics service providers
 - Charge Point Operators
 - Financial institutions
 - Technology companies
- It enables stakeholders to showcase products, identify business opportunities and develop **financing, charging and deployment partnerships**.
- It complements PACT by helping convert aggregated freight demand into actual commercial projects.

Why Freight Electrification Matters?

- Around **70% of India's freight moves by road**.
- Heavy-duty trucks constitute only about **3-4% of India's vehicle fleet**, but contribute **more than one-third of transport-sector carbon emissions**.
- Electric freight deployment increased from **201 vehicles in FY25 to 826 in FY26**, a more than four-fold increase.
- More than **3,000 electric medium- and heavy-duty trucks** are currently operating in India.

e-FAST India

- **e-FAST India** stands for **Electric Freight Accelerator for Sustainable Transport – India**.
- It is a **NITI Aayog-led platform** aimed at accelerating the transition towards **zero-emission freight transport**, particularly medium- and heavy-duty vehicles.

- It brings together government and private-sector stakeholders such as:
 - Original Equipment Manufacturers (OEMs)
 - Logistics companies
 - Shippers
 - Financiers
 - Charging infrastructure providers
- Its focus is shifting from individual pilot projects towards **large-scale, commercially viable electric freight deployment**.

Additional Info

- **Major barriers to electric trucks**
 - High upfront vehicle cost.
 - Higher cost of financing.
 - Fragmented logistics operations.
 - Lack of coordinated charging infrastructure along major freight corridors.
 - Uncertainty regarding utilisation, battery performance and resale value.
- **Proposed solutions**
 - **Demand aggregation** to create predictable volumes.
 - **Blended finance** to reduce investment risks.
 - Leasing models to lower upfront costs.
 - Better vehicle and battery data to reduce lending risks.
 - Corridor-based charging infrastructure for high-utilisation freight routes.
- **Related Government Initiatives**
 - **PM E-DRIVE Scheme** – supports faster adoption of electric mobility and development of EV charging infrastructure.
 - **PLI Scheme for Automobile and Auto Components** – promotes domestic manufacturing of advanced automotive technologies.
 - **PLI Scheme for Advanced Chemistry Cell (ACC) Battery Storage** – promotes domestic battery manufacturing.
 - **FAME India Scheme** – earlier demand-support framework for electric and hybrid vehicles.
 - **PM e-Bus Sewa** – supports deployment of electric buses in Indian cities.

5th Swachh Vayu Sarvekshan Awards Recognise Top Cities and Wards

What's the News?

- The **Ministry of Environment, Forest and Climate Change (MoEFCC)** conferred the **5th Swachh Vayu Sarvekshan Awards** under the **National Clean Air Programme (NCAP)**.
- The awards recognised best-performing **cities and municipal wards** for measures undertaken to reduce air pollution.
- **Lucknow, Rourkela and Kalinga Nagar** emerged as the top-ranked cities in their respective population categories.
- The 2026 edition introduced **ward-level assessment**, extending clean-air evaluation to the local level.
- A **Compendium of Best Management Practices under NCAP** was also released to facilitate replication of successful pollution-control measures.

Swachh Vayu Sarvekshan

- It is an **annual assessment of cities covered under NCAP**, launched in **2022-23** by MoEFCC.
- It promotes competition among cities on implementation of **City Clean Air Action Plans**.
- In 2026, all **130 NCAP cities** were assessed in three population groups:
 - **Category I:** Above 10 lakh population
 - **Category II:** 3-10 lakh population
 - **Category III:** Below 3 lakh population
- Assessment covers measures related to:
 - Road-dust control
 - Solid Waste Management (SWM)
 - Vehicular emissions
 - Industrial pollution
 - Construction & Demolition (C&D) waste
 - Emissions from DG sets and commercial establishments
 - Information, Education and Communication (IEC) activities
- Evaluation involves **city self-assessment** → **State-Level Monitoring Committee approval** → **CPCB evaluation** → **field verification by independent committees**.

Important: Swachh Vayu Sarvekshan primarily evaluates a city's **air-pollution control actions and their implementation**; it should not be interpreted simply as a ranking of cities by absolute air quality.

2026 City Rankings

Population Category	1st	2nd	3rd
Above 10 lakh	Lucknow – 198	Indore – 197	Jabalpur – 195
3–10 lakh	Rourkela – 198.5	Firozabad & Guntur – 195	Amravati – 194
Below 3 lakh	Kalinga Nagar – 198.5	Angul – 196.5	Talcher – 193.5

Lucknow received a ₹1.5 crore cash award for topping the million-plus population category.

Ward-Level Swachh Vayu Sarvekshan

- Ward-level assessment was introduced to promote a **bottom-up approach** to air-quality management.
- More than **7,400 wards** participated.
- **10 wards** received national awards across three categories, while **69 wards from 23 States/UTs** were recognised at the State/UT level.

National Category Leaders

- Above 30,000 population: Ward 70, Lucknow
- 10,000–30,000: Ward 36 and Ward 30, Bhubaneswar – joint first
- Below 10,000: Ward 13, Rourkela

National Clean Air Programme (NCAP)

- Launched: 2019
- Nodal Ministry: Ministry of Environment, Forest and Climate Change
- Coverage: 130 cities across 24 States/UTs
- It adopts a **multi-sectoral approach** involving the Central and State governments, Urban Local Bodies and other stakeholders through city-specific clean-air action plans.
- **PRANA – Portal for Regulation of Air-Pollution in Non-Attainment Cities** tracks the physical and financial progress of NCAP action plans.

Progress under NCAP

Using FY 2017–18 as the baseline, performance in FY 2025–26 showed:

- **108 of 130 cities** recorded improvement in annual PM10 levels.
- **72 cities** achieved more than **20% reduction**.
- **26 cities** achieved more than **40% reduction**.
- **14 cities** met the **National Ambient Air Quality Standards (NAAQS)**.
- Around ₹16,425 crore in performance-linked grants has been provided to NCAP

cities for pollution-mitigation measures.

Additional Info

- **Swachh Vayu Diwas / International Day of Clean Air for Blue Skies**
 - Observed on **7 September** every year.
 - The **UN General Assembly designated the day in 2019**, with the first observance held in 2020.
 - India observes the occasion as **Swachh Vayu Diwas**.
- **Central Pollution Control Board (CPCB)**
 - Statutory organisation constituted under the **Water (Prevention and Control of Pollution) Act, 1974**.
 - Also exercises powers and functions under the **Air (Prevention and Control of Pollution) Act, 1981**.
 - Functions under MoEFCC.
- **PM10**
 - Particulate matter having an aerodynamic diameter of **10 micrometres or less**.
 - Reduction in particulate pollution is a major focus of NCAP.

Five Baby Orangutans Rescued in Odisha, Wildlife Trafficking Probe Launched

What's the News?

- **Five juvenile orangutans** were found in the **Bhograi area of Balasore district, Odisha**, despite orangutans having **no natural wild population in India**.
- The group comprises **three males and two females** and was rescued by the Odisha Forest Department.
- The animals were shifted to **Nandankanan Zoological Park, Bhubaneswar**, where they are under **quarantine and veterinary supervision**.
- The **Odisha Police Special Task Force (STF)** and the **Wildlife Crime Control Bureau (WCCB)** are investigating possible links to an **organised international wildlife-trafficking network**. Natural migration is considered highly improbable because there is no ecological corridor connecting their native range with India.

Orangutans?

- Orangutans are **great apes** belonging to:
 - **Genus:** *Pongo*
 - **Family:** Hominidae

- **Order:** Primates
- They are **Asia's only great apes** and the world's largest predominantly **arboreal/tree-dwelling mammals**.
- Their natural wild distribution is restricted to the rainforests of **Borneo and Sumatra in Southeast Asia**.
- Three recognised species are:
 - **Bornean orangutan** – *Pongo pygmaeus*
 - **Sumatran orangutan** – *Pongo abelii*
 - **Tapanuli orangutan** – *Pongo tapanuliensis*
- **IUCN Red List:** All three species are **Critically Endangered (CR)**.
- **CITES:** All three are listed in **Appendix I**, which imposes the strictest controls on international trade; commercial international trade is generally prohibited.

Wildlife Crime Control Bureau

- **WCCB** is a statutory, multidisciplinary wildlife-crime enforcement body under the **Ministry of Environment, Forest and Climate Change (MoEFCC)**.
- It was constituted under **Section 38Y of the Wild Life (Protection) Act, 1972**; its principal functions are specified under **Section 38Z**.
- Major functions include:
 - Collecting and sharing intelligence on organised wildlife crime.
 - Maintaining a centralised wildlife-crime database.
 - Coordinating State and central enforcement agencies.
 - Assisting implementation of international wildlife conventions such as **CITES**.
 - Supporting scientific investigation and prosecution of wildlife offences.

CITES & Indian Wildlife Law

- **CITES – Convention on International Trade in Endangered Species of Wild Fauna and Flora** regulates international trade in wild animals and plants so that trade does not threaten their survival.
- India's **Wild Life (Protection) Amendment Act, 2022** strengthened domestic implementation of CITES.
 - **Schedule IV** of the amended law covers specimens of species listed in **CITES Appendices I, II and III**.
 - **Section 49E:** Provides for designation of a **CITES Management Authority**, responsible for

- permits and certificates relating to international trade.
- **Section 49F:** Provides for designation of **Scientific Authorities** to advise on trade-related conservation issues.
- The Odisha case is therefore significant not merely as an exotic-animal rescue but as a potential **transnational wildlife crime involving a CITES Appendix-I species**.

Additional Info

- **Nandankanan Zoological Park**
 - Located near **Bhubaneswar, Odisha**.
 - The rescued orangutans are presently being kept under quarantine and specialised care there.
 - Nandankanan previously housed an orangutan named **Binny**, which died at the age of 41 in 2019.
- **Major threats to orangutans**
 - Tropical-forest habitat loss and fragmentation.
 - Poaching and capture of infants.
 - Illegal exotic-pet trade.
 - Human-wildlife conflict.

India Launches Net Zero Portal and NAPCC Dashboard

What's the News?

- The **Ministry of Environment, Forest and Climate Change (MoEFCC)** has launched the **India Net Zero Portal** and the **National Action Plan on Climate Change (NAPCC) Dashboard**.
- The platforms were launched in **Mumbai** by Union Minister of State for Environment, Forest and Climate Change **Kirti Vardhan Singh** on **World Ozone Day**.
- The **Net Zero Portal** provides a national platform for Indian entities to voluntarily register their net-zero targets, disclose greenhouse-gas emissions and report progress.
- The **NAPCC Dashboard** consolidates information and indicators relating to India's national climate missions to improve monitoring, inter-ministerial coordination and identification of implementation gaps.

India Net Zero Portal

- It is a **centralised digital platform** for voluntary registration and disclosure of net-zero commitments by Indian entities across sectors.
- Participating entities can:
 - disclose their **greenhouse-gas (GHG) emissions**;

- declare a **Net Zero target**;
- provide **annual progress updates**;
- specify their pathway towards Net Zero through clean-energy transition, energy efficiency, technological interventions and carbon removals.
- Entities are encouraged to disclose:
 - **Scope 1 emissions:** Direct emissions from sources owned or controlled by an entity.
 - **Scope 2 emissions:** Indirect emissions associated with purchased electricity, steam, heating or cooling.
 - **Scope 3 emissions:** Other indirect emissions across the entity's value chain; reporting remains voluntary.
- Entities successfully declaring targets receive an **acknowledgement from MoEFCC**.
- Public disclosure will create a consolidated national repository of voluntary net-zero commitments.

NAPCC Dashboard

The **National Action Plan on Climate Change Dashboard** provides a unified digital view of the implementation and progress of India's national climate missions. It is intended to:

- consolidate mission-related information and identified indicators;
- facilitate monitoring by concerned ministries and departments;
- strengthen **inter-ministerial coordination**;
- assess sectoral climate progress;
- identify implementation gaps; and
- improve linkage between domestic climate action and India's international climate commitments.

National Action Plan on Climate Change

- **NAPCC was launched in 2008** as India's overarching framework for addressing climate change through mitigation and adaptation.
- Its original **eight National Missions** were:
 1. National Solar Mission
 2. National Mission for Enhanced Energy Efficiency
 3. National Mission on Sustainable Habitat
 4. National Water Mission
 5. National Mission for Sustaining the Himalayan Ecosystem
 6. National Mission for a Green India

7. National Mission for Sustainable Agriculture
8. National Mission on Strategic Knowledge for Climate Change

- The current NAPCC Dashboard also covers the **National Mission on Climate Change and Human Health**, taking the dashboard's coverage to **nine national missions**.

Net Zero

- **Net Zero** means reducing greenhouse-gas emissions as far as possible and balancing remaining emissions through equivalent removals.
- India has committed to achieve **Net Zero emissions by 2070**.
- Net-zero action is connected with India's broader commitments under the **Paris Agreement** and its **Nationally Determined Contributions (NDCs)**.
- The new portal specifically brings voluntary commitments by companies and other entities onto a common, publicly accessible government platform.

World Ozone Day

- **World Ozone Day – 16 September**
- Official name: **International Day for the Preservation of the Ozone Layer**
- **2026 Theme:** “Global Action for a Cooler Planet”
- It commemorates the adoption of the **Montreal Protocol on Substances that Deplete the Ozone Layer** in 1987.
- The Montreal Protocol seeks to phase out ozone-depleting substances and is regarded as a major multilateral environmental agreement.

Additional Info

- **MoEFCC:** Nodal Union Ministry for environmental protection, climate-change policy, forests and biodiversity conservation.
- **NAPCC + SAPCC:** India's national climate framework is complemented at the State/UT level by **State Action Plans on Climate Change (SAPCCs)**.
- **Climate governance significance:**
 - Net Zero Portal → focuses primarily on **voluntary entity-level commitments and disclosures**.
 - NAPCC Dashboard → focuses on **government mission-level implementation and monitoring**.
 - Together, they strengthen digital climate governance, transparency, data consolidation and institutional coordination.

Delhi Tops NITI Aayog's India Electric Mobility Index 2025

What's the News?

- **Delhi** retained the top position in the **India Electric Mobility Index (IEMI) 2025**, with an overall score of **84**.
- **Maharashtra** ranked second with **78**, followed by **Karnataka (73)**, **Chandigarh (71)** and **Goa (65)**.
- The index is developed by **NITI Aayog in collaboration with WRI India** and evaluates the progress of States and Union Territories towards electric mobility.
- Delhi's score increased from **77 in the previous edition to 84**, while Maharashtra improved from **68 to 78**.

India Electric Mobility Index 2025

- **IEMI 2025 is the second edition** of the index and assesses progress during **January–December 2025**.
- It is a **composite index**, with States and UTs scored on a **0–100 scale**.
- It covers **16 indicators** under three major themes:
 - **Transport Electrification Progress – 50%**
 - **Charging Infrastructure Readiness – 30%**
 - **EV Research and Innovation Status – 20%**
- The index assesses both **policy enablers and actual outcomes**, including EV adoption, public charging infrastructure, State policies, EV startups, R&D initiatives and patents.

Rankings

- **Overall Top Performers**
 - Delhi – **84**
 - Maharashtra – **78**
 - Karnataka – **73**
 - Chandigarh – **71**
 - Goa – **65**
- **Large States:** Maharashtra ranked first, followed by Karnataka.
- **Hilly & Northeastern States:** Manipur ranked highest with a score of **46**.
- **UTs & City States:** Delhi ranked first, followed by Chandigarh and Goa.
- **Odisha** scored **55** and was classified as a **Frontrunner** among the Large States.

Delhi's Performance

Delhi performed strongly across all three components of the index:

- **Transport Electrification Progress:** **77**, the highest in India.
- **Charging Infrastructure Readiness:** **88**.
- **EV Research & Innovation Status:** **94**, the highest score nationally under this theme.

Its performance reflects relatively high EV adoption, extensive public-transport electrification, charging infrastructure and a strong EV startup and research ecosystem.

Performance Categories

States and UTs are grouped according to their IEMI scores:

- **Top Performers:** 65 and above
- **Frontrunners:** 50–64
- **Emerging Performers:** 35–49
- **Aspirants:** Below 35

For comparison, the national **median IEMI score increased from 36 to 40** between the two editions, indicating an overall improvement in the e-mobility ecosystem.

Additional Info

- **NITI Aayog**
 - Government of India's apex public-policy think tank.
 - Established in **2015**, replacing the Planning Commission.
 - Chairperson: **Prime Minister of India**.
- **WRI India**
 - Indian arm of the **World Resources Institute (WRI)**.
 - Works in areas including sustainable cities, energy, climate, transport and natural-resource management.
- **Electric Mobility**
 - Covers transport powered substantially or entirely by electricity, including **electric two-wheelers, cars, buses and commercial vehicles**, along with charging and supporting infrastructure.
 - IEMI enables comparison of State-level progress and helps identify gaps in **EV adoption, charging infrastructure and innovation capacity**.

INCOIS to Use AI and Satellites to Track Marine Litter Hotspots

What's the News?

- The **Indian National Centre for Ocean Information Services (INCOIS)** has launched the pilot phase of **NIRMaL Sagar – National Initiative for Remediation of Marine Litter** – at **Visakhapatnam, Andhra Pradesh**.
- The initiative aims to develop an **integrated marine-litter tracking and management system** using **ocean modelling, satellite remote sensing, Artificial Intelligence (AI) and Machine Learning (ML)**.

- The pilot will identify sources of marine plastic litter, track its movement, locate accumulation hotspots and support targeted removal and recycling measures.
- INCOIS is implementing the pilot in association with **Andhra University and Vignana Bharati (VIBHA)**.

NIRMaL Sagar

- **Full form:** National Initiative for Remediation of Marine Litter.
- **Pilot location:** Visakhapatnam on the Bay of Bengal coast.
- **Scientific lead:** INCOIS, Hyderabad.
- It seeks to create **India's first integrated marine-litter tracking framework**.
- Major objectives include:
 - Identifying sources of marine plastic waste.
 - Tracking the drift and movement of litter through ocean waters.
 - Mapping areas where floating debris accumulates.
 - Forecasting potential marine-litter hotspots.
 - Developing strategies for litter removal.
 - Promoting recycling and **circular-economy approaches**.

How Will Marine Litter Be Tracked?

- **Satellite Remote Sensing:** Satellite observations can help detect and monitor ocean and coastal conditions over large areas.
- **Ocean Modelling:** Simulates ocean currents and other physical processes that determine how floating waste moves.
- **AI & Machine Learning:** Analyse large datasets to detect patterns and improve hotspot identification and forecasting.
- Combining these technologies can help authorities move from general beach clean-ups towards **location-specific and source-oriented interventions**.

Marine Litter

- Marine litter refers to persistent human-made solid material discarded or transported into **marine and coastal environments**.
- Important sources include:
 - Plastic waste carried by rivers and drains.
 - Fishing nets and other fishing gear.
 - Coastal tourism and urban waste.
 - Shipping and maritime activities.

- Ocean currents and winds can concentrate floating debris in particular **accumulation zones**, making hotspot mapping useful for targeted clean-up operations.
- **Microplastics** are plastic particles generally measuring **less than 5 mm**.

About INCOIS

- **Indian National Centre for Ocean Information Services (INCOIS)** is an **autonomous body under the Ministry of Earth Sciences**.
- **Headquarters:** Hyderabad, Telangana.
- It was established in **1999**.
- Major services include:
 - **Ocean State Forecasts**
 - **Potential Fishing Zone advisories**
 - **Tsunami early-warning services**
 - Ocean observation, satellite oceanography and marine-data services.
- INCOIS is also designated as a **National Oceanographic Data Centre** under the International Oceanographic Data and Information Exchange framework.

Swachh Sagar, Surakshit Sagar 5.0

- The NIRMaL Sagar pilot was launched alongside the conclusion of **Swachh Sagar, Surakshit Sagar 5.0**, India's nationwide coastal cleanliness and ocean-conservation campaign.
- The campaign involves:
 - Beach clean-up drives.
 - Public participation and ocean-conservation pledges.
 - Awareness programmes for coastal communities and youth.
 - Activities promoting prevention of marine pollution.
- The 2026 edition covered **100+ locations** across India.

Additional Info

- **International Coastal Cleanup Day**
 - Observed on the **third Saturday of September** every year.
 - In **2026, it fell on 19 September**.
 - Focuses on removal of waste from coastlines and raising awareness about marine pollution.
- **Sustainable Development Goal 14 – Life Below Water**
 - Calls for conservation and sustainable use of **oceans, seas and marine resources**.
 - **Target 14.1** focuses on preventing and significantly reducing marine pollution, particularly pollution from land-based activities, including marine debris.

- **Plastic Waste Management Rules, 2016**
 - Provide India's regulatory framework for managing plastic waste.
 - Incorporate **Extended Producer Responsibility (EPR)**, under which producers, importers and brand owners have responsibilities relating to plastic packaging waste.
 - Marine-litter prevention is closely connected with effective land-based plastic-waste management because rivers, drains and coastal settlements can transport plastic into the sea.

Bay of Bengal Deep Depression Crosses Andhra Coast

What's the News?

- A deep depression over the west-central and adjoining northwest Bay of Bengal crossed the north Andhra Pradesh-south Odisha coast, close to the southwest of Kalingapatnam, between Visakhapatnam and Gopalpur.
- It crossed the coast as a deep depression, with maximum sustained winds of about 55–65 kmph, gusting to 75 kmph.
- The system subsequently moved inland over north coastal Andhra Pradesh and is expected to gradually weaken while moving northwestwards and then north-northwestwards.
- Heavy to very heavy rainfall affected parts of north coastal Andhra Pradesh and southern Odisha, along with strong winds and rough sea conditions.

Why It Was Not Named 'Cyclone Arnab'

- **Arnab** is the next designated name in the North Indian Ocean cyclone-naming list and was contributed by Bangladesh.
- However, the IMD continued to classify this system as a deep depression, not a cyclonic storm.
- A tropical disturbance receives a name from RSMC New Delhi only after it reaches Cyclonic Storm intensity.
- Hence, referring to the system as "Cyclone Arnab" was premature; Arnab was not officially assigned to it.

IMD Classification of Cyclonic Disturbances

System	Maximum Sustained Wind
Depression	31–49 kmph
Deep Depression	50–61 kmph
Cyclonic Storm	62–88 kmph

Severe Cyclonic Storm	89–117 kmph
Very Severe Cyclonic Storm	118–166 kmph
Extremely Severe Cyclonic Storm	167–221 kmph
Super Cyclonic Storm	≥222 kmph

A system is assigned a cyclone name when it reaches the **Cyclonic Storm threshold of 34 knots (about 62 kmph)** and is officially classified accordingly.

Impact and Preparedness

- **Odisha:** Heavy to extremely heavy rainfall affected or threatened several southern districts, including Ganjam, Gajapati, Rayagada, Koraput and Malkangiri.
- **Andhra Pradesh:** Areas including Srikakulam, Vizianagaram, Parvathipuram Manyam, Alluri Sitharama Raju and Visakhapatnam faced heavy rainfall warnings.
- Schools and Anganwadi centres were closed in several affected districts as a precaution.
- Fishermen were advised against venturing into affected sea areas due to rough to very rough sea conditions.
- Major risks included flash floods, waterlogging, landslides, tree falls and disruption of power and transport infrastructure.

Cyclone Naming in the North Indian Ocean

- Cyclone naming over the Bay of Bengal and Arabian Sea began in 2004.
- Names are assigned by the **Regional Specialised Meteorological Centre (RSMC), New Delhi**, operated by the **India Meteorological Department (IMD)**.
- The present list contains names submitted by 13 WMO/ESCAP Panel countries:
 - Bangladesh
 - India
 - Iran
 - Maldives
 - Myanmar
 - Oman
 - Pakistan
 - Qatar
 - Saudi Arabia
 - Sri Lanka
 - Thailand
 - United Arab Emirates
 - Yemen
- Names are used sequentially and are not repeated once used.
- **Arnab** appears in the list as a name contributed by Bangladesh.

Additional Info

India Meteorological Department (IMD)

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- Functions under the **Ministry of Earth Sciences**.
- It is India's principal agency for **meteorological observations, weather forecasting and cyclone warnings**.
- **RSMC New Delhi**, operated by IMD, provides tropical-cyclone advisories for the **North Indian Ocean**, covering both the **Bay of Bengal and Arabian Sea**.

India Issues First PRAMAAN Certificates under Forest Certification Scheme

What's the News?

- Union Environment Minister **Bhupender Yadav** handed over India's **first PRAMAAN certificates** under the **Indian Forest and Wood Certification Scheme (IFWCS)**.
- The certificates were awarded to the **Andhra Pradesh Forest Development Corporation (APFDC)** for plantations covering about **33,000 hectares** and to a **bamboo farmer associated with the Odisha Bamboo Development Agency (OBDA)**.
- The development marks the transition of India's national forest-certification framework from policy formulation to **field-level certification** of sustainably managed forest and agroforestry resources.

What is PRAMAAN?

PRAMAAN stands for **Programme for Recognition and Accreditation of Sustainable Management Practices for Agroforestry and Natural Forestry Resources**.

- It is the certification framework under the **Indian Forest and Wood Certification Scheme (IFWCS)**.
- IFWCS was launched by the **Ministry of Environment, Forest and Climate Change (MoEFCC)** in **December 2023**.
- It is a **voluntary, market-based, third-party certification scheme** aimed at promoting:
 - Sustainable forest management.
 - Sustainable agroforestry.
 - Responsible practices in wood-based industries.
 - Traceability and market credibility of forest and tree-based products.

First Certificates

Andhra Pradesh

- **Recipient:** Andhra Pradesh Forest Development Corporation.
- **Coverage:** Around **33,000 hectares** of plantations.

- The certification includes eucalyptus plantations managed by APFDC and demonstrates compliance with sustainable forest-management standards.

Odisha

- A bamboo farmer from **Mayurbhanj district**, associated with the Odisha Bamboo Development Agency, received the other certificate.
- The certification covers **14.03 hectares across four plots** in Gobardhansul and Ranibhol.
- It falls under **Trees Outside Forest Management and Chain of Custody (TOFM-CoC)** certification.
- Certified bamboo species include:
 - *Bambusa vulgaris*
 - *Bambusa nutans*
 - *Dendrocalamus strictus*

Certification Categories under IFWCS

The scheme provides three principal types of certification:

- Forest Management Certification (FM)**
 - Covers recorded forests and forest plantations managed according to prescribed sustainable-management standards.
- Trees Outside Forest Management Certification (TOF)**
 - Covers trees grown outside recorded forests, including farm forestry and agroforestry.
- Chain of Custody Certification (CoC)**
 - Tracks certified forest and tree-based material through processing, manufacturing and trade, providing traceability of its sustainable origin.

Institutional Framework

- **MoEFCC:** Nodal Union Ministry for the scheme.
- **Indian Institute of Forest Management (IIFM), Bhopal:** Operating agency for IFWCS-PRAMAAN.
- **Indian Forest and Wood Certification Council:** Guides and monitors implementation of the scheme.
- **National Accreditation Board for Certification Bodies (NABCB):**
 - Functions under the **Quality Council of India (QCI)**.
 - Accredits certification bodies that conduct independent audits under the scheme.

Additional Info

- **National Working Plan Code, 2023**

- Provides the framework for preparation of forest working plans in India.
- Incorporates the **Indian Forest Management Standard (IFMS)** for monitoring sustainable forest management.
- **International Market Linkage**
 - PRAMAAN is intended to improve access of certified Indian forest and agroforestry products to domestic and international markets.
 - Its Chain of Custody framework incorporates due-diligence and traceability requirements relevant to the **European Union Deforestation Regulation (EUDR)**.

CAQM Revises GRAP Schedule for Air Pollution Control in NCR

What's the News?

- The **Commission for Air Quality Management (CAQM)** has approved a revised **Graded Response Action Plan (GRAP)** for the **National Capital Region (NCR)**.
- The revised framework contains **48 pollution-control actions across four stages**, with several restrictions shifted to earlier stages to enable quicker intervention.
- The decision was taken at a Full Commission meeting chaired by **CAQM Chairperson Rajesh Verma**.
- Major changes concern **vehicle emissions, diesel generator sets, construction dust, municipal solid waste and transport-related pollution**.

Revised GRAP Framework

GRAP Stage	Delhi AQI Range	Air Quality	Number of Actions
Stage I	201-300	Poor	25
Stage II	301-400	Very Poor	8
Stage III	401-450	Severe	10
Stage IV	Above 450	Severe+	5

- Several overlapping measures concerning **dust control, municipal solid waste and transport** have been consolidated under Stage I.
- Restrictions concerning **diesel generator (DG) sets** and entry of **BS-IV and below buses** from NCR and adjoining

states have been shifted from **Stage II to Stage I**.

Vehicle Restrictions

- Under **Stage III**, restrictions on **BS-III petrol and BS-IV diesel light motor vehicles (LMVs)** have been extended to **Sonipat**.
- These restrictions already covered the high-vehicle-density districts of:
 - **Gurugram**
 - **Faridabad**
 - **Ghaziabad**
 - **Gautam Budh Nagar**
- Stage III also restricts the entry into Delhi of **diesel BS-IV and below light and medium goods vehicles registered outside Delhi**.
- The earlier exemption for older goods vehicles carrying **essential commodities** has been withdrawn:
 - **Light and medium goods vehicles** – Stage III
 - **Heavy goods vehicles/trucks** – Stage IV.

Construction & Dust Control

- CAQM has expanded **web portal-based monitoring** of dust-control measures at eligible **Construction and Demolition (C&D) sites** beyond municipal limits in the NCR.
- The applicable plot-size threshold remains **500 sq m or more**.
- This aims to improve monitoring of construction dust in rapidly urbanising areas outside municipal boundaries.
- The **Citizens' Charter** for every GRAP stage has also been revised with additional dos and don'ts.

CAQM

- **Full form:** Commission for Air Quality Management in National Capital Region and Adjoining Areas.
- It is a **statutory body** established under the **Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021**.
- Its jurisdiction covers the **NCR and adjoining areas** insofar as their pollution affects air quality in the NCR.
- Its mandate includes:
 - Coordination among states and agencies.
 - Research and identification of air-pollution sources.
 - Issuing directions and coordinating pollution-control measures.
 - Monitoring implementation of measures such as GRAP.

Graded Response Action Plan

- **GRAP** is an emergency, stage-based pollution-control framework for **Delhi-NCR**.
- Measures become progressively stricter as the **Air Quality Index (AQI)** deteriorates.
- Implementation is overseen by CAQM through its **Sub-Committee for Operationalisation of GRAP**.
- GRAP was originally introduced for Delhi-NCR in **2017** and has subsequently been revised several times to strengthen preventive action.

Additional Info

- **Enforcement:** More than **1,800 violating units** had received closure orders during CAQM's enforcement review.
- **Bharat Stage norms**
 - Bharat Stage or **BS emission standards** regulate pollutants emitted by motor vehicles.
 - **BS-VI** became the nationwide standard in 2020; India moved directly from BS-IV to BS-VI.
- **AQI**

- India's National AQI classifies air quality from **Good to Severe**.
- GRAP stages are linked to deterioration in Delhi's average AQI rather than individual pollutant concentrations.



Health & Pharma

9th Rashtriya Poshan Maah 2026 Focuses on Anganwadis and Dietary Diversity

What's the News?

- The **Ministry of Women and Child Development (MWCD)** has launched the **9th Rashtriya Poshan Maah 2026** in **Varanasi, Uttar Pradesh**.
- The month-long nationwide nutrition campaign is being held under the theme **"Hamari Anganwadi, Hamari Jimmedari"**.
- It seeks to strengthen **community ownership of Anganwadi Centres** and improve maternal and child nutrition through dietary diversity, adequate protein intake, fresh hot-cooked meals and early childhood development.
- Union Minister for Women and Child Development **Annpurna Devi** and Uttar Pradesh Chief Minister **Yogi Adityanath** participated in the launch.

Key Focus Areas

Rashtriya Poshan Maah 2026 focuses on:

- **Dietary diversity and adequate protein intake**
- **Fresh hot-cooked meals** at Anganwadi Centres
- Community ownership through **Anganwadi Management Committees**
- Display of **Supplementary Nutrition Programme (SNP) Menu Boards**
- **Nutrition and early stimulation** for childhood development
- Commemoration of **10 years of Pradhan Mantri Matru Vandana Yojana (PMMVY)**

The campaign aims to make nutrition a **Jan Andolan**, involving families, Panchayati Raj Institutions, Self-Help Groups and frontline workers.

Anganwadi Network

- India has **over 14 lakh Anganwadi Centres**.
- They currently provide nutrition, health and early childhood-care services to:
 - More than **7.5 crore children**
 - Around **1.10 crore pregnant and lactating women**
 - Nearly **16 lakh adolescent girls**
- The government is upgrading **2 lakh Anganwadi Centres** into **Saksham Anganwadis** with improved infrastructure and service-delivery facilities.

Dietary Diversity & Supplementary Nutrition

- Dietary diversity seeks to ensure that beneficiaries receive nutrients from different food groups rather than relying mainly on cereals.
- Foods promoted include **millets, pulses, seeds, milk and other protein-rich foods**.
- Anganwadi Centres provide:
 - **Hot Cooked Meals (HCM)**
 - **Take Home Ration (THR)**
 - Nutrition counselling and growth-related services.
- **SNP Menu Boards** are intended to improve transparency by displaying meal provisions and beneficiary entitlements.

POSHAN Abhiyaan

- **POSHAN Abhiyaan (Prime Minister's Overarching Scheme for Holistic Nutrition)** was launched in **2018** to improve nutritional outcomes among children, pregnant women and lactating mothers.
- It adopts a **convergence approach**, bringing together nutrition, health, sanitation, drinking water and related interventions.
- POSHAN Abhiyaan has subsequently been brought under the umbrella of **Mission Saksham Anganwadi and Poshan 2.0**.
- More than **150 crore Jan Andolan activities** have been conducted through Poshan Maah, Poshan Pakhwada and related community programmes since its launch.

Mission Saksham Anganwadi and Poshan 2.0

- It is a **Centrally Sponsored Scheme** administered by the **Ministry of Women and Child Development**.
- It subsumes:
 - **Anganwadi Services**
 - **POSHAN Abhiyaan**
 - **Scheme for Adolescent Girls**
- Its strategy emphasises:
 - Reduction of malnutrition
 - Improved health, wellness and immunity
 - Dietary diversity and locally available nutritious foods
 - Community participation and behavioural change
 - Strengthening and modernisation of Anganwadi Centres.

Pradhan Mantri Matru Vandana Yojana

- **PMMVY** is a maternity-benefit scheme administered by the Ministry of Women and Child Development.
- It provides **cash incentives through Direct Benefit Transfer (DBT)** to eligible pregnant and lactating women to support maternal and child health.
- The scheme has completed **10 years**.
- More than **₹21,000 crore** has been transferred to over **4.65 crore mothers** across the country.

Additional Info

- **Anganwadi Centres**
 - Grassroots institutions for nutrition, health and early childhood development.
 - Originated under the **Integrated Child Development Services (ICDS)** programme.
 - Major services include supplementary nutrition, pre-school non-formal education, nutrition and health education, health check-ups and referral support.
- **First 1,000 Days**
 - Period from **conception to a child's second birthday**.
 - Considered critical for physical growth, brain development and long-term nutritional outcomes.
 - Rashtriya Poshan Maah interventions give particular importance to nutrition during this period.
- **POSHAN Vatikas**
 - Nutrition gardens developed at or around Anganwadi Centres to encourage consumption of **fresh, locally available and diverse foods**.

India Crosses 80 Lakh HPV Vaccinations in Cervical Cancer Prevention Drive

What's the News?

- India has administered **over 80 lakh doses of the Human Papillomavirus (HPV) vaccine** under the nationwide cervical cancer prevention campaign.
- The programme targets **14-year-old girls** and provides a **single dose of Gardasil-4 free of cost** at government health facilities.
- The campaign covers all **36 States and Union Territories** and targets an annual cohort of about **1.2 crore eligible girls**.

- Vaccination is **voluntary and requires parental consent**.

National HPV Vaccination Campaign

- **Target group:** Girls aged **14 years**.
- **Target population:** Around **1.2 crore girls annually**.
- **Vaccine:** **Gardasil-4**, a quadrivalent HPV vaccine.
- **Schedule:** **Single dose**.
- **Cost:** Free at designated government health facilities.
- Vaccination is available through:
 - **Ayushman Arogya Mandirs**
 - Primary Health Centres (PHCs)
 - Community Health Centres (CHCs)
 - Sub-District and District Hospitals
 - Government Medical Colleges
- Beneficiary registration and vaccination tracking are supported through the **U-WIN digital platform**.

Vaccination Coverage

- More than **80 lakh doses** have been administered since the national rollout.
- States reporting **100% coverage of their identified target populations** include:
 - Gujarat
 - Uttar Pradesh
 - Madhya Pradesh
 - Mizoram
- **Over 90% coverage:** Bihar, Andhra Pradesh and Assam.
- **Over 85%:** Karnataka.
- **Over 60%:** Chhattisgarh, Sikkim, Kerala, Telangana and Odisha.

HPV and Cervical Cancer

- **Human Papillomavirus (HPV)** is a group of viruses, some types of which can cause cancers.
- Persistent infection with high-risk HPV types is the principal cause of **cervical cancer**.
- **Gardasil-4** protects against four HPV types:
 - **HPV-16 and HPV-18:** Major cancer-causing types.
 - **HPV-6 and HPV-11:** Mainly associated with genital warts.
- Vaccination before significant exposure to HPV provides preventive protection against HPV-related cervical disease.

India's Cervical Cancer Prevention Strategy

The vaccination programme forms part of a broader strategy involving:

- **Primary prevention:** HPV vaccination.

- **Secondary prevention:** Cervical cancer screening and early detection through the primary healthcare network.
- **Treatment:** Referral and management of detected cancers, including through **Day Care Cancer Centres**.
- More than **8.73 crore women** had been screened for cervical cancer through India's public-health system by early 2026.

Additional Info

- **Cervical Cancer in India**
 - It is the **second most common cancer among women in India**.
 - Unlike many cancers, cervical cancer is substantially preventable through **HPV vaccination, screening and timely treatment of precancerous lesions**.
- **U-WIN**
 - Digital vaccination platform developed for recording and tracking immunisation services.
 - Supports beneficiary registration, vaccination records, coverage monitoring and identification of missed beneficiaries.
 - It extends digital tracking mechanisms to India's immunisation ecosystem.
- **WHO Cervical Cancer Elimination Strategy**
 - WHO defines elimination as reducing cervical cancer incidence below **4 cases per 1 lakh women per year**.
 - Its **90-70-90 targets for 2030** are:
 - **90%** of girls fully vaccinated against HPV by age 15.
 - **70%** of women screened with a high-performance test by ages 35 and 45.
 - **90%** of women identified with cervical disease receiving appropriate treatment.

7th National Formulary of India 2026 Launched

What's the News?

- Union Minister of State **Anupriya Patel**, Ministry of Health & Family Welfare and Ministry of Chemicals & Fertilisers, launched the **7th Edition of the National Formulary of India (NFI 2026)** in New Delhi.

- The **Indian Pharmacopoeia Commission (IPC)** publishes the NFI to promote the **rational, safe and evidence-based use of medicines**.
- The government also announced the **Biovigilance Programme of India (BvPI)** to strengthen safety monitoring of medicines and biological products associated with **organ and tissue transplantation**.
- Other releases included a hospital guidance document for reporting **medical device-related adverse events** and the **ADR-PvPI 2.0 mobile app for iOS**.

National Formulary of India 2026

- NFI is a **reference and guidance document for healthcare professionals** on appropriate and rational use of medicines.
- **NFI 2026 contains:**
 - **653 drugs**
 - **34 chapters**
 - **20 appendices**
 - **42 fixed-dose combinations**
 - **30 immunologicals**
- Drug monographs have been revised in alignment with the **National List of Essential Medicines (NLEM)** and National Health Programmes.
- The 7th edition is also available digitally through **NFI Online**.
- The **first NFI was published in 1960**, while the previous, **6th edition**, was released in 2021.

Biovigilance Programme of India

- **Biovigilance** refers to systematic safety surveillance of biological products and transplantation-related interventions to identify and manage adverse events.
- Under BvPI, IPC will focus on:
 - Reporting of transplant-related adverse events.
 - Scientific assessment of reported events.
 - Continuous safety monitoring.
 - Prevention and mitigation of identified risks.
- It expands India's existing patient-safety framework by adding specialised surveillance for **organ and tissue transplantation**.

India's Vigilance Programmes

- **Pharmacovigilance Programme of India (PvPI):** Monitors adverse drug reactions and promotes safe use of medicines. Its National Coordination Centre is at IPC, Ghaziabad.

- **Haemovigilance Programme of India (HvPI):** Monitors adverse reactions associated with blood transfusion.
- **Materiovigilance Programme of India (MvPI):** Monitors adverse events associated with medical devices.
- **Biovigilance Programme of India (BvPI):** Extends safety monitoring to medicines and biological products connected with organ and tissue transplantation.

National Pharmacovigilance Week

- The launch took place during the **6th National Pharmacovigilance Week**, observed from **17–23 September 2026**.
- **Theme:** *“Promoting Rational Use of Medicines through Pharmacovigilance: A Step Towards Safer Healthcare.”*
- India has around **1,150 adverse drug reaction reporting centres** across hospitals and medical colleges.
- India has risen to **8th position globally** in contributions to the WHO global medicine-safety database, compared with **123rd position during 2009–2014**.

National Pharmacovigilance Week

- **6th National Pharmacovigilance Week:** 17–23 September 2026.
- **Theme:** *“Promoting Rational Use of Medicines through Pharmacovigilance: A Step Towards Safer Healthcare.”*

Indian Pharmacopoeia Commission

- **IPC** functions under the **Ministry of Health & Family Welfare** and is headquartered at **Ghaziabad, Uttar Pradesh**.
- It publishes the **Indian Pharmacopoeia (IP)** and the **National Formulary of India (NFI)**.
- Around **25 countries** recognise or accept the **Indian Pharmacopoeia**.
- IPC became a member of the **Pharmacopoeial Discussion Group (PDG)** in 2023.

Pharmacovigilance Capacity in India

- Around **1,150 ADR Reporting Centres** are operational across public and private hospitals and medical colleges.
- The government plans to extend adverse-event reporting capabilities to the **primary healthcare level**.
- According to the government, India has moved from **123rd position during 2009–2014 to 8th globally** in contributions to the WHO patient-safety database.

Additional Info

- **Indian Pharmacopoeia vs National Formulary of India**

- **Indian Pharmacopoeia:** Official compendium prescribing standards for the identity, purity and quality of drugs and pharmaceutical substances.
- **National Formulary of India:** Clinical reference intended to promote rational and safe prescribing and use of medicines.
- **Pharmacy Council of India (PCI)**
 - Statutory body constituted under the **Pharmacy Act, 1948**.
 - Regulates pharmacy education and the pharmacy profession in India.
- **NFI Online** also links users with information on **National Health Programmes, immunisation schedules, Jan Aushadhi** and **safe disposal of unused or expired medicines**.

FSSAI Acts Against E-Commerce Platforms Over Food Safety Violations

What's the News?

The **Food Safety and Standards Authority of India (FSSAI)** has initiated penal action against major e-commerce platforms – **Amazon, Swiggy Instamart, BigBasket, Flipkart India and Zepto** – for alleged violations of food safety regulations. The violations include **misbranding, misleading food claims, non-compliant product information, and sale or display of prohibited/poisonous food articles**. The action is part of increased regulatory scrutiny of food products sold through online marketplaces and quick-commerce platforms.

Products and Platforms Flagged

- **Happilo Premium Date Bites – Zesty Orange**
 - Penal action was initiated against all five platforms over allegedly misleading or non-compliant claims associated with the product.
- **Milky Mist dairy products**
 - **Swiggy Instamart and BigBasket** faced action over misleading claims and non-compliant product information involving:
 - **Milky Mist Fresh Low Fat Cream**
 - **Milky Mist Farm Fresh Curd**
 - **Milky Mist Greek Yoghurt**
- **Datura (Dhatura) fruits and seeds**
 - **Amazon Seller Services, Swiggy Instamart and BigBasket** were found non-compliant in relation

to their sale, display or offer for sale as food products.

- Datura contains toxic substances and is treated under food-safety standards as a **poisonous/toxic or harmful seed**.

Rules for Online Food Claims

Food claims and advertisements are governed primarily by the **Food Safety and Standards (Advertising and Claims) Regulations, 2018**.

Under these regulations:

- Claims must be **truthful, unambiguous, meaningful and not misleading**.
- Online promotional claims must satisfy the same regulatory requirements applicable to food labels and advertisements.
- E-commerce platforms must ensure that claims displayed online are consistent with information provided on the **physical product label**.

The **Food Safety and Standards (Labelling and Display) Regulations, 2020** also require e-commerce food business operators to obtain prescribed product information from food businesses and display it on their platforms, wherever applicable.

Penalties under the FSS Act

The **Food Safety and Standards Act, 2006** provides specific penalties for food-related violations:

- **Section 52 – Misbranded food**
 - Penalty may extend to **₹3 lakh**.
 - Corrective action or destruction of the concerned food article may also be directed.
- **Section 53 – Misleading advertisement**
 - Covers advertisements that falsely describe food or mislead consumers about its nature, substance or quality.
 - Penalty may extend to **₹10 lakh**.

E-Commerce Food Safety Requirements

FSSAI has separately directed e-commerce Food Business Operators (FBOs) to strengthen compliance. Important requirements include:

- Food products listed online must comply with applicable **labelling and display regulations**.
- Online claims should not go beyond or contradict claims appearing on the physical package.
- Sellers listed on platforms must possess a valid **FSSAI licence or registration**.

- At the time of delivery, food should generally have at least **30% of its shelf life or 45 days remaining before expiry**, whichever requirement applies.
- Delivery personnel should be trained in food safety, hygiene and prevention of cross-contamination.

Additional Info

- **Food Safety and Standards Authority of India (FSSAI)**
 - A **statutory authority** established under the **Food Safety and Standards Act, 2006**.
 - Functions under the administrative control of the **Ministry of Health and Family Welfare**.
 - Headquarters: **New Delhi**.
 - Responsible for laying down science-based food standards and regulating the **manufacture, storage, distribution, sale and import** of food to ensure safe and wholesome food.
- **Food Business Operator (FBO)**
 - Includes persons or entities carrying out activities related to the manufacture, processing, packaging, storage, transportation, distribution, import or sale of food.
 - E-commerce food businesses therefore fall within India's food-safety regulatory framework.
- **Regulations linked to online food sales**
 - Food Safety and Standards (Advertising and Claims) Regulations, 2018
 - Food Safety and Standards (Labelling and Display) Regulations, 2020
 - Food Safety and Standards Act, 2006

Education

AICTE Launches ₹245-Crore Doctoral Fellowship for Innovation and Entrepreneurship

What's the News?

- The **All India Council for Technical Education (AICTE)** has launched the **AICTE Innovation and Entrepreneurship Doctoral Fellowship Programme (AIEDFP)**.
- The programme has a **projected financial outlay of ₹245 crore over five years** and will support **150 PhD fellowships**.
- It was launched by **AICTE Chairman Prof. Yogesh Singh** and **Member Secretary Prof. Shyama Rath**.
- AIEDFP seeks to shift doctoral research towards **problem-driven and application-oriented outcomes**, including prototypes, intellectual property, technology transfer, commercialisation, startups and solutions with societal impact.

AIEDFP?

- **Full form:** AICTE Innovation and Entrepreneurship Doctoral Fellowship Programme.
- **Objective:** Strengthen the linkage between **academic research, industry, startups and the innovation ecosystem**.
- It covers both:
 - **Technological innovation**, and
 - **Non-technological innovation**, including policy and social innovation.
- It promotes **multidisciplinary and transdisciplinary research** addressing national and global priorities.

Financial Support

- **Duration:** Up to **5 years**, subject to eligibility and satisfactory research progress.
- **Fellowship:**
 - First 3 years: **₹60,000 per month + applicable HRA**.
 - Fourth and fifth years: **₹70,000 per month + applicable HRA**.
- **Innovation Grant:** Up to **₹10 lakh per scholar** for activities such as:
 - Prototype development
 - Testing and validation
 - Field trials
 - Data collection
 - Research-related travel
- The programme therefore combines conventional research funding with dedicated support for converting research into deployable solutions.

Industry & Startup Linkages

- Scholars may engage with **industries, startups, research organisations and incubators**.
- Industry partners can provide:
 - Problem statements
 - Infrastructure and resources
 - Datasets
 - Technical mentorship
- Researchers may undertake **optional industrial exposure of 6–12 months**.
- The intended research-to-market pathway includes **patents → prototypes → technology transfer → commercialisation/startups**.

Additional Info

- **AICTE**
 - Full form: **All India Council for Technical Education**.
 - It is a **statutory body under the Ministry of Education**.
 - Statutory status was provided through the **AICTE Act, 1987 (Act No. 52 of 1987)**.
 - Its mandate includes coordinated development, regulation and maintenance of standards in India's technical education system.

India Wins 9 Medals at 19th International Earth Science Olympiad 2026

What's the News?

- **Team India won 9 medals** at the **19th International Earth Science Olympiad (IESO) 2026** held in **Turin, Italy**.
- Medal tally: **4 Gold, 3 Silver and 2 Bronze**.
- Students from **39 countries** participated in the competition.
- Union Minister of State (Independent Charge) for Earth Sciences **Dr Jitendra Singh** felicitated the Indian contingent at **Prithvi Bhawan, New Delhi**.

Indian Medal Winners

- **Soumik Mandal – 2 Gold + 1 Silver**
 - Also stood **3rd in the overall global ranking**.
- **Aaron Maiti – 1 Gold + 1 Bronze**
- **Riddhi Ranjan – 1 Gold + 1 Silver**
- **Md Ehtesham Rizwi – 1 Silver + 1 Bronze**

International Earth Science Olympiad (IESO)?

- An international competition for school students in Earth Sciences.
- The 2026 event was the 19th edition.
- Major competition components include:
 - Written and Practical examinations
 - International Team Field Investigation (ITFI)
 - Earth Science Project (ESP)
- It assesses knowledge and application across areas such as geology, geophysics, meteorology, oceanography and environmental science.

India's Selection & Training

- India's participation is supported by the Ministry of Earth Sciences (MoES) under its Outreach and Awareness programme.
- The national Earth Science Olympiad examination was facilitated by the Geological Society of India (GSI).
- Around 17,800 students appeared at about 500 centres across India.
- The top 25 students were selected for an intensive three-week training camp at Maharaja Sayajirao University, Vadodara.
- Four students were subsequently selected to represent India internationally.

Additional Info

- Ministry of Earth Sciences (MoES)
 - Nodal Union ministry dealing with Earth system sciences, including atmosphere, oceans, weather, climate, seismology and related geosciences.
 - The Ministry linked the IESO outreach effort with broader initiatives such as:
 - Deep Ocean Mission
 - Mission Mausam
 - PRITHVI

PM-SETU Approves ₹735.70 Crore for ITI Clusters in Three States What's the News?

- The National Steering Committee (NSC) under the Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs (PM-SETU) scheme has approved Strategic Investment Plans (SIPs) worth ₹735.70 crore for ITI clusters in Rajasthan, Telangana and Uttar Pradesh.
- With these approvals, the cumulative sanctioned investment under PM-SETU

has reached ₹2,171 crore across nine ITI clusters.

- The projects focus on modernising ITI infrastructure, upgrading existing trades, introducing new long- and short-term courses, and aligning vocational training with industry requirements.
- The meeting was chaired by Debashree Mukherjee, Secretary, Ministry of Skill Development and Entrepreneurship (MSDE).

Approved ITI Clusters

- Rajasthan – Bhiwadi Cluster: ₹241 crore
 - Strategic Investment Plan submitted by H.G. Infra Engineering Ltd.
 - Covers five ITIs, with Government ITI Bhiwadi as the Hub ITI.
- Telangana – Medchal Cluster: ₹254.30 crore
 - Strategic Investment Plan submitted by ZEN Technologies Ltd.
 - Covers five ITIs, with Government ITI Medchal as the Hub ITI.
- Uttar Pradesh – Meerut Cluster: ₹240.40 crore
 - Strategic Investment Plan submitted by the National Skill Development Corporation (NSDC).
 - Covers five ITIs, with Government ITI Saket, Meerut as the Hub ITI.

PM-SETU Scheme

- PM-SETU stands for Pradhan Mantri Skilling and Employability Transformation through Upgraded ITIs.
- It is a Centrally Sponsored Scheme under the Ministry of Skill Development and Entrepreneurship (MSDE) aimed at improving the quality and industry relevance of vocational training.
- Total outlay: ₹60,000 crore
 - Central Government: ₹30,000 crore
 - State Governments: ₹20,000 crore
 - Industry: ₹10,000 crore
- It aims to upgrade 1,000 Government ITIs through a Hub-and-Spoke model:
 - 200 Hub ITIs
 - 800 Spoke ITIs
- Upgradation includes smart classrooms, modern laboratories, digital content and industry-aligned courses.

Hub-and-Spoke & Industry-Led Model

- A Hub ITI acts as the principal institution of a cluster and is linked with nearby Spoke ITIs.
- Industry partners participate in:
 - Curriculum and course design.

- Infrastructure and equipment modernisation.
- Training aligned with emerging technologies.
- Apprenticeships and employment linkages.
- **Special Purpose Vehicles (SPVs)** involving government and Anchor Industry Partners are used for management and implementation of ITI clusters.
- The model seeks to make vocational training **demand-driven and responsive to local industrial requirements**, rather than relying only on standardised courses.

Additional Info

- **Rajasthan becomes first state to execute an SHA**
 - A **Shareholders' Agreement (SHA)** was signed among **H.G. Infra Engineering Ltd., Government of Rajasthan and MSDE** for the Bhiwadi cluster.
 - Rajasthan became the **first state to execute an SHA under PM-SETU**, formally initiating implementation of the cluster.
- **Second component of PM-SETU**
 - The scheme also provides for capacity augmentation of **five National Skill Training Institutes (NSTIs)** located at:
 - Bhubaneswar
 - Chennai
 - Hyderabad
 - Kanpur
 - Ludhiana
 - These institutes are to develop **sector-specific National Centres of Excellence for skilling**, with emphasis on advanced **Training of Trainers** and global partnerships.
- **National Steering Committee**
 - Chaired by the **Secretary, MSDE**.
 - Functions as the apex body for overall policy direction, operational guidelines, monitoring and course correction under PM-SETU.
 - State/UT-level implementation is overseen through **State Steering Committees**.

Report Places India in "Severely Restricted" Academic Freedom Category

What's the News?

- India has been placed in the **"severely restricted"** category for academic freedom in **Scholars at Risk's (SAR) Free to Think 2026 report**.
- The report draws on the **Academic Freedom Index (AFI)** and cites concerns relating to university autonomy, research and teaching, faculty actions, campus expression and student protests.
- **Free to Think 2026** documents **382 attacks on scholars, students and higher-education institutions across 59 countries and territories**.
- The separate **Academic Freedom Index Update 2026** assessed **179 countries and territories** and found significant deterioration over the preceding decade in **50 countries**, while **9 recorded improvement**.

India's Academic Freedom Status

- The latest AFI point estimate for India is about **0.14 on a 0–1 scale**, where a higher value indicates greater de facto protection of academic freedom.
- SAR's report classifies India as **"severely restricted"**, alongside **Hong Kong, Indonesia, Pakistan, the West Bank and Ukraine**.
- Countries/territories classified as **"completely restricted"** in the SAR report include Afghanistan, China, Gaza, Iran, Russia, Syria, Türkiye, Venezuela and Zimbabwe.
- The AFI report also places India in the **bottom 10–20%** of the countries and territories assessed. Its methodology includes uncertainty intervals, so the index cautions against treating point estimates as precise league-table rankings.

Academic Freedom Index

- The **Academic Freedom Index (AFI)** measures the *de facto* level of academic freedom through five indicators:
 - **Freedom to research and teach**
 - **Freedom of academic exchange and dissemination**
 - **Institutional autonomy**
 - **Campus integrity**
 - **Freedom of academic and cultural expression**
- The 2026 update uses assessments from **2,357 country experts**, standardized questionnaires and a **Bayesian**

measurement model developed through the V-Dem framework.

- The AFI was originally developed through collaboration involving the **Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)**, **V-Dem Institute**, **Scholars at Risk** and **Global Public Policy Institute (GPPi)**. It is currently implemented by **FAU and the V-Dem Institute**.

What Did the Report Say About India?

The India chapter of *Free to Think 2026* attributes the “severely restricted” assessment to several developments. These are **findings and interpretations of Scholars at Risk**, rather than independent determinations by the Government of India or a judicial authority.

- **University governance:** SAR argues that increased government influence over governance, appointments and academic priorities has affected institutional autonomy.
- **UGC-related policies:** The report raises concerns about changes concerning vice-chancellor eligibility and contractual/non-permanent faculty.
- **Faculty and academic events:** It cites faculty dismissals, disciplinary actions and cancellation of certain academic events as examples of constraints on campus discourse.
- **Student expression:** The report refers to restrictions on demonstrations, disciplinary proceedings and instances involving police or rival student groups.
- **Research and teaching:** SAR says restrictions on the freedom to research and teach have contributed materially to the decline reflected in India's AFI.

Free to Think 2026

- **Published by:** Scholars at Risk (SAR).
- **Edition:** 12th annual *Free to Think* report.
- **Reporting period:** Covers attacks recorded from **July 2025 to June 2026**.
- **Coverage:** **382 attacks** across **59 countries and territories**.
- SAR defines an “attack” broadly to include specified violent, coercive or restrictive actions affecting scholars, students, institutions or university autonomy.
- SAR itself notes an important methodological limitation: its recorded incidents represent only a **fraction of attacks that may occur**, because reporting and verification vary considerably among countries.

Therefore, raw incident counts should not be treated as a direct ranking of countries.

Important Data Clarification

Some reports describe **0.14** as India's “**2026 AFI score**.” More precisely, the **Academic Freedom Index Update 2026 reports conditions as of 2025**, while *Free to Think 2026* subsequently uses the AFI data in its 2026 assessment. Thus, **0.14 is the latest AFI point estimate based on 2025 conditions**, while SAR describes India's status in its 2026 report as “severely restricted.”

Additional Info

• Scholars at Risk (SAR)

- An international network concerned with protection of scholars and academic freedom.
- Its *Free to Think* series is based on the **Academic Freedom Monitoring Project (AFMP)**.
- SAR states that each published monitoring incident is corroborated using at least **two independent sources** before being treated as verified.

• University Grants Commission (UGC)

- A statutory body created under the **University Grants Commission Act, 1956**.
- Functions under the **Department of Higher Education, Ministry of Education**.
- Coordinates and maintains standards of university education and provides grants to eligible institutions.

• Constitutional Context

- The Constitution does **not expressly enumerate a separate fundamental right** called “academic freedom.”
- **Article 19(1)(a)** guarantees freedom of speech and expression, subject to the reasonable restrictions specified under **Article 19(2)**.
- **Education, including university education**, is primarily covered by **Entry 25 of the Concurrent List** in the Seventh Schedule, subject to relevant Union List entries concerning coordination and determination of standards in higher education.

India Ranks 10th at WorldSkills Shanghai 2026

What's the News?

- India secured **10th position** at the **48th WorldSkills Competition – Shanghai 2026**, its first finish within the global top 10.
- Team India won **6 Silver Medals** and **20 Medallions for Excellence**.
- India improved from **13th position** at **WorldSkills Lyon 2024**, where it had won **4 Bronze Medals** and **12 Medallions for Excellence**.
- India fielded its **largest-ever contingent of 70 competitors**, participating across **63 skill categories**.

India's Silver Medal Winners

Competitor	Skill
Smriti Nambiar	Bakery
Mohammed Salam	Dental Prosthetics
Kovid Ajay Gangrade	Digital Interactive Media Design
Parth Vohra	Industrial Design Technology
Mehrunissa Begum	Logistics and Freight Forwarding
Saniya Joshi	Retail Sales

- Smriti Nambiar** was also recognised as **Best of Nation for India**.
- Three Silver Medals came in categories in which India participated for the **first time** – Dental Prosthetics, Digital Interactive Media Design and Retail Sales.

WorldSkills Shanghai 2026

- Edition:** 48th WorldSkills Competition
- Host city:** Shanghai, China
- Participants:** More than **1,400 young competitors**.
- Participation:** Around **70 countries and regions**.
- The competition covered areas such as:
 - Advanced manufacturing and engineering
 - Information and communication technology
 - Creative arts and fashion
 - Transportation and logistics
 - Construction and building technology
 - Social and personal services
- India competed in **11 new and emerging skill categories**, including areas such as **Unmanned Aerial Systems** and **Intelligent Security Technology**.

What is the WorldSkills Competition?

- The **WorldSkills Competition** is a global competition that benchmarks excellence in **Technical and Vocational Education**

and Training (TVET) and occupational skills.

- WorldSkills traces its origins to **1950** and conducts its international competition on a **biennial basis**.
- Competitors demonstrate practical abilities against internationally defined occupational standards.
- WorldSkills currently has **90 member countries and regions**, collectively covering around two-thirds of the global population.

Medallion for Excellence

- A **Medallion for Excellence** is awarded to a competitor who:
 - Scores **700 points or more** on the WorldSkills scale, but
 - Does not receive a Gold, Silver or Bronze Medal.
- It therefore recognises performance that meets the competition's international standard of excellence even when the competitor does not finish in the medal positions.

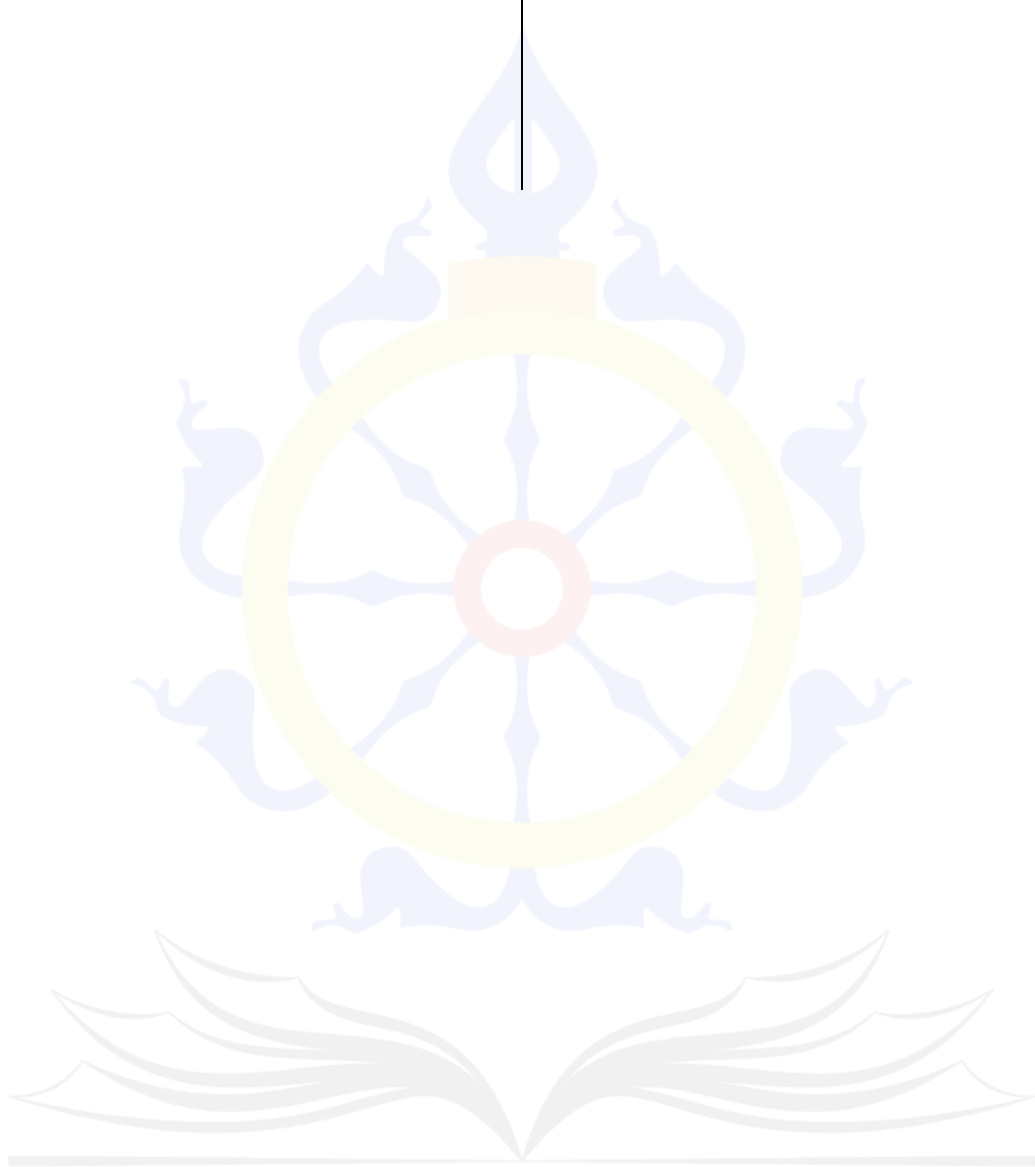
India and WorldSkills

- India joined **WorldSkills International in 2007**.
- India's official WorldSkills member organisation is the **National Skill Development Corporation (NSDC)**.
- Participation is linked with India's broader skills ecosystem under the **Ministry of Skill Development and Entrepreneurship (MSDE)**.
- IndiaSkills**, organised through the Indian skilling ecosystem, identifies and prepares competitors for international competitions such as WorldSkills.

Additional Info

- National Skill Development Corporation (NSDC)**
 - Established in **2008**.
 - Functions under the **Ministry of Skill Development and Entrepreneurship**.
 - Operates through a **Public-Private Partnership (PPP)** model.
 - Government holds **49%**, while the private sector holds **51%** of its share capital.
 - It is a strategic implementation and knowledge partner of the **Skill India Mission**.
- TVET**
 - Stands for **Technical and Vocational Education and Training**.
 - Focuses on occupational knowledge, practical competencies and industry-

relevant skills required for
employment and entrepreneurship.



Economy & Finance

MoSPI Releases National Accounts Statistics 2026 with Revised GDP Estimates

What's the News?

- The Ministry of Statistics and Programme Implementation (MoSPI) has released the National Accounts Statistics (NAS) 2026 publication with 2022-23 as the base year.
- It provides updated estimates of national income, GDP, production, expenditure, savings, capital formation and other macroeconomic aggregates.
- The publication incorporates new series of the Producer Price Index (PPI), Index of Industrial Production (IIP) and Banking Services Price Index (BkSPI), all with base year 2022-23.
- Their incorporation has led to revisions in annual and quarterly GDP estimates from 2022-23 onwards, at both current and constant prices.

National Accounts Statistics 2026

- NAS is an official statistical publication containing detailed information on the structure and performance of the Indian economy.
- NAS 2026 contains **64 statements**:
 - **60 statements** based on:
 - Final Estimates for 2022-23 and 2023-24.
 - First Revised Estimates (FRE) for 2024-25.
 - **4 additional statements** covering:
 - Provisional Estimates (PE) for 2025-26.
 - Quarterly GDP estimates from 2022-23 to 2025-26.
- Major areas covered include:
 - GDP, National Income and per-capita income.
 - Sector-wise output and **Gross Value Added (GVA)**.
 - **Private Final Consumption Expenditure (PFCE)** and **Government Final Consumption Expenditure (GFCE)**.
 - Savings and capital formation.
 - Public-sector and external transactions.

Why Were GDP Estimates Revised?

- The estimates incorporate updated **PPI, IIP and BkSPI series** with the 2022-23 base year and updated administrative data.
- **PPI**
 - Has a broader commodity basket and revised weights.
 - Includes emerging products while removing obsolete items previously covered under WPI.
 - Provides improved price measures for national accounts.

IIP

- Has wider coverage of products and quotations.
- Uses **PPI instead of WPI** as one of its price-related inputs.

BkSPI

- Helps measure changes in the actual physical volume and transactional activity of banking services.

- The revisions particularly affect sectors such as **Mining & Quarrying, Manufacturing, Trade Services, Public Administration and Ownership of Dwellings**.

Revised GDP Estimates

Financial Year	Nominal GDP	Nominal Growth	Real GDP	Real Growth
2022-23	₹261.77 lakh crore	—	₹261.77 lakh crore	—
2023-24	₹290.73 lakh crore	11.1%	₹280.94 lakh crore	7.3%
2024-25 (FRE)	₹317.99 lakh crore	9.4%	₹301.15 lakh crore	7.2%
2025-26 (PE)	₹345.37 lakh crore	8.6%	₹324.70 lakh crore	7.8%

- For **2023-24**, real GDP growth was revised from **7.2% to 7.3%**.
- For **2024-25**, real growth was revised from **7.1% to 7.2%**, while nominal growth was revised down from **9.7% to 9.4%**.
- For **2025-26**, real growth was revised from **7.7% to 7.8%**, while nominal growth was revised from **8.9% to 8.6%**.

Additional Info

Current Prices / Nominal GDP

- Measures output using prices prevailing in the relevant year.
- Therefore reflects changes in both **output and prices**.

Constant Prices / Real GDP

- Values output using prices of the **base year**.
- Primarily reflects changes in the volume of economic activity after

removing the effect of price changes.

• Gross Value Added (GVA)

- Measures the value of output produced by an economic activity minus the value of intermediate inputs used.

• Supply and Use Tables (SUTs)

- Show how goods and services are supplied by domestic production and imports and how they are used across consumption, investment and other economic activities.
- SUTs for **2022–23** and **2023–24** have also been updated to incorporate the revised indicators.

• **FRE:** First Revised Estimates.

• **PE:** Provisional Estimates.

India's Current Account Deficit Widens to \$4.2 Billion in Q1 FY27 What's the News?

- India's **Current Account Deficit (CAD)** widened to **\$4.2 billion**, or **0.5% of GDP**, in Q1 FY27, compared with **\$3.4 billion (0.4% of GDP)** in the corresponding quarter of FY26.
- The widening was primarily driven by a **larger merchandise trade deficit**.
- However, stronger **services exports and remittances** provided a substantial cushion to the current account.

BoP Indicators

Indicator	Q1 FY27	Q1 FY26
Current Account Deficit	\$4.2 bn	\$3.4 bn
CAD as % of GDP	0.5%	0.4%
Merchandise Trade Deficit	\$86.1 bn	\$68.9 bn
Net Services Receipts	\$51.6 bn	\$47.9 bn
Personal Transfer Receipts	\$42.9 bn	\$33.2 bn
Net FDI	+\$6.1 bn	+\$5.2 bn
Net FPI	-\$9.6 bn	+\$1.6 bn

What Drove the CAD?

Merchandise Trade

- The **goods trade deficit** increased sharply to **\$86.1 billion** from \$68.9 billion.
- This means India's payments for merchandise imports exceeded receipts from merchandise exports by a wider margin.

Services Surplus

- Net services receipts** increased to **\$51.6 billion** from \$47.9 billion.

- Growth was recorded particularly in:
 - Computer services**
 - Other business services
 - Transportation services

Remittances

- Personal transfer receipts**, largely representing remittances from Indians working overseas, rose to **\$42.9 billion** from \$33.2 billion.
- Strong services earnings and remittances therefore helped **partially offset the merchandise trade deficit**.

Capital Flows

- Foreign Direct Investment (FDI):**
 - Net inflow: **\$6.1 billion**
 - Previous year: \$5.2 billion
- Foreign Portfolio Investment (FPI):**
 - Net **outflow of \$9.6 billion**
 - Previous year: net inflow of \$1.6 billion
- NRI deposits:**
 - Net inflow declined to **\$2.8 billion** from \$3.6 billion.
- External Commercial Borrowings (ECBs):**
 - Net inflows declined to **\$3.3 billion** from \$4.4 billion.

Forex Reserve Impact

- India's foreign exchange reserves recorded a **depletion of \$8.1 billion on a Balance of Payments basis** during the quarter.
- In the corresponding quarter of the previous year, reserves had increased by **\$4.5 billion**.
- BoP-basis reserve change** reflects transactions and should be distinguished from changes in the headline forex-reserve stock caused by **currency and asset valuation movements**.

Additional Info

What is Current Account Deficit?

Current Account is a component of a country's **Balance of Payments (BoP)**. It broadly records:

- Goods:** Merchandise exports and imports.
- Services:** IT, business, transport, tourism and other services.
- Primary Income:** Investment income, interest, profits, compensation of employees, etc.
- Secondary Income:** Unrequited transfers, including **remittances**.

A **Current Account Deficit** occurs when a country's current-account payments exceed its current-account receipts.

Why is CAD Important?

- A moderate CAD is not necessarily adverse if it is financed by **stable capital inflows such as FDI**.

- A persistently high CAD can:
 - Increase demand for foreign currency.
 - Put depreciation pressure on the **rupee**.
 - Increase reliance on foreign capital.
 - Create pressure on forex reserves when external financing is inadequate.

CAD vs Fiscal Deficit

- **CAD:** Relates to India's transactions with the **rest of the world**.
- **Fiscal Deficit:** Gap between the **government's total expenditure and its non-borrowed receipts**.
- **CAD → External-sector indicator**
- **Fiscal Deficit → Government-finance indicator**

Japan's JCR Upgrades India's Sovereign Rating to 'A-'

What's the News?

- **Japan Credit Rating Agency (JCR)** upgraded India's **foreign-currency and local-currency long-term sovereign issuer ratings** by one notch from **BBB+** to **A-**.
- The **outlook remains Stable**, indicating that JCR does not currently anticipate a rating change in either direction.
- JCR also raised India's **country ceiling** from **A- to A**.
- The upgrade reflects India's **strong economic growth, improved fiscal expenditure quality, stronger financial system and resilient external position**.
- This puts India in the **A rating category on JCR's scale**, its first A-level sovereign rating from an international rating agency in more than three decades.

Why Did JCR Upgrade India?

Strong Economic Growth

- India has maintained growth of around **7%**, supported by:
 - Robust **private consumption**.
 - High **public investment**, particularly infrastructure expenditure.
- Real GDP grew **7.8% in Q1 FY27**, despite global economic and geopolitical headwinds.
- JCR expects India to maintain growth of **more than 6% in FY27**.

Structural Reforms

JCR highlighted policies strengthening India's long-term productive capacity, including:

- **Goods and Services Tax (GST)**.
- Expansion of **Digital Public Infrastructure (DPI)**.
- Digital payments and **Direct Benefit Transfers (DBT)**.
- Wider financial inclusion and formalisation of economic activity.

Fiscal Consolidation

- Centre's fiscal deficit declined from:
 - **4.7% of GDP in FY25**
 - to **4.4% of GDP in FY26**.
- JCR particularly noted improvement in the **quality of government expenditure**, with greater emphasis on **capital expenditure and infrastructure** rather than current expenditure.

Stronger Financial System

- India's banking-sector asset quality has improved substantially.
- **Gross Non-Performing Assets (GNPA)** declined to around **1.8%** by the end of FY26.
- Factors supporting the improvement include:
 - **Insolvency and Bankruptcy Code (IBC)**.
 - Government capital infusion.
 - Stronger **RBI supervision**.
- Capital adequacy and profitability of banks remain healthy, while asset quality and capital adequacy of **NBFCs** have also improved.

External-Sector Strength

JCR highlighted India's ability to withstand external shocks because:

- The **Current Account Deficit (CAD)** remains contained.
- India's large **services surplus** helps offset the merchandise trade deficit.
- Foreign-exchange reserves are substantial and **significantly exceed short-term external debt**.

Remaining Challenges

JCR also flagged continuing fiscal vulnerabilities:

- **General government debt**, including Centre and State debt, remains high.
- Interest payments impose a significant fiscal burden.
- India's federal fiscal structure and transfers between the Centre and States complicate fiscal consolidation.
- Sustained improvement will depend partly on whether government infrastructure spending successfully **crowds in private investment**.

Additional Info

What is a Sovereign Credit Rating?

A **sovereign credit rating** assesses a government's **ability and willingness to repay its debt obligations**.

A higher rating generally implies:

- Lower perceived default risk.
- Potentially lower overseas borrowing costs.
- Greater confidence among international investors.

What Does 'A-' Mean?

- **A- is an investment-grade rating.**
- On JCR's scale, it is higher than:
 - BBB+
 - BBB
 - BBB-
- But lower than:
 - A
 - A+
 - AA categories
 - AAA

What is a Country Ceiling?

- A **country ceiling** indicates the maximum rating generally assignable to foreign-currency obligations of entities located within that country.
- JCR raised India's country ceiling by one notch to **A**.

India's Other Major Sovereign Ratings

- **S&P Global: BBB / Stable**
- **Fitch: BBB- / Stable**
- **Moody's: Baa3**
- JCR's **A-** rating is therefore notably higher than India's ratings from the three major global agencies.

MoSPI Clarifies Negative Manufacturing Deflator in New GDP Series

What's the News?

- The **Ministry of Statistics and Programme Implementation (MoSPI)** clarified concerns regarding the **negative implicit GVA deflator of -1.5% for manufacturing** in India's latest GDP estimates.
- Under the revised GDP series with **2022-23 as the base year**, India recorded **real GDP growth of 7.8%** in Q1 FY2026-27.
- Manufacturing recorded:
 - **Nominal GVA growth: 7.7%**
 - **Real GVA growth: 9.2%**
 - **Implicit GVA deflator: -1.5%**
- MoSPI clarified that the negative deflator **does not mean manufacturing or factory-gate prices declined**. It resulted from **input prices rising faster than output prices** under the double-deflation methodology.

Why a Negative Manufacturing Deflator?

- Manufacturing GVA is estimated using the **double-deflation approach**.

- Under this method:
 - **Manufacturing output** is separately adjusted for changes in output prices.
 - **Intermediate consumption**, such as raw materials and other inputs, is separately adjusted for input-price changes.
 - **Real GVA = Real Output - Real Intermediate Consumption.**
- When **input prices increase faster than output prices**, nominal value added may grow more slowly than real value added.
- Hence, the derived implicit GVA deflator can become negative even though the prices of both inputs and outputs are increasing.
- Sectors where input-price growth exceeded output-price growth included:
 - Textiles and cotton ginning
 - Basic metals
 - Rubber and plastic products.

Implicit GVA Deflator

It broadly captures the difference between growth at **current prices** and growth at **constant prices**.

A negative implicit deflator therefore indicates that **real GVA growth exceeds nominal GVA growth because of relative price movements**; it should not automatically be interpreted as deflation in the conventional sense.

GDP Deflator vs CPI and WPI

- India's overall **implicit GDP deflator was around 2.5%**.
- It need not correspond with either the **Consumer Price Index (CPI)** or **Wholesale Price Index (WPI)** because their coverage, weights and price concepts differ.
- **CPI:** Measures changes in retail prices of a specified basket of goods and services consumed by households.
- **WPI:** Primarily measures wholesale-level price movements of goods.
- **GDP Deflator:** Reflects price changes across the entire domestic output covered by GDP, including goods, services, investment and government activity.
- More than **300 individual price deflators** are applied at different item/item-group levels while compiling GDP; the overall GDP deflator is a **derived aggregate**, rather than a single price index directly applied to GDP.

Why Were Earlier GDP Estimates Revised?

- Questions were also raised over the downward revision of the previous

year's Q1 GDP estimate from about **₹86.05 lakh crore to ₹80.32 lakh crore.**

- MoSPI stated that revisions resulted from:
 - Shift to the **2022–23 base year.**
 - Incorporation of improved and updated data sources.
 - Changes in estimation methodology.
 - Updating of available economic indicators.
- MoSPI rejected the interpretation that the previous year's GDP was deliberately lowered to mechanically increase the current year's **7.8% growth rate.**
- Quarterly GDP estimates follow a **benchmark-indicator approach**, where movements are based on relevant high-frequency indicators; therefore, a revision in the previous benchmark does not by itself imply an artificial increase in economic activity.

Additional Info

- **GDP (Gross Domestic Product)**
 - Market value of final goods and services produced within the domestic territory of a country during a specified period.
 - **GDP at constant prices** removes the effect of price changes and is used to measure real economic growth.
 - **GDP at current prices** includes prevailing market-price effects.
- **GVA (Gross Value Added)**
 - Measures the value generated by individual economic sectors.
 - Broadly:
 - **GVA = Value of Output - Intermediate Consumption**
 - GDP is obtained from GVA after adjusting for product taxes and subsidies.
- **Base Year**
 - Reference year used for constructing constant-price national-account estimates.
 - India's revised GDP series uses **2022–23 as the base year**, replacing the earlier **2011–12 base year.**
 - Base-year revisions aim to capture changes in the structure of the economy, relative prices and availability of improved datasets.
- **MoSPI**
 - **Ministry:** Ministry of Statistics and Programme Implementation.

- It is the Union government's nodal ministry for major official statistics and national accounts, including GDP estimates.

- Its Statistics Wing includes the **National Statistical Office (NSO).**

• Statistical Discrepancy in GDP

- GDP can be estimated through different approaches, particularly the **production** and **expenditure** approaches.
- A statistical discrepancy arises because estimates generated from different datasets and approaches may not exactly coincide.
- It acts as a **statistical balancing item** and should not, by itself, be interpreted as evidence that GDP has been understated or overstated.

NPCI Launches UPI Tap & Pay and AI-Powered MyUPI

What's the News?

- The **National Payments Corporation of India (NPCI)** has launched **UPI Tap & Pay** and **MyUPI (UPI Help 2.0)** at the **Global Fintech Fest (GFF) 2026 in Mumbai.**
- The initiatives were unveiled by **RBI Governor Sanjay Malhotra.**
- **UPI Tap & Pay** enables contactless UPI payments by tapping an **NFC-enabled smartphone** on a compatible Point-of-Sale (PoS) terminal.
- **MyUPI** is an AI-powered platform designed to provide unified transaction information, customer support, fraud controls and dispute-resolution services across the UPI ecosystem.

UPI Tap & Pay

- Users can make payments by **unlocking an NFC-enabled smartphone and tapping it on an NFC-enabled PoS terminal**, without opening a UPI application.
- **Mobile internet on the user's phone is not required**; the transaction uses the PoS terminal's internet connection.
- **UPI PIN-less limit:** Up to **₹5,000.**
- Transactions above ₹5,000 require the **UPI PIN.**
- It supports multiple UPI-linked account types, including **RuPay Credit Card on UPI.**
- **NFC (Near Field Communication)** is a short-range wireless technology that

enables contactless communication between compatible devices.

MyUPI

- **MyUPI**, also described as **UPI Help 2.0**, is an AI-powered customer-support and control platform.
- It is built on NPCI's in-house **Small Language Model (SLM)**, **FiMI – Finance Model for India**.
- It provides a **single view of UPI transactions and AutoPay mandates** across different banks and UPI applications.
- Major features include:
 - **Safety Switch:** Users can request blocking of UPI debit transactions when account compromise is suspected.
 - **UPI Number Delink:** Allows a mobile number to be delinked from receiving UPI payments.
 - **Payee Context-based Information:** Provides additional information about a beneficiary before payment.
 - **Automated Chargeback Processing:** Enables real-time creation of chargebacks for eligible transactions, reducing complaint-resolution time.
 - **Transaction Replay:** Allows users to recall and repeat previous transactions through any UPI app.
 - **24x7 multilingual self-service support.**

UPI Biometric Authentication

- UPI biometric authentication, introduced at **GFF 2025**, allows authentication through methods such as **fingerprint or facial recognition** on supported devices.
- Cumulative biometric-authenticated UPI transactions had crossed **6.29 billion by the end of August 2026**.
- The expansion of biometric authentication and Tap & Pay reflects UPI's movement towards **lower-friction, faster payment authentication**.

Additional Info

- **National Payments Corporation of India (NPCI)**
 - Umbrella organisation for operating **retail payment and settlement systems** in India.
 - An initiative of the **Reserve Bank of India (RBI)** and **Indian Banks' Association (IBA)**.
 - Established under the framework of the **Payment and Settlement Systems Act, 2007**.

- Incorporated as a **not-for-profit company**, presently under **Section 8 of the Companies Act, 2013**.
- Major NPCI platforms include **UPI, RuPay, IMPS, NACH, AePS, BHIM and NETC**.
- **Unified Payments Interface (UPI)**
 - Developed and operated by NPCI.
 - Introduced in **2016** as an interoperable real-time payment system.
 - Enables multiple bank accounts to be accessed through compatible payment applications.

IMF Welcomes India's Statistical Framework Modernisation

What's the News?

- The **International Monetary Fund (IMF)** has welcomed India's efforts to modernise its **macroeconomic statistical framework**.
- IMF Communications Director **Julie Kozack** said the incorporation of the new **Index of Industrial Production (IIP)** and **Producer Price Index (PPI)** series should improve the accuracy of India's GDP estimates.
- The IMF also noted that India's **real GDP grew by 7.8% in the April-June quarter of 2026-27**, exceeding its staff expectations.
- Stronger-than-expected activity in the **services sector and exports** contributed to the growth, reinforcing India's position as a major contributor to global economic growth.

Statistical Framework Modernisation

India has undertaken major revisions to make economic statistics better reflect the current structure of the economy.

- **GDP Base Year:** Revised from **2011-12 to 2022-23**.
- **IIP Base Year:** Revised from **2011-12 to 2022-23**.
- **PPI Base Year:** **2022-23**.
- The new IIP and PPI series were incorporated into national accounts after becoming available subsequent to the release of the new GDP series.
- Their incorporation represents an **improvement in data inputs**, rather than a change in the underlying National Accounts methodology.

New Index of Industrial Production

- **IIP** measures changes in the **volume of industrial production** over time.
- The new series has **2022-23 = 100** as its base.

- Its basket contains **463 item groups**, including **120 new item groups**.
- Coverage has been expanded to areas such as:
 - Minor and rare-earth minerals
 - Gas supply
 - Water supply
 - Sewerage and waste management
 - Renewable and non-renewable electricity generation
- The current series uses **National Industrial Classification (NIC)-2008**, based on the UN's **ISIC Revision 4**.

Producer Price Index

- **PPI** measures changes in the prices received by domestic producers for their output.
- India introduced an **Output PPI with base year 2022-23**, along with a trial Input PPI and PPIs for selected services.
- PPI provides a more appropriate price measure for parts of the National Accounts and can improve the calculation of **real GDP and Gross Value Added (GVA)**.
- It is being used selectively according to the characteristics of individual economic activities rather than replacing other price indices universally.

India's GDP Performance

- **Real GDP growth: 7.8%** in the April-June quarter of 2026-27.
- Real GDP was estimated at about **₹81.36 lakh crore**, compared with **₹75.46 lakh crore** in the corresponding quarter of the previous year.
- The IMF attributed the stronger-than-expected performance particularly to **services and exports**.
- It described India as a **key growth engine for the world**, while encouraging continued improvements in statistical quality.

Additional Info

- **Ministry of Statistics and Programme Implementation (MoSPI)**
 - Responsible for compilation and release of major official statistics such as **GDP, IIP and CPI**.
 - Periodic base-year revision helps account for structural changes in production, consumption and relative prices.
 - MoSPI generally aims for base revisions at roughly **five-year intervals**, in line with international recommendations.
- **International Monetary Fund (IMF)**

- Established following the **Bretton Woods Conference of 1944**.
- Headquarters: **Washington, D.C., United States**.
- Major functions include promoting international monetary cooperation, supporting exchange-rate and financial stability, conducting economic surveillance and providing financial assistance to member countries.
- India is a **founding member** of the IMF.

Why Base-Year Revision Matters

- Updates sectoral weights and economic structure.
- Incorporates newer surveys and administrative databases.
- Improves measurement of real output by using more representative prices and production patterns.
- Helps GDP, inflation and industrial-production statistics reflect contemporary economic conditions more accurately.

NPCI Introduces 0.4% MDR on Higher-Value UPI Merchant Payments

What's the News?

The **National Payments Corporation of India (NPCI)** has introduced a **Merchant Discount Rate (MDR) of 0.4%** on specified **Person-to-Merchant (P2M) UPI transactions above ₹2,000**. The charge will be borne within the merchant-payment ecosystem and **not by customers making UPI payments**. Person-to-person transfers, low-value merchant payments and eligible small merchants remain outside the MDR framework.

The framework is intended to create a revenue stream for banks, payment service providers and UPI applications to support payment infrastructure, cybersecurity, innovation and expansion of the UPI network.

New MDR Framework

The revised framework will become effective from **15 October 2026**.

Transaction Category	MDR
P2M payment up to ₹2,000	Zero
P2M payment above ₹2,000	0.4%
Transaction of ₹75,000 or more	Maximum ₹300 per transaction
Railways, telecom, insurance, fuel, agricultural inputs and	Flat ₹5

specified essential services above ₹2,000	
Capital-market payments such as mutual funds, securities, stockbrokers and dealers	0.02%, capped at ₹300
P2P transfers	Zero
Eligible P2PM small merchants	Zero
UPI AutoPay recurring mandates	Zero prescribed MDR

MDR (Merchant Discount Rate) is the fee charged to a merchant for accepting a digital payment. It is distributed among participants in the payment ecosystem rather than being collected as a tax by the Government or NPCI.

What Remains Free?

- **Person-to-Person (P2P) transactions:** Transfers between individuals remain completely free irrespective of transaction value.
- **Merchant payments up to ₹2,000:** No MDR applies.
- **Small merchants:** Vendors receiving up to ₹1 lakh per month through UPI QR codes under the P2PM category will continue with zero MDR.
- **Consumers:** UPI apps cannot impose platform or hidden transaction fees on individual users under the framework.
- **Around 96% of P2M transactions** are expected to remain unaffected by MDR.

Why Introduce MDR?

UPI merchant payments had operated under a **zero-MDR regime since January 2020**. The revised structure seeks to make the rapidly expanding payment ecosystem more financially sustainable while retaining free payments for individuals and most small-value merchant transactions. Revenue from MDR is expected to support **payment infrastructure, cybersecurity, fraud prevention, innovation and customer service**. A dedicated fund for small merchants will also receive an amount equivalent to **5% of total MDR collections** to promote wider UPI acceptance and usage.

UPI Transaction Scale

UPI processed around **24.51 billion transactions worth ₹29.9 lakh crore in August 2026**. Of these, P2M transactions accounted for about **15.51 billion transactions**, or roughly **63% of volume**, but only around **₹8.95 lakh crore or 30% of transaction value**.

P2P transactions account for about **70% of total UPI transaction value**, which will remain entirely outside the MDR framework.

NPCI and UPI

- **National Payments Corporation of India (NPCI)**
 - Incorporated in **2008**.
 - Umbrella organisation for operating India's retail payment and settlement systems.
 - Established as an initiative of the **Reserve Bank of India (RBI) and Indian Banks' Association (IBA)** under the **Payment and Settlement Systems Act, 2007**.
- **Unified Payments Interface (UPI)**
 - Launched in **2016**.
 - Enables real-time, interoperable bank-to-bank payments using mobile applications.
 - Supports both **P2P** and **P2M** transactions.

Legal Background

Section 10A of the Payment and Settlement Systems Act, 2007 provides the statutory framework relating to charges on specified electronic payment modes.

The **Taxation and Other Laws (Amendment) Act, 2026** amended Section 10A, replacing the earlier linkage with electronic payment modes prescribed under the Income-tax law with a provision allowing the **Central Government to specify one or more electronic modes of payment through notification**. This provides the legal basis for a differentiated charging framework for digital payment modes.

ONGC Discovers Natural Gas in Mahanadi Offshore Basin

What's the News?

- **Oil and Natural Gas Corporation (ONGC)** has discovered natural gas in a **deepwater exploratory well in the Mahanadi Offshore Basin**, around 43 km off Konark, Odisha.
- The discovery was made at the **MDW-28 (MN-DW18-1-H-D) well**, the first well drilled by ONGC in the basin under its current **Samudra Manthan deepwater exploration campaign**.
- The well was drilled to a **target depth of 1,623 metres**, with gas encountered in the **1,441-1,452 metre interval**.
- Initial testing showed **encouraging gas flow and reservoir pressure**. However, further appraisal is required to determine the size of the resource and its commercial viability.

Mahanadi Offshore Gas Discovery

- The Mahanadi Offshore Basin lies along the **Odisha coast in the Bay of Bengal**

and forms part of India's eastern offshore hydrocarbon frontier.

- ONGC has previously reported discoveries such as **Utkal and Konark** in the basin.
- The new well is located relatively close to the coast and about **23 nautical miles from the Konark discovery**.
- Its proximity to other discoveries may allow development through **shared production and evacuation infrastructure**, if commercially viable.

Samudra Manthan

- **Samudra Manthan – National Offshore Exploration Scheme** is a **Central Sector Scheme** aimed at accelerating oil and natural-gas exploration in India's offshore and deepwater areas.
- It has an approved outlay of **₹84,084 crore up to FY 2030–31**.
- Major components include:
 - **₹28,534 crore** for modern offshore seismic-data acquisition and processing.
 - **₹43,200 crore** for drilling **60 deepwater exploration wells**.
 - Government support of up to **50% of eligible drilling cost or ₹675 crore per well**, whichever is lower.
 - **₹10,000 crore** for common offshore infrastructure.
 - **₹2,000 crore** for oil and gas manufacturing and services zones.

Why is the Discovery Significant?

- India's eastern and western offshore basins, extending to water depths of up to **3,000 metres**, are estimated to contain more than **5,600 MMTOE (Million Metric Tonnes of Oil Equivalent)** of hydrocarbon potential.
- Subject to successful exploration, Samudra Manthan targets an increase in:
 - Hydrocarbon resource base from about **1.6 billion TOE to 2.2 billion TOE**.
 - Annual domestic oil and gas production from around **62 MMTOE to 80 MMTOE**.
- Expansion of domestic production can help India **reduce hydrocarbon import dependence** and improve energy security.

Commercial Development

- A gas discovery does **not automatically mean commercial production**.
- ONGC will undertake:
 - Reservoir appraisal.

- Resource estimation.
- Flow and pressure assessment.
- Technical and economic evaluation.

- The **Petroleum and Natural Gas Rules, 2025** allow the use of shared facilities, which could enable nearby discoveries to be jointly developed and reduce the cost and time required to bring deepwater resources into production.

Additional Info

- **ONGC**
 - A **Maharatna Central Public Sector Enterprise** under the **Ministry of Petroleum and Natural Gas**.
 - Primarily engaged in exploration and production of **crude oil and natural gas**.
- **Mahanadi Basin**
 - A sedimentary basin located along India's **eastern continental margin**.
 - Extends across onshore and offshore areas associated with the **Mahanadi river system and Bay of Bengal**.
 - Considered one of India's emerging deepwater hydrocarbon exploration regions.
- **Deepwater Exploration**
 - Involves exploration and drilling in offshore areas with substantial water depths.
 - Requires specialised drilling vessels, subsea technology and high-resolution seismic data.
 - It is generally more technologically complex and capital-intensive than conventional onshore or shallow-water exploration.

India Tops Global Growth Outlook in WEF Chief Economists' Survey

What's the News?

- India has emerged with the **strongest growth outlook** among the economies and regions assessed in the latest **World Economic Forum (WEF) Chief Economists' Outlook**.
- **98%** of surveyed chief economists expect India to record **moderate or stronger growth** over the next 12 months.
- **74%** expect **strong or very strong growth**, up sharply from **52% in the previous survey**.
- India's outlook is supported mainly by **resilient domestic demand**, although

higher energy prices and geopolitical uncertainty remain key risks.

India's Growth Outlook

- **Strong/very strong growth:** 74% of respondents, against 52% previously.
- **Moderate or stronger growth:** 98% of respondents.
- India and **South-East Asia** received among the strongest regional growth assessments.
- India and South-East Asia are also the notable exceptions to weak household-income conditions globally: **over 60%** of respondents expect **real household incomes to increase** in these regions.

Global Economic Outlook

- **56%** of chief economists expect the global economic outlook to **remain stable or improve**, compared with the previous survey in which **89%** expected conditions to weaken.
- **China:** Around **one-third** of respondents expect weak growth.
- **Europe:** Remains the weakest region; **61%** expect weak or very weak growth.
- **United States, South-East Asia and Central Asia** also received relatively strong growth assessments.

Business Environment and Key Risks

- Despite its strong growth prospects, India slipped from **2nd to 4th** among preferred business environments for multinational companies.
 - **40%** placed India among their top three destinations, compared with **56% previously**.
- Major global risks identified by chief economists include:
 - **Geopolitical conflicts:** 97%
 - **Asset-price corrections:** 58%
 - **Rising geoeconomic fragmentation:** 77%
- Cost-of-living pressures are expected particularly in:
 - **Food:** 88%
 - **Electricity:** 83%
 - **Transport:** 77%

Chief Economists' Outlook

- It is a periodic WEF assessment of the **global macroeconomic environment** based on views of leading chief economists from the public and private sectors.
- It covers issues such as:
 - Economic growth
 - Inflation and cost of living
 - Labour markets
 - Fiscal and monetary policy
 - Trade and investment
 - Geoeconomic fragmentation
- The report is prepared through the WEF's **Centre for the New Economy and**

Society and supports its **Future of Growth Initiative**.

Additional Info

World Economic Forum (WEF)

- **Established:** 1971
- **Founder:** Klaus Schwab
- **Headquarters:** Geneva, Switzerland
- **Nature:** Independent, not-for-profit foundation.
- **Purpose:** Provides a platform for **public-private cooperation** involving governments, businesses, international organisations, academia and civil society.
- Its best-known gathering is the **Annual Meeting at Davos, Switzerland**.

RBI Manages Forex Inflows and Surplus Liquidity Through Swap Facility and VRRR

What's the News?

The **Reserve Bank of India (RBI)** is using a combination of **special foreign-exchange swap facilities, Variable Rate Reverse Repo (VRRR) auctions and Open Market Operations (OMOs)** to manage unusually high surplus liquidity in the banking system. RBI's special forex swap facility attracted about **\$143.6 billion** in foreign-currency inflows, largely through **Foreign Currency Non-Resident (Bank) [FCNR(B)] deposits**. These inflows injected large amounts of rupee liquidity into banks, pushing the banking-system surplus above **₹10 lakh crore** at its peak. RBI has subsequently been absorbing the excess liquidity.

In a recent overnight VRRR operation, RBI absorbed **₹71,971 crore** against a notified amount of ₹75,000 crore at a **5.24% cut-off rate**. Banking-system surplus liquidity subsequently stood at around **₹4.92 lakh crore**.

Forex Swap Facility

RBI introduced a special **US Dollar-Rupee Forex Swap Facility** to encourage foreign-currency inflows and strengthen external-sector liquidity.

Under the mechanism:

- Banks mobilise eligible foreign currency.
- They provide dollars to RBI and receive **rupees** in exchange.
- The transaction is reversed at maturity according to the agreed swap arrangement.
- It gives banks access to rupees while shifting the exchange-rate hedging requirement associated with eligible funds to the swap mechanism.

For **FCNR(B) deposits**, eligible deposits have a maturity of **3–5 years**, while the RBI swap is conducted in **US dollars**.

Inflows

Total inflows under the special facilities reached about **\$143.596 billion**, comprising:

- **FCNR(B) deposits:** \$132.98 billion
- **Overseas Foreign Currency Borrowings (OFCBs):** \$5.32 billion
- **External Commercial Borrowings (ECBs):** about \$5.30 billion

The FCNR(B) component accounted for more than **90% of the total mobilisation**.

FCNR(B) Deposits

Foreign Currency Non-Resident (Bank) Account [FCNR(B)] allows Non-Resident Indians to maintain term deposits with Indian banks in permitted foreign currencies.

Features:

- Deposits are maintained in **foreign currency**, reducing exchange-rate risk for depositors.
- Accounts are **term deposits**, not savings or current accounts.
- Both principal and interest are generally **repatriable**.
- The special RBI swap facility covered fresh eligible FCNR(B) deposits with **3–5 year maturity**.

The large mobilisation of FCNR(B) deposits boosted India's foreign-currency availability but simultaneously created substantial **domestic rupee liquidity**, requiring RBI to sterilise part of the inflow.

Variable Rate Reverse Repo

A **Variable Rate Reverse Repo (VRRR)** is a liquidity-absorption instrument used by RBI under its **Liquidity Adjustment Facility (LAF)**.

In a VRRR:

- Banks with surplus funds place money with RBI for a specified period.
- RBI pays interest on these funds.
- The interest rate is determined through **competitive bidding**, rather than being fixed beforehand.
- The funds are temporarily withdrawn from the banking system and return when the operation matures.

Recent VRRR

- Notified amount: **₹75,000 crore**
- Bids received: **₹71,971 crore**
- Amount accepted: **₹71,971 crore**
- Tenor: **1 day**
- Cut-off rate: **5.24%**
- Weighted average rate: **5.24%**

The objective is to prevent excess liquidity from pushing overnight market

rates substantially below RBI's policy rate.

Why Did Surplus Liquidity Rise?

The major factors were:

- Large **FCNR(B) deposit inflows**
- Conversion of foreign currency into rupees through RBI's forex swaps
- Inflows from ECBs and overseas borrowings
- Government expenditure, including salary and pension payments

Because RBI supplies rupees while receiving foreign currency under the swap mechanism, large forex inflows can simultaneously strengthen foreign-exchange liquidity and expand **domestic banking-system liquidity**.

Liquidity Management Tools

RBI can use several instruments when liquidity becomes excessive:

- **VRRR:** Temporarily parks banks' surplus funds with RBI.
- **Standing Deposit Facility (SDF):** Allows banks to place overnight funds with RBI without providing collateral.
- **OMO Sale:** RBI sells government securities, receiving rupees and thereby **withdrawing durable liquidity**.
- **Forex Sell-Buy Swap:** RBI can sell dollars for rupees initially, absorbing rupee liquidity.
- **Cash Reserve Ratio (CRR):** A higher CRR requires banks to maintain a larger proportion of deposits with RBI.

RBI has also used **government-security sales through OMOs** alongside VRRR auctions during the current surplus-liquidity episode.

Monetary Policy Corridor

The policy rates relevant to liquidity management are:

- **Policy Repo Rate:** 5.25%
- **Standing Deposit Facility (SDF):** 5.00%
- **Marginal Standing Facility (MSF):** 5.50%
- **Bank Rate:** 5.50%

The **repo rate forms the centre**, SDF the floor and MSF the upper bound of the operating corridor. Excess liquidity can pull overnight market rates toward the SDF floor; liquidity-absorption operations such as VRRR help keep market rates closer to the policy repo rate.

Additional Info

- **Liquidity Adjustment Facility (LAF)**
 - Framework through which RBI manages short-term banking-system liquidity.
 - Includes variable-rate repo and reverse-repo operations and other fine-tuning operations.

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- **Open Market Operations (OMOs)**
 - RBI buys government securities → liquidity increases.
 - RBI sells government securities → liquidity decreases.
- **Sterilisation**
 - Refers to RBI operations designed to offset the domestic liquidity impact of foreign-exchange interventions.
 - In the present case, forex inflows injected rupees, while **VRRR and OMO sales** have been used to absorb part of that excess liquidity.
- **Earlier FCNR(B) Swap**
 - RBI had used a similar mechanism during the **2013 rupee-pressure episode**, when foreign-currency deposit and related measures helped attract substantial overseas funds.

India Rises to 31st in WEF Travel & Tourism Development Index 2026

What's the News?

- India ranked **31st among 110 economies** in the **World Economic Forum's Travel & Tourism Development Index (TTDI) 2026**, improving by **nine positions** from its recalculated 2024 ranking.
- **Japan** topped the index, followed by the **United States, Spain, Australia and France**.
- India's improvement was supported by stronger **tourism infrastructure, cultural resources and non-leisure/business travel resources**.
- India also benefits from strong **price competitiveness, natural assets and cultural heritage**, although gaps remain in tourism services, workforce capabilities and environmental sustainability.

Travel & Tourism Development Index

- Published by the **World Economic Forum (WEF)**.
- Developed as a benchmarking tool to assess the **factors and policies enabling sustainable and resilient development of the travel and tourism sector**.
- It does **not directly measure tourist arrivals, tourism receipts or revenues**.
- The 2026 edition covers **110 economies**.
- It consists of:
 - **5 dimensions**
 - **17 pillars**
 - **102 indicators**

- Indicator values are normalised on a **1–7 scale**, where a higher score indicates better enabling conditions.

Five Dimensions

- Enabling Environment**
 - Business Environment
 - Safety and Security
 - Health and Hygiene
 - Human Resources and Labour Market
 - ICT Readiness
- Travel & Tourism Policy and Enabling Conditions**
 - Prioritisation of Travel & Tourism
 - Openness to Travel & Tourism
 - Price Competitiveness
- Infrastructure and Services**
 - Air Transport Infrastructure
 - Ground and Port Infrastructure
 - Tourist Services and Infrastructure
- Travel & Tourism Resources**
 - Natural Resources
 - Cultural Resources
 - Non-Leisure Resources
- Travel & Tourism Sustainability**
 - Environmental Sustainability
 - Travel & Tourism Socioeconomic Impact
 - Travel & Tourism Demand Sustainability.

India's Strengths and Challenges

- **Strengths**
 - Competitive travel costs.
 - Rich natural and cultural resources.
 - Improving air and tourism infrastructure.
 - Growing business and non-leisure travel ecosystem.
 - India is among the **top 10 economies in the number of UNESCO World Heritage cultural sites**.
- **Areas requiring improvement**
 - Tourist services and supporting infrastructure.
 - Workforce skills and human-resource capacity.
 - Business-enabling conditions.
 - Environmental sustainability.

Global Findings

- **Top 5:** Japan, United States, Spain, Australia and France.
- **101 of 110 economies (92%)** improved their TTDI scores compared with 2024.
- **Asia-Pacific** recorded the strongest regional improvement, with its average score increasing by **3.6%**.
- The **10 major emerging tourism economies**, including **India, China, Indonesia, Malaysia, Thailand and**

Brazil, collectively account for **over 28% of global direct travel and tourism GDP**; their share is projected to reach **35% by 2035**.

Additional Info

- The 2026 methodology incorporates data revisions and adjustments. The WEF therefore **recalculated the 2019, 2021 and 2024 figures** to ensure comparability with 2026.
- Consequently, comparisons with rankings published in earlier editions should use the **recalculated historical figures provided in the 2026 report**, rather than the originally published rankings.

Make in India Completes 12 Years: Sectoral Gains but Structural Challenges Persist

What's the News?

- **Make in India** has completed 12 years since its launch in 2014 with substantial expansion in sectors such as **electronics, mobile phones, steel, defence, pharmaceuticals and renewable-energy equipment**.
- **Make in India 2.0** now covers **27 sectors – 15 manufacturing and 12 services sectors**.
- Recent manufacturing indicators have strengthened, but broader metrics show a mixed picture: manufacturing's share in national output and India's share in global merchandise exports have not increased proportionately to the growth seen in some individual industries.

Make in India

- **Launched:** 2014.
- **Nodal Ministry:** Ministry of Commerce and Industry.
- **Objectives:**
 - Make India a global hub for **manufacturing, design and innovation**.
 - Facilitate domestic and foreign investment.
 - Promote innovation and technological capability.
 - Develop modern industrial infrastructure.
 - Improve the business and regulatory environment.
- The programme has subsequently been complemented by initiatives such as **Production Linked Incentive (PLI) schemes, PM GatiShakti, National Single Window System (NSWS) and India Industrial Land Bank**.

Manufacturing Performance

- Manufacturing **GVA at constant prices** recorded a **10.88% CAGR during 2022-23 to 2025-26** under the revised national accounts series.
- Manufacturing output under the **Index of Industrial Production (IIP)** grew **7% during April-July 2026** year-on-year.
- However, manufacturing's share in GVA increased only from about **14.6% in 2022-23 to 15.6% in 2025-26**.
- India's share in global merchandise exports remained around **1.7%**, broadly similar to its level in 2013.

Major Sectoral Achievements

- **Electronics**
 - Production increased from about **₹1.9 lakh crore in 2014-15 to ₹13.11 lakh crore in 2025-26**.
 - Mobile-phone production increased from around **₹18,900 crore to ₹6.3 lakh crore**.
 - India is the **world's second-largest mobile-phone manufacturer by volume**.
- **Steel**
 - Crude-steel production increased from **81.7 million tonnes to 170 million tonnes** between 2014-15 and 2025-26.
- **Defence**
 - Indigenous defence production increased from **₹46,429 crore to ₹1.78 lakh crore** over the same period.
- **Solar Manufacturing**
 - Solar-module manufacturing capacity increased from **2.3 GW in 2014 to 192 GW by June 2026**.
 - Solar-cell capacity increased from **1.2 GW to around 30 GW**.
- **Pharmaceuticals**
 - India ranks **3rd globally by pharmaceutical production volume and 11th by value**.
 - Industry turnover reached about **₹5.09 lakh crore in 2025-26**.

Production Linked Incentive Scheme

- PLI schemes cover **14 sectors**, including electronics, pharmaceuticals, automobiles, solar PV modules, speciality steel and textiles.
- Latest official figures show:
 - **Investment:** about ₹2.6 lakh crore.
 - **Production and sales:** about ₹23.8 lakh crore.
 - **Exports:** over ₹15.5 lakh crore.
 - **Employment:** about **14.6 lakh jobs**.
- Investment has nevertheless been concentrated in a limited number of

sectors, particularly electronics, automobiles, pharmaceuticals, solar modules and speciality steel.

Investment and Business Facilitation

- Cumulative FDI inflows during **2014-15 to 2025-26 reached about USD 843 billion**, around **169% higher** than during the preceding 12-year period.
- **National Single Window System (NSWS)** provides a unified digital platform for identifying and obtaining business approvals.
- **India Industrial Land Bank (IILB)** is a GIS-enabled database of industrial land; it mapped **4,220 industrial parks covering about 6.98 lakh hectares** by May 2026.
- **PM GatiShakti National Master Plan** integrates geospatial and infrastructure data to improve multimodal infrastructure planning.

New Manufacturing Initiatives

- **Semicon 2.0**
 - Allocation: **₹1,27,500 crore**.
 - Covers semiconductor design, fabrication, advanced packaging, materials, equipment, R&D and talent.
- **Bharat Audyogik Vikas Yojana (BHAVYA)**
 - Allocation: **₹33,660 crore**.
 - Aims to develop **100 investment-ready industrial parks**.
- **Mobile Phone Manufacturing Scheme**
 - Allocation: **₹62,500 crore**.
 - Focuses on higher production, domestic value addition and supply-chain resilience.
- **Rare-Earth Permanent Magnet Scheme**
 - Allocation: **₹7,280 crore**.
 - Targets **6,000 metric tonnes per annum** of integrated sintered NdFeB magnet manufacturing capacity.

Challenges

- Sector-specific production gains have not yet produced a comparable rise in manufacturing's overall share of the economy.
- Private investment and manufacturing FDI performance have remained uneven.
- India's global merchandise-export share has remained broadly stable.
- Domestic **component ecosystems and value addition** remain important issues, particularly where manufacturing is concentrated in final assembly.
- Manufacturing employment growth has also been weaker than the scale initially envisaged for the programme.

Additional Info

- **GVA (Gross Value Added):**
 - Measures the value of goods and services produced after subtracting intermediate consumption.
 - **GDP = GVA + product taxes - product subsidies.**
- **PLI Scheme:**
 - Provides incentives linked to **incremental production or sales**, rather than merely providing subsidies for establishing a manufacturing unit.
 - Intended to improve scale, domestic value addition, exports and integration into global value chains.
- **Make in India 2.0:**
 - Covers **27 priority sectors**.
 - Implementation is distributed across concerned Union ministries/departments and State governments.

India Set to Launch Its First Blue Bond

What's the News?

- **Sagarmala Finance Corporation Limited (SMFCL)**, India's first maritime-focused lender, is set to raise funds through the country's **maiden blue bond**.
- Under the latest provisional terms, SMFCL aims to raise **₹600 crore**, comprising a **₹100 crore base issue** and a **₹500 crore greenshoe option**, through **10-year bonds**.
- The proceeds will finance **maritime-sector lending, greenfield port projects, coastal road networks and related infrastructure**.
- **SBI Capital Markets** is the arranger, while the issue has received an **AA+ rating from ICRA and CARE**.
- Earlier reports referred to an issue of up to **₹1,000 crore**; the ₹600-crore figure reflects the latest provisional term sheet for the forthcoming issuance.

What are Blue Bonds?

- **Blue bonds** are debt instruments whose proceeds are earmarked for projects supporting the sustainable use and conservation of **oceans, seas and water resources**.
- Like conventional bonds, they involve:
 - Payment of interest to investors.
 - Repayment of principal at maturity.

- Unlike ordinary bonds, the funds must be directed towards specified **water- and marine-related activities**.

Eligible Activities

Blue finance can support:

- Sustainable shipping and port infrastructure.
- Clean water and wastewater management.
- Water recycling.
- Sustainable fisheries.
- Marine and coastal ecosystem conservation.
- Ocean-based renewable energy.
- Ocean mapping and research.
- Cleaner coastal and maritime infrastructure.

Sagarmala Finance Corporation Limited

- **SMFCL** is a **Miniratna Category-I Central Public Sector Enterprise** under the **Ministry of Ports, Shipping and Waterways**.
- It was formerly known as **Sagarmala Development Company Limited (SDCL)**.
- It became India's **first NBFC dedicated exclusively to the maritime sector** after receiving RBI registration in 2025.
- Its mandate includes financing:
 - Ports and port connectivity.
 - Shipping and shipbuilding.
 - Inland waterways.
 - Coastal infrastructure.
 - Maritime MSMEs and related activities.

Why a Blue Bond?

- Maritime infrastructure projects generally require **large amounts of long-term capital**.
- Blue bonds can attract institutional investors such as **insurance companies, provident/pension funds and sustainability-focused investors**.
- Longer-tenure bonds can also help reduce **asset-liability mismatch**, where a lender finances long-duration infrastructure projects using comparatively short-duration borrowings.
- They provide an additional capital-market financing channel beyond **bank loans, government budgetary support and conventional bonds**.

Blue Bonds in India's Regulatory Framework

- **SEBI** expanded its sustainable-finance framework to recognise **blue bonds** for water-management and marine-sector activities.

- Blue bonds are treated as a specialised category within the broader **green debt securities** framework.
- Issuers of such securities are subject to requirements relating to:
 - Identification of eligible projects.
 - Use and tracking of proceeds.
 - Sustainability objectives.
 - Periodic disclosures and impact reporting.

Blue Bond vs Green Bond

Feature	Blue Bond	Green Bond
Primary focus	Oceans, marine and water resources	Wider environmental and climate projects
Examples	Sustainable fisheries, water management, clean ports	Renewable energy, green buildings, clean transport
Scope	Relatively narrow	Broader
Risk	Bluwashing	Greenwashing

Additional Info

- **Greenshoe Option:**
 - Allows an issuer to retain subscriptions above the original/base issue size up to a predetermined limit.
 - In the proposed SMFCL issue, the latest terms indicate a **₹500 crore greenshoe option**.
- **Bluwashing:**
 - Refers to presenting an investment or project as environmentally beneficial to oceans or water resources without adequate evidence or measurable impact.
 - Clear use-of-proceeds rules and impact reporting help reduce this risk.
- **World's First Sovereign Blue Bond:**
 - **Seychelles** issued the world's first sovereign blue bond in **2018**.
 - It raised **USD 15 million** to support sustainable marine and fisheries projects.
- **Blue Economy:**
 - Refers broadly to the sustainable use of ocean and coastal resources for economic development and livelihoods while maintaining marine ecosystem health.
 - Blue bonds provide a mechanism for linking the **blue economy with capital markets**.

NMDC Commissions ₹5,427 Crore Integrated Iron Ore Project in Chhattisgarh

What's the News?

- NMDC Ltd. has commissioned a ₹5,427 crore integrated iron ore processing, slurry pipeline and pellet-making project in the Bastar region of Chhattisgarh.
- The project links NMDC's Bachel iron ore operations with Nagarnar, strengthening the value chain from ore processing to pellet production.
- It comprises an iron ore processing plant at Bachel, a 15 million tonnes per annum (MTPA) slurry pipeline, and a 2 MTPA pellet plant at Nagarnar.

Components

- **Iron Ore Processing Plant – Bachel**
 - Located in Dantewada district.
 - Processes iron ore fines and slimes from NMDC's Bailadila mines into iron ore concentrate.
- **Slurry Pipeline**
 - **Length:** 135 km.
 - **Capacity:** 15 MTPA.
 - Connects Bachel with Nagarnar.
 - Passes through 61 villages in Bastar and Dantewada districts.
 - Provides an alternative to road transport and reduces dependence on rail-based ore evacuation.
- **Pellet Plant – Nagarnar**
 - **Capacity:** 2 MTPA.
 - Converts processed iron ore concentrate into pellets for use in steelmaking.
 - Uses **Straight Grate Induration Technology** for heating and hardening iron ore pellets.

Why is the Project Significant?

- Expands NMDC's operations beyond mining into **beneficiation, slurry transportation and pelletisation**.
- Enables better utilisation of **iron ore fines and slimes**, which can otherwise have relatively limited direct use in conventional steelmaking.
- Produces **value-added iron ore pellets**, improving resource efficiency.
- The slurry pipeline creates a dedicated bulk-mineral transport route and reduces pressure on **road and railway logistics**.
- It forms part of NMDC's long-term strategy to increase its **iron ore production capacity to 100 million tonnes**.

Iron Ore Beneficiation and Pelletisation

• Beneficiation

- Process of improving the quality of mined ore by separating useful iron-bearing material from impurities.
- Produces a higher-grade **iron ore concentrate**.

• Iron Ore Fines

- Small-sized particles produced during mining, crushing and screening of iron ore.

• Slimes

- Very fine iron ore particles generally generated during ore washing and beneficiation.

• Pelletisation

- Fine iron ore concentrate is formed into small spherical pellets.
- Pellets provide a relatively uniform feedstock for iron and steel production.

• Induration

- Green pellets are subjected to controlled heating to obtain sufficient mechanical strength for handling and metallurgical use.

Additional Info

• NMDC Ltd.

- A **Central Public Sector Enterprise (CPSE)** under the **Ministry of Steel**.
- Established in **1958**.
- It is India's largest iron ore producer.
- Its major iron ore operations include the **Bailadila mines in Chhattisgarh** and mines in **Karnataka**.

• Bailadila Iron Ore Region

- Located mainly in **Dantewada district, Chhattisgarh**.
- Known for significant deposits of **high-grade iron ore**.
- Bachel is one of NMDC's major mining complexes in the Bailadila region.

• Nagarnar

- Located in **Bastar district, Chhattisgarh**.
- It is an important centre for iron and steel processing, including the **3 MTPA Nagarnar integrated steel plant**.

Bank of India Launches Programmable Digital Rupee

What's the News?

- **Bank of India (BoI)** has launched **user-level programmability with auto-issuance** on its **Central Bank Digital Currency (CBDC)** platform.
- The facility allows users to schedule recurring transfers of **Digital Rupee (₹)** to a beneficiary's CBDC wallet by specifying the **amount, frequency and permitted purpose of use**.
- The CBDC platform has been developed by **Montran India** in line with the framework applicable to the RBI's digital rupee ecosystem.

Programmable Digital Rupee

- A **programmable CBDC** allows conditions to be attached to digital currency so that the money can be used for a **specified purpose**.
- RBI's programmability framework allows conditions based on parameters such as:
 - **Expiry date**
 - **Geographical location**
 - **Merchant Category Code (MCC)**
 - **Merchant Virtual Payment Address (VPA)**
- Potential applications include **Direct Benefit Transfers (DBT), targeted subsidies, loans and purpose-specific employee allowances**.

Auto-Issuance Feature

- A user can create a standing instruction specifying:
 - Fixed amount
 - Payment frequency
 - Beneficiary's CBDC wallet
 - Permitted purpose of expenditure
- The specified ₹ is then **automatically credited at the scheduled interval**, eliminating the need to manually initiate every recurring payment.
- For example, a parent may schedule a monthly transfer to a student's ₹ wallet and restrict its use to **tuition, meals or other education-related expenses**.
- **Important distinction:** "Auto-issuance" here refers to automated distribution/credit through the CBDC platform. The **RBI remains the issuer of the Digital Rupee**.

Digital Rupee (₹)

- ₹ is **India's Central Bank Digital Currency**, issued by the **Reserve Bank of India (RBI)**.
- It is:
 - Digital form of India's sovereign currency.

- **Legal tender**.
- A **direct liability of the RBI**.
- Stored in a digital CBDC wallet.
- **Non-interest bearing**, similar to physical cash.

- It can be used for **Person-to-Person (P2P)** and **Person-to-Merchant (P2M)** transactions.

Two Forms of ₹

- **₹-R (Retail CBDC):** Intended for use by the general public for retail transactions.
- **₹-W (Wholesale CBDC):** Intended mainly for financial institutions and wholesale financial-market transactions.
- RBI began pilots of both forms in **2022**.

₹ vs UPI

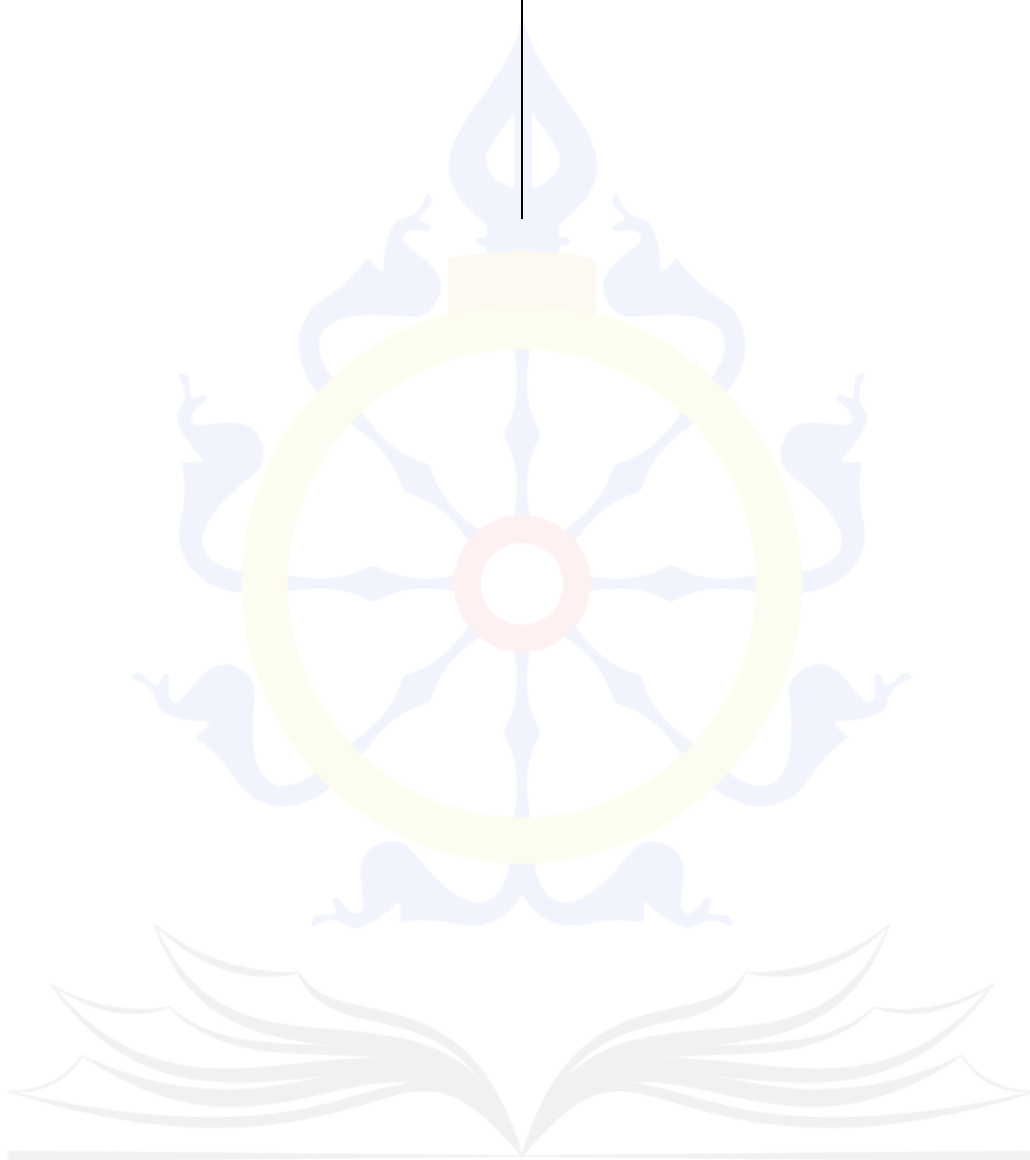
Digital Rupee (₹)	UPI
It is money itself in digital form.	It is a payment mechanism .
Issued by the RBI .	Transfers money held in bank accounts.
Stored separately in a CBDC wallet .	Generally linked to bank accounts.
It is a liability of the RBI .	Bank deposits are liabilities of commercial banks.
CBDC wallet-to-wallet transactions can provide direct settlement.	Transactions operate through the banking/payment-system infrastructure.

RBI specifically distinguishes ₹ as a digital form of the rupee, while **UPI is a means of payment**.

Additional Info

- **Legal framework**
 - The **Finance Act, 2022** amended the **Reserve Bank of India Act, 1934** to expressly recognise bank notes issued in **digital form**.
 - **Section 2(aiv):** Defines a bank note as one issued by RBI in physical or digital form.
 - **Section 22:** Gives RBI the sole right to issue bank notes.
 - **Section 22A:** Provides specific treatment for bank notes issued in digital form.
- **Programmable CBDC pilots**
 - RBI has tested programmability for **farmer-related benefits, Kisan Credit Card-linked lending and employee fuel/meal allowances**.

- Under Odisha's **Subhadra Yojana**, e₹ had been used as a payment channel for around **88,000 beneficiaries** in an earlier RBI-reported implementation.
- **e₹ in circulation**
 - Value at end-March 2026: **₹771.7 crore**
 - Previous year: **₹1,016.5 crore**
 - Decline: approximately **24.1%**.



Science & Technology

EOS-05: ISRO Launches India's First Geosynchronous Imaging Satellite

What's the News?

The Indian Space Research Organisation (ISRO) successfully launched **GSLV-F17** carrying **EOS-05**, an advanced Earth-observation satellite, from the **Second Launch Pad at Satish Dhawan Space Centre (SDSC-SHAR), Sriharikota**. The satellite, weighing **2,367 kg**, was injected into a **Sub-Geosynchronous Transfer Orbit (Sub-GTO)** roughly 18 minutes after liftoff. **GSLV-F17** is the **19th flight of India's Geosynchronous Satellite Launch Vehicle (GSLV)**.

EOS-05: An "Eye in the Sky"

- **EOS-05**, formerly known as **GISAT-1A**, is an Earth-observation/geo-imaging satellite developed by ISRO.
- It is designed to operate from **geosynchronous orbit (~35,786 km altitude)**.
- It is **India's first dedicated imaging satellite intended to operate from geosynchronous orbit**, enabling persistent observation of large geographical regions.
- The satellite is intended to provide frequent imagery useful for:
 - Agriculture and crop monitoring
 - Water-resource management
 - Urban and infrastructure planning
 - Forest and environmental monitoring
 - Ocean-resource assessment
 - Disaster management
 - Strategic and security-related situational awareness

Why Geosynchronous Orbit?

Most Earth-observation satellites operate in **Low Earth Orbit (LEO)** and periodically revisit a particular location. A geosynchronous satellite has an orbital period matching Earth's rotation, allowing it to maintain prolonged observation of a broad region.

Advantage: high-frequency monitoring of rapidly changing phenomena such as **cyclones, floods, forest fires and other disasters**.

EOS-05: Technical Features

- **Satellite type:** Earth Observation / Geo-imaging
- **Mass:** 2,367 kg
- **Platform:** I-2K satellite platform

- **Orbit:** Geosynchronous orbit, approximately **35,786 km**
- **Imaging system:** 700-mm Ritchey-Chrétien optical telescope
- **VNIR spatial resolution:** about **42 m**
- **Hyperspectral instruments:**
 - HyS-VNIR – **158 spectral bands**
 - HyS-SWIR – **256 spectral bands**
 - MX-LWIR – Long-Wave Infrared capability
- **Revisit capability:** critical areas can be imaged at intervals of roughly **5–10 minutes**, while a full scan of the Indian landmass can be achieved in about **30 minutes**, subject to operating conditions.

GSLV-F17 Mission

- **Launch vehicle:** GSLV-F17 / GSLV Mk II
- **Vehicle configuration:** Three-stage
 - Solid-propellant first stage
 - Liquid-propellant second stage
 - Indigenous **cryogenic upper stage**
- **Payload fairing:** **4-metre-diameter ogive composite** configuration
- **Launch site:** Second Launch Pad, SDSC-SHAR, Sriharikota, Andhra Pradesh
- **Mission significance:** The mission demonstrated GSLV's capability to inject a **2,367-kg Earth-observation spacecraft**, the heaviest Earth-observation satellite carried by this vehicle to date.

GSLV vs PSLV

Feature	GSLV	PSLV
Full form	Geosynchronous Satellite Launch Vehicle	Polar Satellite Launch Vehicle
Primary strength	Heavier spacecraft for geosynchronous missions	Polar/SSO and Earth-observation missions
Stages	3	4
Cryogenic stage	Yes, GSLV Mk II	No
Typical orbital role	GTO/geosynchronous missions	LEO/SSO missions

Additional Info

- **ISRO**
 - Established: **1969**
 - Functions under the **Department of Space, Government of India**.
- **Satish Dhawan Space Centre (SDSC-SHAR)**
 - India's principal orbital launch centre.

- Located at **Sriharikota, Andhra Pradesh.**
- **Geostationary vs Geosynchronous**
 - **Geosynchronous:** Orbital period equals Earth's rotational period.
 - **Geostationary:** A special geosynchronous orbit that is **circular, equatorial and appears stationary over one point on Earth.**
 - Geostationary orbit altitude: approximately **35,786 km** above the equator.
- EOS-05 is also significant as the operational successor to the earlier **GISAT-1 mission**, whose launch attempt did not achieve the intended mission outcome.

India Explores Small Modular Reactors for Andaman & Nicobar Islands

What's the News?

- India is exploring the deployment of **Small Modular Reactors (SMRs)** in the **Andaman and Nicobar Islands** to meet rising electricity demand and strengthen energy resilience.
- Scientists from the **Bhabha Atomic Research Centre (BARC)**, under the **Department of Atomic Energy (DAE)**, are assessing potential reactor sites across all **three districts** of the Union Territory.
- The proposal is linked to expanding civilian and strategic infrastructure, particularly the **Great Nicobar Project**.
- **No nuclear reactor has yet been approved for construction;** the exercise is currently at the **site-assessment and feasibility stage.**

Why Nuclear Power for the Islands?

- The islands depend substantially on **diesel generator sets**, with fuel transported from mainland India.
- Major upcoming infrastructure is expected to increase electricity demand considerably.
- SMRs could provide:
 - Reliable **baseload electricity.**
 - Reduced dependence on transported fossil fuels.
 - Power for remote and isolated locations.
 - Low-carbon electricity for civilian and strategic infrastructure.

Small Modular Reactors (SMRs)

- SMRs are compact nuclear reactors with **smaller generating capacity and modular construction** compared with conventional large nuclear power plants.
- Components can be manufactured as modules and subsequently assembled at the deployment site.
- Their smaller size makes them particularly relevant for:
 - Remote regions.
 - Smaller electricity grids.
 - Industrial/captive power applications.
 - Locations where large conventional nuclear plants may be unsuitable.
- India is developing indigenous SMR technologies as part of its broader nuclear-energy expansion strategy.

Great Nicobar Project

- The proposed SMR deployment is closely linked with the expected energy requirements of the **Great Nicobar Island development programme.**
- Major components include:
 - **International Container Transshipment Terminal (ICTT)** at **Galathea Bay.**
 - **Greenfield international airport.**
 - New township.
 - Associated power and infrastructure facilities.
- The proposed transshipment terminal is envisaged with a capacity of about **14.2 million TEUs.**
- The project has economic as well as **strategic, defence and national-security significance.**

Strategic Importance of Andaman & Nicobar Islands

- The islands occupy a critical position in the **eastern Indian Ocean**, close to important Sea Lines of Communication linking the Indian and Pacific Oceans.
- **Great Nicobar Island** lies near the western approaches to the **Strait of Malacca**, one of the world's major maritime chokepoints.
- The islands enhance India's ability to:
 - Monitor maritime activity in the eastern Indian Ocean.
 - Secure important shipping routes.
 - Strengthen its presence in the **Indo-Pacific.**
 - Support India's **Act East** and maritime-security objectives.

- Their significance has increased amid the expanding economic and naval presence of **China in the Indian Ocean Region**.

Additional Info

- **Andaman and Nicobar Command (ANC)**
 - India's **only integrated tri-services command**.
 - Brings together elements of the **Army, Navy and Air Force** under a unified command.
 - Its location enables surveillance of strategically important sea routes.
- **INS Baaz**
 - Naval air station located at **Campbell Bay, Great Nicobar Island**.
 - Commissioned in **2012**.
 - Located close to the **Six Degree Channel** and approaches to the Strait of Malacca.
 - It is India's **southernmost naval air station**.
- **Andaman & Nicobar Islands**
 - **Union Territory** of India.
 - Capital: **Sri Vijaya Puram**.
 - Three districts:
 - South Andaman.
 - North and Middle Andaman.
 - Nicobar.
- **Strait of Malacca**
 - Major maritime passage between the **Malay Peninsula and Sumatra**.
 - Connects the **Indian Ocean/Andaman Sea** with the **South China Sea and Pacific Ocean** through adjoining straits.
 - It is a critical route for trade and energy flows between the Middle East, Europe and East Asia.
- **BARC**
 - India's premier multidisciplinary nuclear research institution.
 - Functions under the **Department of Atomic Energy**.
 - Plays a central role in indigenous nuclear reactor and nuclear-technology development.

India Commissions Small-Scale Spherical Tokamak for Fusion Research

What's the News?

- The **Institute for Plasma Research (IPR)**, Gandhinagar, has commissioned an indigenous **Small-Scale Spherical**

Tokamak (SS-ST) for nuclear-fusion research.

- The compact machine enables scientists to study **plasma generation, confinement and control** in a spherical-tokamak configuration.
- All major components were **designed and developed indigenously**, with fabrication support from Indian industries.
- The development expands India's experimental fusion infrastructure beyond its established **ADITYA-U and SST-1 tokamaks**.

What is a Spherical Tokamak?

- A **tokamak** is a device that uses strong magnetic fields to confine extremely hot, ionised gas called **plasma** for controlled nuclear-fusion experiments.
- A conventional tokamak has a **doughnut-shaped (toroidal)** plasma chamber.
- A **spherical tokamak** has a lower aspect ratio and a more compact, nearly spherical plasma geometry.
- Advantages being investigated include:
 - Efficient plasma confinement in a smaller machine.
 - Potential operation with comparatively lower magnetic-field requirements.
 - Possibility of more compact and potentially cheaper future fusion reactors.
- Its major engineering challenge is the **limited space in the central column** for magnets and other components.

India's Small-Scale Spherical Tokamak

- Developed by **IPR**, an aided institute of the **Department of Atomic Energy (DAE)**.
- Important parameters/features include:
 - Plasma major radius: about **0.28 m**.
 - Toroidal magnetic field: around **0.1 tesla** at the plasma major radius.
 - Designed plasma pulse duration: about **20 milliseconds**.
 - Vacuum achieved: below **2×10^{-7} mbar** during initial experiments.
 - Uses a **2.45-GHz Electron Cyclotron Resonance (ECR) system** for plasma production/heating.
- Initial experiments successfully generated hydrogen plasma, demonstrating the functioning of the magnetic coils, gas-feed system, diagnostics and control systems.

Nuclear Fusion

- **Fusion** occurs when two light atomic nuclei combine to form a heavier nucleus and release energy.
- It is the process that powers the **Sun and other stars**.
- Fusion research commonly focuses on hydrogen isotopes such as **deuterium and tritium**.
- For fusion to occur, matter must be converted into plasma and maintained at extremely high temperatures while being sufficiently confined.

Fusion vs Fission

- **Fusion:** combines light nuclei.
- **Fission:** splits heavy nuclei such as uranium.
- Fusion offers the prospect of very high energy output with no carbon emissions during operation and comparatively less long-lived radioactive waste, but sustained, economically viable fusion power remains technologically difficult.

India's Fusion Research Ecosystem

- **ADITYA-U**
 - Located at IPR.
 - Upgraded successor to **ADITYA**, India's first indigenously developed magnetic-confinement fusion device.
 - Used for plasma-control and operational studies relevant to future fusion systems.
- **SST-1**
 - Stands for **Steady State Superconducting Tokamak-1**.
 - India's first **superconducting tokamak**.
 - Designed for long-duration plasma research using superconducting magnets.
- **Private-sector development**
 - Bengaluru-based **Pranos Fusion** has separately developed **PRAGYA**, described as India's first privately developed low-aspect-ratio compact tokamak.
 - **PRAGYA** is an experimental plasma-control testbed rather than a commercial electricity-generating fusion reactor.

Additional Info

- **Institute for Plasma Research (IPR)**
 - Location: **Gandhinagar, Gujarat**.
 - Functions under the **Department of Atomic Energy**.
 - Conducts research in plasma physics, fusion technology, superconducting magnets,

cryogenics and related technologies.

- **ITER**
 - **International Thermonuclear Experimental Reactor**, being assembled at **Saint-Paul-lès-Durance, France**.
 - Members: **European Union, India, China, Japan, South Korea, Russia and the United States**.
 - India is responsible for roughly **9.1% of ITER construction contributions**, largely through in-kind technological components.
 - ITER aims to demonstrate the scientific and technological feasibility of large-scale magnetic-confinement fusion; it is **not a commercial power plant**.

Astrogate Labs Develops India's First Indigenous OISL Terminal

What's the News?

- Bengaluru-based deep-tech company **Astrogate Labs** has announced the development of what it describes as **India's first indigenous Optical Inter-Satellite Link (OISL) terminal**.
- The OISL terminal will enable **direct satellite-to-satellite communication using laser beams**, reducing dependence on ground stations for transferring data across satellite constellations.
- The company is targeting **flight readiness by 2027**.
- At the **9th Bengaluru Space Expo (BSX 2026)**, Astrogate also demonstrated **AstroLink Micro**, its separate **10 Gbps space-to-ground laser communication terminal**.
- Astrogate has previously supplied an indigenous satellite-to-ground laser communication terminal to **ISRO**.

What is an Optical Inter-Satellite Link (OISL)?

- An **OISL** establishes a direct optical communication link between satellites using **laser beams instead of conventional radio-frequency (RF) signals**.
- Satellites can relay data between themselves before transmitting it to an appropriate ground station.
- OISLs are particularly useful for large **Low Earth Orbit (LEO) satellite constellations**, where satellites continuously move relative to Earth and one another.
- They can enable:

- **High-bandwidth data transmission**
- **Low-latency communication**
- Reduced dependence on terrestrial ground stations
- More efficient routing of data across satellite constellations
- Highly directional communication links with lower interference and interception exposure than broad RF transmissions.

Key Technologies

Astrogate's OISL system builds on components developed for its earlier space-to-ground optical communication terminals.

Major components include:

- **Pointing, Acquisition and Tracking (PAT) System**
 - Detects and precisely tracks another satellite.
 - Essential because laser beams are extremely narrow and satellites move at high relative velocities.
- **Optical Modem**
 - Converts digital information into optical signals for laser-based transmission and receives incoming optical data.
- **Stabilised Coarse-Tracking Gimbals**
 - Orient the optical terminal towards the target satellite despite spacecraft movement.
- **System-Level Integration**
 - Integrates tracking, optics, communication electronics and spacecraft interfaces into a functional terminal.

AstroLink Micro

- **AstroLink Micro** is Astrogate Labs' **10 Gbps space-to-ground laser communication terminal**.
- It was demonstrated at Bengaluru Space Expo 2026.
- It should be distinguished from the new OISL terminal:
 - **AstroLink Micro:** Satellite ↔ Ground communication
 - **OISL Terminal:** Satellite ↔ Satellite communication
- Astrogate's existing space-to-ground optical terminals have achieved **Technology Readiness Level 8 (TRL 8)**, indicating that the system has been completed and qualified for flight.

Why Optical Communication?

Traditional satellite communication primarily relies on the **radio-frequency spectrum**. However, rapidly growing satellite constellations and increasing volumes of Earth-observation and

communication data are placing pressure on available bandwidth.

Free Space Optical Communication (FSOC) addresses this by transmitting information through light propagating through free space.

Advantages

- Much higher potential data capacity
- Narrow and highly directional beams
- Lower susceptibility to RF interference
- Reduced pressure on increasingly congested RF spectrum
- Suitable for high-volume satellite data transmission
- Enables creation of **optical mesh networks in space**

For example, large LEO constellations can use inter-satellite laser links to route data across multiple satellites before sending it to a ground station located closer to its final destination.

Strategic Significance for India

- **Space Technology Self-Reliance**
 - Indigenous development reduces dependence on imported high-end optical communication systems.
- **Future Satellite Constellations**
 - OISLs can become a critical communication backbone for future Indian **LEO constellations**.
- **Defence Applications**
 - Astrogate is targeting **sovereign defence constellations** as one of the potential markets for the technology.
- **Satellite Backhaul**
 - Satellites can relay large volumes of data through an orbital network before transmitting it to Earth.
- **Orbital Computing**
 - High-speed inter-satellite links could connect future computing and data-processing infrastructure deployed in orbit.
- **Private Space Ecosystem**
 - The development reflects the growing role of Indian private companies and start-ups in strategically important space technologies beyond launch vehicles and satellite manufacturing.

Additional Info

- **Technology Readiness Level (TRL)**
 - TRL is a framework used to assess the maturity of a technology.

- It ranges broadly from early-stage scientific concepts to fully operational systems.
- **TRL 8** indicates that the actual system has been completed and qualified for its intended operational environment.
- **International Interoperability**
 - Astrogate has completed cross-compatibility testing of its space-to-ground technology with the **University of Western Australia's TeraNet mobile optical ground station**.
 - The testing demonstrated interoperability with international optical ground infrastructure.
- **Astrogate Labs**
 - Headquarters: **Bengaluru, Karnataka**
 - Works on **Free Space Optical Communication systems** for space and defence applications.
 - Its technologies include proprietary PAT systems, optical modems and associated optical communication subsystems.
 - It also has an office in **Durham, England**.
- **Low Earth Orbit (LEO)**
 - Generally extends from about **160 km to 2,000 km above Earth**.
 - Frequently used for Earth observation and increasingly for large broadband satellite constellations because of relatively low communication latency.

India Launches Advanced Ocean Research Vessel ORV Sagar Manthan

What's the News?

- India has launched the advanced **Ocean Research Vessel (ORV) Sagar Manthan** at **Rishi Bankim Shipyard, Kolkata**.
- It has been **designed, engineered and constructed by Garden Reach Shipbuilders & Engineers (GRSE)** for the **National Centre for Polar and Ocean Research (NCPOR)** under the **Ministry of Earth Sciences (MoES)**.
- Built at an approximate cost of **₹840 crore**, the vessel strengthens India's indigenous capability in oceanographic research and maritime technology.
- It will gradually replace the **43-year-old ORV Sagar Kanya**, which was procured from Germany in 1983.

ORV Sagar Manthan

- It is an **all-weather, multidisciplinary oceanographic research platform** designed to operate even in extreme environments such as the **Southern Ocean**.
- It has a projected **service life of 30 years**.
- Major scientific capabilities include:
 - **Swath multibeam surveys and bathymetric mapping**.
 - **Multichannel seismic and geophysical profiling**.
 - **Sub-bottom profiling and seabed sampling**.
 - **Atmospheric and upper-air observations**.
 - **Water-column and CTD profiling**.
 - Deployment of **Remotely Operated Vehicles (ROVs)** and **Autonomous Underwater Vehicles (AUVs)**.
- The vessel has **dual-class certification** from the **Indian Register of Shipping (IRS)** and the **American Bureau of Shipping (ABS)**.
- After system integration and sea trials, its final delivery and commissioning to NCPOR/MoES is scheduled for **2028**.

Deep Ocean Mission Linkage

- ORV Sagar Manthan has been constructed under **Vertical-4: Deep Ocean Survey and Exploration** of the **Deep Ocean Mission (DOM)**.
- Its research will support exploration along **mid-oceanic ridges in the Indian Ocean**, particularly for identifying **multi-metal hydrothermal sulphide mineralisation**.
- It will also help establish **environmental baseline data**, supporting assessment of the ecological impacts of deep-sea exploration.

Deep Ocean Mission

- The **Deep Ocean Mission** is a Ministry of Earth Sciences initiative aimed at developing technologies and scientific capabilities for the exploration and sustainable utilisation of deep-ocean resources.
- Major components include:
 - Development of technologies for **deep-sea mining and manned submersibles**.
 - **Ocean climate-change advisory services**.
 - Exploration and conservation of **deep-sea biodiversity**.
 - **Deep Ocean Survey and Exploration**.

- Harnessing **energy and freshwater from the ocean.**
- Development of an **advanced marine station for ocean biology.**

Additional Info

- **National Centre for Polar and Ocean Research (NCPOR)**
 - Autonomous research institution under the **Ministry of Earth Sciences.**
 - Headquartered in **Goa.**
 - Undertakes research relating to the **polar regions, Southern Ocean and marine geosciences.**
 - Coordinates India's scientific activities in **Antarctica and the Arctic.**
- **Garden Reach Shipbuilders & Engineers (GRSE)**
 - A **Defence Public Sector Undertaking** under the **Ministry of Defence.**
 - Headquartered in **Kolkata.**
 - Undertakes construction of naval, coast guard and specialised vessels.
 - ORV Sagar Manthan represents India's transition from importing major oceanographic research platforms to **indigenous design and construction.**
- **ORV Sagar Kanya**
 - India's long-serving multidisciplinary oceanographic research vessel.
 - Procured from **Germany in 1983.**
 - ORV Sagar Manthan will gradually replace it as part of the modernisation of India's ocean-research fleet.

UIDAI Launches Aadhaar Face Authentication SDK and Sandbox

What's the News?

- The **Unique Identification Authority of India (UIDAI)** has launched the **Aadhaar Face Authentication Software Development Kit (SDK)** and **Aadhaar Face Authentication Sandbox.**
- The SDK enables banks, fintech firms, insurers, brokers, government departments and other entities to integrate Aadhaar face authentication **directly into their Android and iOS applications.**
- Users can authenticate themselves within a single application, reducing dependence on the separate **Aadhaar FaceRD app.**
- The initiative is particularly relevant to the **Banking, Financial**

Services and Insurance (BFSI) sector for digital onboarding and multi-factor authentication.

Aadhaar Face Authentication SDK

- **SDK (Software Development Kit):** A package of software tools that enables developers to incorporate a particular functionality into their applications.
- Key features include:
 - **AI/ML-based liveness detection** to confirm that a live person is being authenticated.
 - **Anti-spoofing mechanisms** to detect attempts using photographs, videos or other fraudulent representations.
 - Secure handling and **encryption of authentication data.**
 - Compatibility with standard consumer smartphones.
- Earlier, Aadhaar face authentication generally required the **FaceRD application** to operate in the background. The new SDK embeds the capability within the service provider's own application.

Aadhaar Face Authentication Sandbox

- It is a **secure and controlled testing environment** for organisations integrating Aadhaar Face Authentication.
- Developers and quality-assurance teams can test the complete authentication workflow before live deployment, including:
 - User provisioning and consent
 - Face capture
 - Liveness detection
 - Authentication
 - Error handling
 - Response validation
- It does **not require external biometric hardware** for testing.
- It can simulate failure scenarios such as:
 - Invalid digital signatures
 - Network interruptions
 - Timeouts
 - Spoofing attempts.

Scale of Face Authentication

- UIDAI's indigenous **AI/ML-based Face Authentication system** was introduced in **2021.**
- It has processed **over 500 crore transactions.**
- Nearly **200 entities** have adopted the technology, including government departments, banks, NBFCs, telecom operators and brokerage firms.
- Aadhaar authentication overall is handling around **10 crore transactions**

per day, while UIDAI is preparing infrastructure for approximately **25-30 crore daily authentications**.

- More than **600 entities** use the wider Aadhaar authentication platform.

Major Uses

Aadhaar Face Authentication is being used for:

- **Jeevan Pramaan** – submission of Digital Life Certificates by pensioners.
- **Ayushman Bharat** – beneficiary onboarding.
- **Direct Benefit Transfer (DBT)** schemes.
- **Aadhaar-enabled payments**.
- SIM activation through **e-KYC**.
- Beneficiary authentication under schemes such as:
 - **PM-KISAN**
 - **PM Awas Yojana**
 - **PM E-DRIVE**.

Playbook on Ease of Onboarding

- UIDAI also released a **“Playbook on Ease of Onboarding”**.
- It provides guidance to **BFSI entities** for joining the UIDAI authentication ecosystem.
- It covers Aadhaar-based identity verification for:
 - Customers
 - Employees
 - Other business partners.

Additional Info

- **UIDAI**
 - Statutory authority under the **Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016**.
 - Functions under the **Ministry of Electronics and Information Technology (MeitY)**.
 - Responsible for Aadhaar enrolment, authentication and management of the Aadhaar identity ecosystem.
- **Aadhaar**
 - A **12-digit unique identification number** issued to residents of India.
 - Authentication can use demographic or biometric information.
 - Biometric modes include **fingerprint, iris and facial authentication**.
- **Face Authentication vs Face Recognition**
 - **Face Authentication:** Generally verifies whether a person is who they claim to be – a **1:1 identity verification** process.

- **Face Recognition:** Commonly searches for an individual's face against a larger database – a **1:N matching** process.

ISRO Tests CE20 Cryogenic Engine at Upgraded 220 kN Thrust

What's the News?

- **ISRO** successfully conducted a **flight-acceptance hot test** of the indigenous **CE20 cryogenic engine** at an upgraded thrust of about **220 kN (22 tonnes)**.
- The engine is earmarked for the **C32 cryogenic upper stage** of the upcoming **LVM3-M7**, the seventh operational mission of LVM3.
- The test was conducted at the **Main Engine & Stage Test (MET) facility, ISRO Propulsion Complex (IPRC), Mahendragiri, Tamil Nadu**.
- Operating CE20 at the higher thrust level is part of ISRO's programme to **increase LVM3's payload capability**.

CE20 Cryogenic Engine

- **CE20** is India's indigenously developed high-thrust cryogenic engine, developed by the **Liquid Propulsion Systems Centre (LPSC)**.
- It powers the **cryogenic upper stage of LVM3**.
- Propellants:
 - **Liquid Hydrogen (LH₂):** Fuel
 - **Liquid Oxygen (LOX):** Oxidiser
- It operates on a **gas-generator cycle**.
- CE20 has been qualified to operate between **19 and 22 tonnes of thrust** and has also completed **human-rating qualification requirements** for **Gaganyaan**.

C32 Upper Stage

- ISRO is upgrading LVM3's cryogenic upper stage from the **C25 configuration to C32**.
- The upgrade combines:
 - Increased cryogenic propellant capacity.
 - CE20 operation at the higher **22-tonne thrust level**.
- The objective is to increase the amount of payload that LVM3 can carry to orbit.
- The CE20 engine tested will be refurbished and integrated with the **C32 flight stage for LVM3-M7**.

LOX Tank Pressurisation Module

- The test also successfully demonstrated the **LOX Tank Pressurisation Module (LTPM)**.
- It is intended for the **C32 stages associated with Gaganyaan missions**.

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- A tank-pressurisation system maintains the required pressure inside the propellant tank to ensure reliable propellant supply to the engine during operation.

Nozzle Protection System

- CE20's nozzle is designed for **high-altitude operation**, while engine acceptance tests are conducted under sea-level conditions.
- ISRO developed a **Nozzle Protection System (NPS)** to enable such testing while reproducing conditions relevant to operation in near-vacuum.
- NPS reduces the time and resources required for conventional **High Altitude Test (HAT)** arrangements and facilitates longer-duration ground testing.

LVM3

- **LVM3 (Launch Vehicle Mark-3)** is ISRO's heavy-lift launch vehicle.
- It is a **three-stage launch vehicle**, comprising:
 - Two **S200 solid strap-on boosters**
 - **L110 liquid core stage**
 - **C25/C32 cryogenic upper stage**
- Standard LVM3 specifications include:
 - Height: about **43.5 m**
 - Lift-off mass: about **640 tonnes**
 - Payload capability: around **4-tonne class to GTO**, with later missions demonstrating enhanced capability.
- LVM3 has been used for missions including **Chandrayaan-2, Chandrayaan-3 and commercial satellite launches**.

Additional Info

- **Cryogenic Propulsion**
 - Uses propellants maintained at extremely low temperatures.
 - Hydrogen remains liquid at approximately **-253°C**, while oxygen is stored as a liquid at approximately **-183°C to -195°C**, depending on operating conditions.
 - LOX-LH₂ engines provide high **specific impulse**, making them particularly useful for upper stages.
- **Flight-Acceptance Hot Test**
 - A ground firing conducted on a flight engine before integration with a launch vehicle.
 - It verifies hardware integrity and confirms that engine systems meet mission-performance requirements.
- **ISRO Propulsion Complex (IPRC)**

- Located at **Mahendragiri, Tamil Nadu**.
- Major ISRO centre for assembly, integration and testing of liquid, cryogenic and related propulsion systems.

LVM3-M7

- Will be the **seventh operational mission of LVM3**.
- ISRO has scheduled the mission for the **fourth quarter of 2026**.

India's SST-1 Gets New Gyrotron to Advance Fusion Research

What's the News?

India has strengthened its nuclear fusion research programme by installing and commissioning an **82.6 GHz, 400 kW gyrotron** on the **Steady State Superconducting Tokamak-1 (SST-1)** at the **Institute for Plasma Research (IPR), Gandhinagar, Gujarat**. The system provides high-frequency microwave energy to heat and control extremely hot plasma inside the tokamak.

The new system is an upgrade over the earlier **42 GHz Electron Cyclotron Resonance Heating (ECRH) system** and expands India's capability to study long-duration, high-temperature plasma—an essential requirement for controlled nuclear fusion.

India's 'Artificial Sun'?

- **Artificial Sun** is an informal term used for experimental facilities that attempt to reproduce the **nuclear fusion process that powers the Sun and other stars**.
- It does **not** mean that SST-1 is a miniature Sun or a commercial fusion power plant.
- In fusion, two light nuclei combine to form a heavier nucleus, releasing energy because a small amount of mass is converted into energy according to **$E = mc^2$** .
- The most widely studied terrestrial fusion reaction combines the hydrogen isotopes **deuterium and tritium**, producing **helium and a neutron**.
- Fusion experiments on Earth require extremely high temperatures because they cannot reproduce the enormous gravitational pressure present inside stars. ITER is designed for plasma temperatures of about **150 million°C**, roughly **10 times the Sun's core temperature**.

What is a Gyrotron?

A **gyrotron** is a high-power microwave source used for plasma heating in magnetic-confinement fusion devices.

The newly commissioned system has:

- **Frequency:** 82.6 GHz
 - **Power:** 400 kW
 - **Application:** Electron Cyclotron Resonance Heating (ECRH)
 - **Facility:** SST-1 at IPR, Gujarat
- ECRH transfers microwave energy primarily to plasma electrons. It can assist in **plasma start-up, heating, current control and management of plasma instabilities.**

The higher-frequency system increases the range of magnetic-field and plasma conditions under which SST-1 experiments can be conducted.

What is SST-1?

SST-1 – Steady State Superconducting Tokamak-1 – is India's first superconducting tokamak and is operated by the Institute for Plasma Research.

- **Location:** Gandhinagar, Gujarat
- **Purpose:** Magnetic-confinement fusion and long-duration plasma research
- Uses **superconducting toroidal and poloidal magnetic-field coils.**
- Contains auxiliary heating systems including **ECRH** and **Lower Hybrid Current Drive (LHCD).**
- Its systems were conceived for plasma operations of up to about **1,000 seconds.**

A **tokamak** is a toroidal or doughnut-shaped device in which powerful magnetic fields are used to confine electrically charged plasma without allowing the ultra-hot plasma to directly contact the reactor walls.

Why Superconducting Magnets?

Conventional copper electromagnets experience substantial electrical resistance and heating during prolonged operation.

Superconducting magnets have extremely low electrical resistance at cryogenic temperatures, allowing strong magnetic fields to be maintained for much longer periods. This makes them particularly important for research on **steady-state or long-pulse fusion reactors.**

Nuclear Fusion vs Nuclear Fission

Nuclear Fusion	Nuclear Fission
Combines light nuclei	Splits heavy nuclei
Common fuels studied: Deuterium and Tritium	Common fuels: Uranium-235, Plutonium-239

Powers stars such as the Sun	Used in existing nuclear power reactors
Requires extremely high temperatures	Initiated using neutron-induced reactions
Produces helium and neutrons in D-T fusion	Produces radioactive fission products
Commercial electricity generation remains under development	Commercial technology already established

Institute for Plasma Research

- IPR is located at **Gandhinagar, Gujarat.**
- It functions as an **aided/autonomous research institution under the Department of Atomic Energy (DAE), Government of India.**
- Its major research areas include plasma physics, magnetic-confinement fusion and associated technologies.
- India's first indigenous tokamak, **ADITYA**, was commissioned at IPR in **1989.**
- India's fusion programme subsequently developed **ADITYA-U** and **SST-1.**

India and ITER

India is also a full member of **ITER (International Thermonuclear Experimental Reactor)**, the major international fusion project being built at **Cadarache, France.**

- ITER members are **China, European Union, India, Japan, South Korea, Russia and the United States.**
- India joined ITER as a full partner in **2005.**
- India bears about **9.1% of ITER's construction contribution**, largely through in-kind components and systems.
- Major Indian contributions include:
 - **Cryostat**
 - In-wall shielding
 - Cryogenic systems
 - Cooling-water systems
 - Diagnostic Neutral Beam
 - Plasma-heating and associated systems
- The ITER cryostat, manufactured with major Indian industrial involvement, weighs about **3,850 tonnes** and is India's largest procurement package for the project.
- ITER is designed to demonstrate a fusion gain of **$Q \geq 10$** —around **500 MW of fusion power from 50 MW of external heating power.** It is an experimental facility and is **not designed to supply electricity to the grid.**

India's 51st Doppler Weather Radar Inaugurated in Sambalpur

What's the News?

- India's **51st Doppler Weather Radar (DWR)** has been inaugurated at **Sambalpur, Odisha**, strengthening weather surveillance and early-warning capabilities in western Odisha.
- The **Make in India** radar is located in the Sambalpur area and operates under the broader framework of **Mission Mausam**.
- Odisha now has **three Doppler Weather Radars**—at **Sambalpur, Paradip and Gopalpur**.
- The system will improve forecasting and early warnings for **thunderstorms, lightning, hailstorms and heavy rainfall**.

Sambalpur Doppler Weather Radar

- **Observation radius:** about **250 km**.
- **Weather-system tracking:** up to around **450 km**.
- **Spatial resolution:** about **150 metres**.
- **Observation update:** approximately **every 10 minutes**.
- It operates **round the clock** and provides near-real-time meteorological observations.

The radar will particularly benefit **13 Odisha districts**—Sambalpur, Bargarh, Jharsuguda, Sundargarh, Deogarh, Subarnapur/Sonepur, Balangir, Boudh, Nuapada, Angul, Kalahandi, Keonjhar and Dhenkanal. Its coverage also extends into adjoining areas of **Chhattisgarh and Jharkhand**.

Doppler Weather Radar

- A DWR transmits radio waves and analyses signals reflected from precipitation particles.
- It uses the **Doppler Effect**, i.e. the change in frequency caused by the relative motion of the target, to estimate the **movement and velocity of precipitation and winds**.
- It supports:
 - detection and tracking of severe thunderstorms;
 - rainfall estimation;
 - identification of hail and intense precipitation;
 - short-duration forecasts or **nowcasting**;
 - timely warnings for extreme weather.

Regional Importance

- Western Odisha earlier had relatively limited radar coverage compared with

the coastal region served by Paradip and Gopalpur.

- The Sambalpur radar can provide more localised information for **agriculture, disaster management and water-resource management**.
- Its observations are particularly relevant to the **Mahanadi basin and Hirakud Reservoir region**, assisting rainfall assessment and flood/reservoir management.

Mission Mausam

- **Mission Mausam** is a Government of India initiative under the **Ministry of Earth Sciences (MoES)** aimed at strengthening weather and climate observation, modelling, forecasting and early-warning systems.
- Expansion of the **Doppler Weather Radar network**, satellite observations and ground-based meteorological systems forms part of this effort.
- India's DWR network has expanded significantly, with the Sambalpur installation taking the operational national count to **51**.

Additional Info

- **India Meteorological Department (IMD)**
 - Functions under the **Ministry of Earth Sciences**.
 - It is India's principal agency for meteorological observations, weather forecasting and severe-weather warnings.
- **Nowcasting**
 - Refers to highly localised, short-range forecasting for the **next few hours**, based on real-time observations such as radar and satellite data.
- **Odisha's DWR locations**
 - **Paradip** – coastal Odisha.
 - **Gopalpur** – coastal/southern Odisha.
 - **Sambalpur** – western Odisha.

SEMICON India 2026 Unveils Semicon 2.0 Roadmap

What's the News?

Prime Minister **Narendra Modi** inaugurated the **fifth edition of SEMICON India 2026** at **Yashobhoomi, New Delhi**, under the theme **"Silicon to Systems: Building the Ecosystem."**

The event highlighted India's transition from establishing semiconductor manufacturing capacity under **Semicon 1.0** to developing a complete domestic semiconductor value chain under **Semicon 2.0**. The Union Cabinet has approved

Semicon 2.0 with an outlay of **₹1,27,500 crore**.

Semicon 2.0?

Semicon 2.0 is the second phase of India's semiconductor programme. It seeks to expand support beyond fabrication and packaging to cover the entire ecosystem. It is structured around **six pillars**:

- **Design:** Expand the domestic chip-design ecosystem and semiconductor intellectual property.
- **Machines & Materials:** Promote domestic production and R&D in semiconductor equipment, chemicals, gases and materials.
- **More Fabs:** Support additional silicon, compound semiconductor, discrete component and display fabrication facilities.
- **Advanced Packaging:** Further strengthen ATMP/OSAT capabilities.
- **Research & Development:** Promote applied R&D and development of more advanced semiconductor technologies.
- **Talent Development:** Expand skills in chip design, system design, clean-room operations and semiconductor manufacturing.

Investment & Employment

- Around **₹1 lakh crore** of investment commitments have been received within the Semicon 2.0 ecosystem.
- These investments are expected to materialise over the next **2–3 years**.
- Nearly **1 lakh new employment opportunities** are expected across the semiconductor ecosystem.
- The government plans to train **1 lakh technicians over five years** for manufacturing, clean-room and related roles.
- The expanded programme targets around **200 semiconductor design start-ups/companies**.
- Under the first phase, **105 semiconductor start-ups** received support/access to advanced design tools, while **20** subsequently secured venture-capital funding.

SEMICON India 2026

- **Edition:** 5th
- **Venue:** Yashobhoomi, New Delhi
- **Theme:** *Silicon to Systems: Building the Ecosystem*
- **Exhibitors:** More than **600**, including around **300 international participants**
- **Country Pavilions:** 6
- **State Pavilions:** 12

- The event also featured a **Startup Pavilion** and a **Workforce Development Zone**.

The conference brings together governments, semiconductor companies, equipment and material suppliers, start-ups, investors, academia and technology professionals.

India Semiconductor Mission

The **India Semiconductor Mission (ISM)** functions under the **Ministry of Electronics and Information Technology (MeitY)** and is the nodal institutional mechanism for developing India's semiconductor and display ecosystem.

The original **Semicon India Programme**, launched in 2021, had an outlay of **₹76,000 crore**. Under its first phase:

- **12 semiconductor manufacturing projects** were approved across multiple states, involving cumulative proposed investment of more than **₹1.64 lakh crore**.
- Projects include semiconductor fabrication and **ATMP/OSAT** facilities.
- **24 semiconductor design projects** of start-ups and MSMEs received approval for financial support.
- Indian institutions and start-ups received access to industry-standard **Electronic Design Automation (EDA)** tools.

Semiconductor Ecosystem

Fab (Fabrication Facility):

- A specialised manufacturing plant where semiconductor circuits are fabricated on wafers.
- India's first major fab under the programme is scheduled for commissioning in **2028**.

ATMP – Assembly, Testing, Marking and Packaging:

- Covers the post-fabrication stages in which chips are assembled, tested, marked and packaged for use.

OSAT – Outsourced Semiconductor Assembly and Test:

- Companies that provide semiconductor assembly, packaging and testing services to chip designers/manufacturers.

EDA – Electronic Design Automation:

- Specialised software tools used to design, simulate and verify integrated circuits and semiconductor systems.

Why Semiconductors Matter?

Semiconductors are critical inputs for **AI, telecommunications, automobiles and EVs, defence systems, data centres, consumer electronics, industrial automation and 5G/6G technologies**.

India's semiconductor demand is projected to reach around **US\$110 billion by FY2030** and exceed **US\$200 billion by FY2035**, increasing the importance of domestic manufacturing, design capabilities and resilient supply chains.

Additional Info

Electronics Manufacturing in India

- Electronics production increased from about **₹1.9 lakh crore in 2014-15** to **₹13.11 lakh crore in 2025-26**.
- Electronics exports increased from around **₹38,000 crore** to **₹4.24 lakh crore** over the same period.
- Mobile-phone production increased from around **₹18,000 crore** to **₹6.27 lakh crore**.
- India manufactures about **99.2% of mobile phones sold domestically** and has emerged as a net exporter of mobile phones.

Global Semiconductor Market

The global semiconductor market is projected to reach approximately **US\$3 trillion by 2035**, underscoring the strategic importance of semiconductor manufacturing, technology and supply-chain resilience.

IIT Delhi Develops India's First Indigenous Micro-GPU

What's the News?

- Researchers at **IIT Delhi's Department of Electrical Engineering** have developed India's first working and demonstrable **indigenously designed micro-Graphics Processing Unit (micro-GPU)**.
- The project was led by M.Tech students **Nammi Akash and M. Ravi Teja**, under the guidance of **Prof. Jayadeva and Prof. Kaushik Saha**.
- The processor demonstrates **programmable graphics rendering** and is aimed primarily at low-cost **embedded graphics and display-processing systems**.
- The development can strengthen indigenous semiconductor-design capability and reduce dependence on imported graphics-processing technology.

What is the Micro-GPU?

- A **GPU (Graphics Processing Unit)** is a specialised processor capable of performing many computations in parallel. Besides graphics rendering, GPUs are extensively used in **Artificial Intelligence (AI) and Machine Learning (ML)**.

- IIT Delhi's micro-GPU uses a **custom floating-point GPU engine**.
- Its hardware has been implemented entirely in **Register Transfer Language (RTL)**.
- The design has been mapped onto a **Spartan-7 Field-Programmable Gate Array (FPGA)**.
- It is a **scalable programmable graphics-processor Intellectual Property (IP) block**, which can eventually be implemented either on programmable hardware or as a dedicated silicon chip.

Potential Applications

The micro-GPU has been designed mainly for affordable embedded visualisation systems, including:

- Industrial control displays and low-cost **Human-Machine Interfaces (HMIs)**.
- **E-rickshaw dashboard navigation systems**.
- Inland-water navigation terminals for small fishing boats.
- Educational **e-book readers**.
- Other low-cost graphics and display-processing devices.

Future Roadmap

- IIT Delhi researchers plan to develop an **8-16 core vector-style graphics processor architecture**.
- The proposed system will be accompanied by an optimised **compiler and graphics software toolchain**.
- The team plans a proof-of-concept implementation using a **65-nanometre ASIC process node**.
- Researchers consider mature nodes such as **65 nm** potentially cost-effective for indigenous embedded graphics chips.
- Funding is proposed to be sought for **ASIC development, system integration and eventual commercialisation**.

Technologies

- **FPGA (Field-Programmable Gate Array):**
 - An integrated circuit whose digital logic can be reconfigured after manufacturing.
 - Commonly used to prototype processor architectures before producing dedicated silicon.
- **ASIC (Application-Specific Integrated Circuit):**
 - A chip manufactured for a specific application.
 - Unlike an FPGA, its hardware configuration is generally fixed after fabrication.
- **RTL (Register Transfer Language/Level):**

- A hardware-design representation describing how digital signals and data move between registers and logical components.
- **65 nm Process Node:**
 - A mature semiconductor fabrication technology.
 - Mature nodes can offer lower development and fabrication costs for applications that do not require cutting-edge transistor densities.

Related Indian Semiconductor Initiative

- **India Semiconductor Mission (ISM)** functions as the nodal initiative for developing India's semiconductor and display ecosystem.
- The **Semicon India Programme** was approved with an outlay of **₹76,000 crore**.
- Its components include support for semiconductor fabs, display fabs, compound semiconductors and packaging facilities, along with semiconductor design.
- The **Design Linked Incentive (DLI) Scheme** supports semiconductor designs covering **Integrated Circuits (ICs), chipsets, System-on-Chips (SoCs), systems and IP cores**.
- Indigenous processor IP such as the IIT Delhi micro-GPU is significant because semiconductor capability involves not only fabrication but also **chip architecture, IP design, verification, software tools and system integration**.

CSIR Marks 85th Foundation Day; Five Regional-Language Science Magazines Launched

What's the News?

- The **Council of Scientific and Industrial Research (CSIR)** observed its **85th Foundation Day on 26 September 2026**.
- Union Minister of State (Independent Charge) for Science & Technology **Dr Jitendra Singh** launched **five popular-science magazines in Indian languages**, published by **CSIR-NIScPR**.
- The CSIR@85 celebrations also saw the unveiling of **CIRA – CSIR's Innovation and Research Ambassador**, a **CSIR@85 special postal stamp**, an Industry Connect video and a Technology Compendium.

Five New Science Magazines

Language	Magazine
Assamese	Bigyan Lahar

Bengali	Bigyan Brittanto
Marathi	Vidnyan Kshitij
Tamil	Ariviyal Arikkaiyalar
Telugu	Vigyan Velugu

- The magazines include both **translated scientific material and original articles written in the respective languages**.
- The initiative aims to widen access to scientific knowledge and strengthen **science writing in Indian languages**.

Council of Scientific and Industrial Research

- **Established:** 26 September 1942
- **Headquarters:** Anusandhan Bhawan, New Delhi
- **Administrative Ministry:** Ministry of Science & Technology
- **Department:** Department of Scientific and Industrial Research (**DSIR**)
- CSIR functions as an **autonomous research organisation** with a pan-India network of **37 national laboratories**.
- Its research covers areas including **aerospace, biotechnology, chemicals, drugs, genomics, oceanography, geophysics, mining, metallurgy, environment, energy and information technology**.

CSIR Organisation

- **President:** Prime Minister of India
- **Vice-President:** Union Minister for Science & Technology
- **Director General:** **Dr N. Kalaiselvi**, who also serves as Secretary, DSIR.
- CSIR@85 highlighted a network of **37 laboratories and more than 10,000 personnel**.

CSIR-NIScPR

- **CSIR-National Institute of Science Communication and Policy Research (NIScPR)** is based in New Delhi.
- It was created in **2021** through the merger of:
 - **CSIR-NISCAIR:** National Institute of Science Communication and Information Resources.
 - **CSIR-NISTADS:** National Institute of Science, Technology and Development Studies.
- It works primarily in **science communication, science-policy research, information dissemination and public understanding of science**.
- The five new publications expand its popular-science communication into **Assamese, Bengali, Marathi, Tamil and Telugu**.

Additional Info

- **Dr Shanti Swarup Bhatnagar**

- Founder Director of CSIR.
- The **Shanti Swarup Bhatnagar Prize for Science and Technology** is named after him.
- The prize recognises notable Indian research in scientific disciplines, and recipients are traditionally announced on **26 September, CSIR Foundation Day**.
- **CIRA**
 - Full form: **CSIR's Innovation and Research Ambassador**.
 - Introduced as CSIR's new mascot during the CSIR@85 celebrations.
- The Foundation Day programme emphasised **technological sovereignty**, faster translation of research from **discovery to deployment**, indigenous technology development and greater industry participation in R&D.

India's First LNG-Powered Train Flagged Off from Sabarmati

What's the News?

- **Indian Railways** has introduced India's first **LNG-diesel dual-fuel train**, flagged off by Union Home and Cooperation Minister **Amit Shah** from **Sabarmati Railway Station, Ahmedabad, Gujarat**.
- The train is a **Diesel Electric Multiple Unit (DEMU)** whose existing diesel system has been modified to use **Liquefied Natural Gas (LNG)** along with diesel.
- The initiative is aimed at reducing **diesel consumption, fuel costs and emissions** while expanding the use of alternative fuels in railway operations.

LNG-Diesel Dual-Fuel Train

- Two **Driving Power Cars (DPCs)** have been converted at the **Sabarmati Integrated Coaching Depot**.
- **Power:** 1,400 HP per DPC.
- LNG can substitute approximately **40% of diesel consumption** in the modified system.
- The converted DPCs completed **more than 2,000 km of field trials** before introduction.
- The dual-fuel configuration allows continued operation using diesel when LNG is unavailable, while maintaining the required engine power and operational reliability.

Fuel Capacity and Savings

- Each DPC carries an LNG tank of about **2,200 litres**.

- It can store roughly **950–1,000 kg of usable LNG**.
- One DPC can operate for about **444 km on a full LNG load**, according to the project details reported by Indian Railways.
- Estimated annual fuel-cost saving:
 - **₹11.9 lakh per DPC**
 - **₹23.9 lakh for an 8-coach rake**
- LNG substitution is expected to reduce emissions of **carbon dioxide (CO₂)**, **nitrogen oxides (NO_x)** and **particulate matter (PM)** compared with diesel-only operation.

Route and Configuration

- The inaugural service operated between **Sabarmati and Mahesana Junction in Gujarat**.
- It is an **8-coach, non-AC chair-car DEMU**.
- Its permanent regular route had **not been finalised** at the time of launch.

What is LNG?

- **LNG – Liquefied Natural Gas** is natural gas, composed primarily of **methane**, cooled to around **-162°C** so that it becomes liquid.
- Liquefaction reduces its volume substantially, making natural gas easier to **store and transport**.
- LNG remains a **fossil fuel**, but its combustion generally produces lower particulate and certain pollutant emissions than conventional diesel.
- In this train, LNG does **not completely replace diesel**; it is used as part of a **dual-fuel internal-combustion system**.

LNG Train vs Hydrogen Train

- **LNG Train**
 - Uses an **internal-combustion engine**.
 - Runs on a combination of **LNG and diesel**.
 - LNG substitutes around **40% of diesel** in the present configuration.
- **Hydrogen Train**
 - Uses hydrogen in a **fuel-cell system** to generate electricity through a reaction between hydrogen and oxygen.
 - Its direct fuel-cell by-product is primarily **water vapour**.
 - Indian Railways introduced its first hydrogen-powered train before the LNG train.

Indian Railways and Green Transition

- The LNG initiative forms part of Indian Railways' broader shift towards **electrification and alternative fuels**.

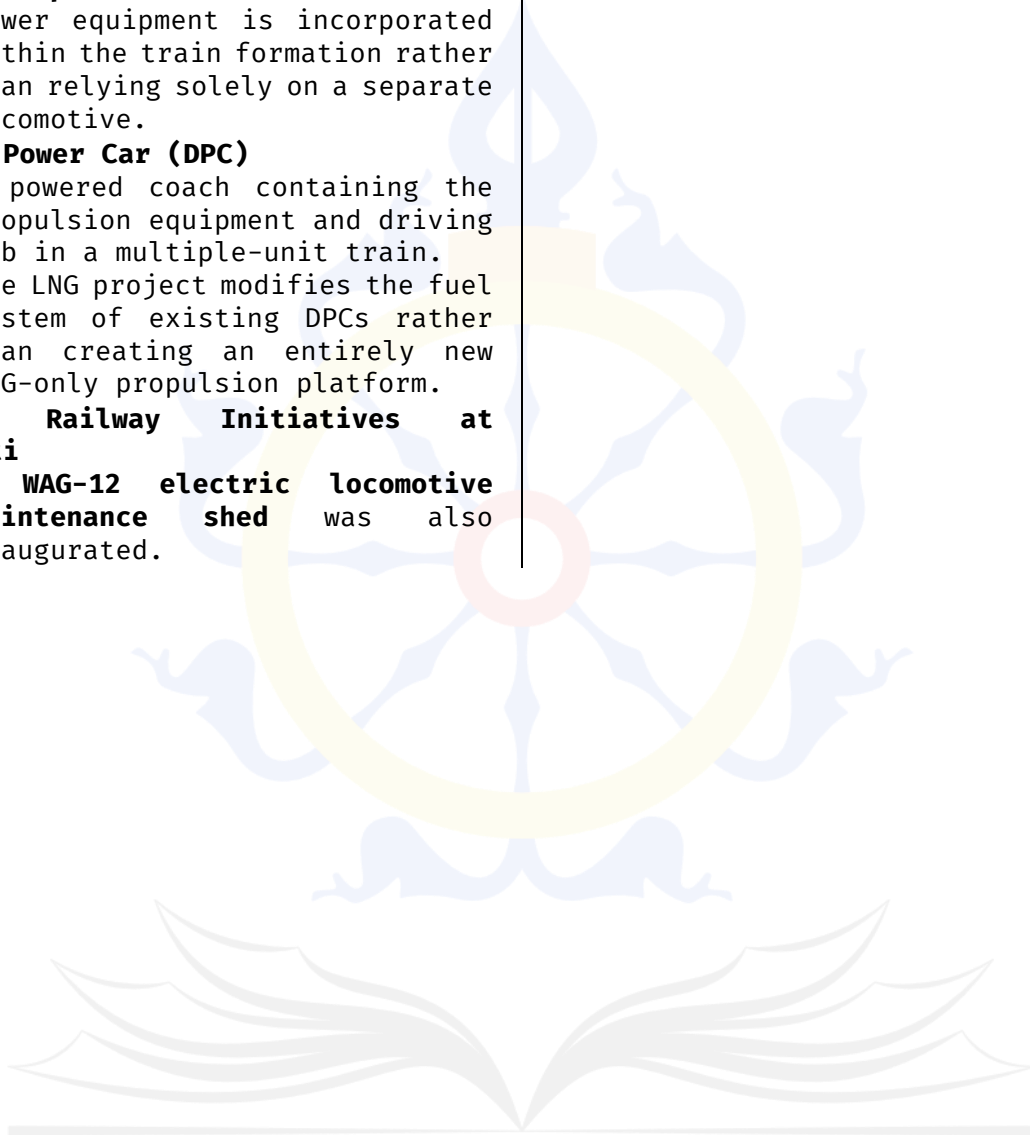
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- Indian Railways has set a target of achieving **net-zero carbon emissions by 2030**.
- LNG and hydrogen technologies complement the larger programme of railway electrification by exploring cleaner propulsion options for operations where conventional diesel traction may otherwise remain necessary.

Additional Info

- **DEMU**
 - Stands for **Diesel Electric Multiple Unit**.
 - Power equipment is incorporated within the train formation rather than relying solely on a separate locomotive.
- **Driving Power Car (DPC)**
 - A powered coach containing the propulsion equipment and driving cab in a multiple-unit train.
 - The LNG project modifies the fuel system of existing DPCs rather than creating an entirely new LNG-only propulsion platform.
- **Related Railway Initiatives at Sabarmati**
 - A **WAG-12 electric locomotive maintenance shed** was also inaugurated.

- Railway works associated with the programme included the indigenous **Kavach Automatic Train Protection system**, automatic signalling and railway-line capacity expansion.



Agriculture

Google Introduces India-First AI Models for Agricultural Intelligence

What's the News?

- **Google DeepMind** has introduced two **India-first artificial intelligence models** designed to provide **field-level agricultural intelligence** using satellite imagery, remote sensing and machine learning.
- Developed by its **AnthroKrishi team**, the models are:
 - **Agricultural Landscape Understanding (ALU)**
 - **Agricultural Monitoring & Event Detection (AMED)**
- They can support **crop monitoring, irrigation planning, land-record management, farm credit, climate resilience and precision agriculture.**
- Outputs are available through **Application Programming Interfaces (APIs)** and can also be visualised as layers in **Google Earth.**

ALU and AMED

- **Agricultural Landscape Understanding (ALU)**
 - Uses high-resolution satellite imagery and AI-based image segmentation.
 - Identifies individual **field boundaries, trees, vegetation and water bodies**, including farm ponds and wells.
 - Assigns spatial identities and calculates the area of mapped features.
 - Provides up to **15 years of historical landscape data.**
 - Landscape information is generally refreshed every **6-12 months.**
- **Agricultural Monitoring & Event Detection (AMED)**
 - Builds on field boundaries identified by ALU.
 - Determines the **likely crop being cultivated.**
 - Detects agricultural events such as **sowing and harvesting.**
 - Provides both historical and **in-season crop monitoring.**
 - Relevant monitoring information can be updated approximately **every 15 days.**

Applications in India

- **Karnataka**

- The **State Water Resources Department** is combining ALU and AMED with local weather and remote-sensing information.
- Supports water management across about **2.6 million hectares of irrigated land.**
- Can improve river-basin planning and water productivity.

• Telangana

- ALU and AMED datasets have been integrated into the State's **Agriculture Data Exchange (ADeX).**
- ADeX supports digital-agriculture applications potentially benefiting **over 5 million farmers.**
- Applications include crop-stress detection, weather-based advisories and alerts for localised pest outbreaks.

• TerraStack

- An **IIT Bombay-incubated startup** using ALU and AMED APIs.
- Has integrated agricultural information covering **more than 140 million hectares** of farmland.
- Applications include:
 - Land-record reconciliation.
 - Farm-revenue estimation.
 - Agricultural credit assessment.
 - Biofuel procurement.

Climate-Smart Agriculture

- **CarbonFarm** uses the ALU API with **Gemini** to monitor low-carbon rice cultivation.
- AI-based monitoring helps measure:
 - Water-use outcomes.
 - Adoption of sustainable farming practices.
 - **Methane-emission reductions.**
- Such verified information can facilitate farmers' access to **carbon-credit and climate-finance programmes.**
- CarbonFarm aims to support **2 million hectares of low-carbon rice cultivation by 2030.**

Global Expansion

- Though initially developed around Indian agricultural conditions, ALU and AMED are being scaled internationally.
- Agricultural insights have expanded to African countries including:
 - **Kenya**
 - **Uganda**

- Ghana
- Rwanda
- Nigeria
- Zambia
- The models had also been opened to testers in **Malaysia, Vietnam, Indonesia and Japan.**
- This illustrates the potential of **India-first digital solutions to become globally scalable agricultural technologies.**

Additional Info

• Digital Agriculture Mission

- Government of India initiative with an outlay of **₹2,817 crore.**
- Seeks to develop Digital Public Infrastructure (DPI) for agriculture using technologies such as **AI, remote sensing and data analytics.**
- Major components include:
 - **AgriStack**
 - Farmers' Registry.
 - Geo-referenced Village Maps.
 - Crop Sown Registry.
 - **Krishi Decision Support System (KDSS)**
 - Integrates satellite, weather, crop, soil and water information.
 - Supports drought/flood monitoring, crop mapping, yield estimation and crop-insurance assessment.
 - **Soil Profile Mapping.**

• Precision Agriculture

- Farm-management approach that uses **location-specific data and technology** to optimise inputs such as water, fertilisers and pesticides.
- AI-based field-level intelligence can enable more targeted interventions than broad district-level agricultural datasets.

Government Launches Digital Livestock Insurance Portal

What's the News?

- The **Department of Animal Husbandry & Dairying (DAHD)** has launched a **Livestock Insurance Portal** as a unified digital platform for livestock insurance across India.

- The portal operates under the **Livestock Insurance activity of the National Livestock Mission (NLM).**
- It was launched by Union Minister for Fisheries, Animal Husbandry & Dairying **Rajiv Ranjan Singh (Lalan Singh)** in New Delhi.
- It digitises the complete insurance cycle, including **policy issuance, premium management, beneficiary verification, claim processing and real-time monitoring.**

Livestock Insurance Portal

- The portal brings together:
 - Livestock farmers
 - State Governments
 - Insurance companies
 - Implementing agencies
- It provides a **single technology-enabled interface** instead of fragmented insurance processes.
- Major functions include:
 - Online insurance enrolment.
 - Policy issuance and management.
 - Premium management.
 - Beneficiary verification.
 - Processing and tracking of claims.
 - Real-time monitoring and reporting.
 - Data-based monitoring of scheme implementation.
- It is available in **11 regional languages in addition to Hindi and English**, improving accessibility for livestock farmers.

Livestock Insurance under National Livestock Mission

- Livestock Insurance is implemented under the **National Livestock Mission**, a **Centrally Sponsored Scheme** of the Ministry of Fisheries, Animal Husbandry & Dairying.
- Its objective is to protect livestock owners against financial losses arising from the **death of insured animals** and promote wider adoption of livestock insurance.
- Eligible livestock includes:
 - Indigenous and crossbred milch animals.
 - Cattle and buffaloes.
 - Sheep and goats.
 - Pigs and rabbits.
 - Horses, donkeys, mules, camels and ponies.
 - Yak and Mithun, among other livestock.

Premium Subsidy and Coverage

- The beneficiary's contribution has been reduced to **15% of the insurance**

premium, compared with the earlier range of 20–50%.

- The remaining **85%** is supported by the Central and State Governments:
 - **60:40** – Centre and State for most states.
 - **90:10** – Centre and State for Himalayan and North-Eastern states.
 - **100% Central support** – Union Territories.
- Subsidised insurance is available for up to **10 cattle units per beneficiary household** for most eligible livestock.
- For **pigs and rabbits**, the limit is **5 cattle units**.
- **1 cattle unit = 1 large animal or 10 small animals** for the applicable categories.

Why is the Portal Significant?

- Enables faster and more transparent **claim settlement**.
- Allows real-time tracking of insurance policies and claims.
- Reduces administrative complexity for farmers and insurers.
- Improves coordination between the Centre, States, insurers and implementing agencies.
- Creates a centralised database that can support **data-driven livestock policy and monitoring**.
- More than **30 lakh animals** had already been insured during the year when the portal was launched.

Additional Info

- **RFID-based identification**
 - **Radio Frequency Identification (RFID)** has been approved as an additional method for identifying insured animals.
 - RFID can provide unique electronic identification, improving traceability and verification during claim settlement.
- **National Livestock Mission**
 - Implemented by the **Department of Animal Husbandry & Dairying** under the **Ministry of Fisheries, Animal Husbandry & Dairying**.

- Focus areas include **entrepreneurship development, breed improvement, feed and fodder development and livestock insurance**.
- The realigned NLM has an approved outlay of **₹2,300 crore**.

Important Days

National Wildlife Day 2026: Promoting Wildlife Conservation

What's the News?

National Wildlife Day is observed on **4 September** to raise awareness about wildlife conservation, endangered species, habitat protection and the need to preserve biodiversity. It is also observed on **22 February**, associated with the birth anniversary of wildlife conservationist **Steve Irwin**. The observance was established by animal advocate **Colleen Paige** and was first celebrated in **2005**.

National Wildlife Day: History & Purpose

- The observance focuses on:
 - Protection of endangered species.
 - Conservation of wildlife habitats.
 - Prevention of poaching and illegal wildlife trade.
 - Reduction of human-wildlife conflict.
 - Public awareness about biodiversity and ecosystem services.
- The **4 September** observance is particularly associated with remembering Steve Irwin's contribution to wildlife conservation following his death in 2006.

Why Wildlife Conservation Matters?

Wildlife is an integral component of ecological systems. Major threats include:

- Habitat loss and fragmentation**
- Deforestation**
- Climate change**
- Pollution**
- Poaching and illegal wildlife trade**
- Invasive alien species**
- Human-wildlife conflict**

Conservation therefore requires both **in-situ conservation**—protecting species in their natural habitats—and **ex-situ conservation**, such as zoos, captive breeding and other managed facilities.

India's Wildlife Conservation Framework

India has developed a legal and institutional framework for protecting biodiversity and wildlife.

- Wildlife (Protection) Act, 1972**
 - Principal legislation for protection of wild animals, birds and plants.

- Provides for protected areas and restrictions on hunting and wildlife trade.
- National Parks & Wildlife Sanctuaries**
 - Important instruments of **in-situ conservation**.
 - National Parks generally provide a higher degree of protection from human activities.
- Project Tiger**
 - Launched in **1973** for conservation of the Bengal tiger and its habitats.
- Project Elephant**
 - Launched in **1992** to protect elephants, their habitats and migration corridors.
- Project Dolphin**
 - Focuses on conservation of riverine and marine dolphins, including the **Gangetic river dolphin**.
- National Biodiversity Authority (NBA)**
 - Established under the **Biological Diversity Act, 2002**.
 - Responsible for implementing India's biodiversity-access and benefit-sharing framework.

Constitutional Provisions

Wildlife conservation also has a constitutional basis:

- Article 48A** – Directive Principle directing the State to protect and improve the environment and safeguard forests and wildlife.
- Article 51A(g)** – Fundamental Duty of citizens to protect and improve the natural environment, including forests, lakes, rivers and wildlife, and to have compassion for living creatures.
- Article 21** – The Supreme Court has interpreted the right to life to encompass aspects of a healthy environment.

National Wildlife Day vs World Wildlife Day

Feature	National Wildlife Day	World Wildlife Day
Observed	4 September ; also 22 February	3 March
Nature	Awareness observance	UN-recognised international observance
Focus	Wildlife conservation	Wild fauna and flora

	n and endangered species	
Key association	Colleen Paige / Steve Irwin	CITES
2026 theme	—	“Medicinal and Aromatic Plants: Conserving Health, Heritage and Livelihoods”

Do not confuse **National Wildlife Day (4 September)** with **World Wildlife Day (3 March)**. World Wildlife Day commemorates the adoption of **CITES in 1973** and was proclaimed by the UN General Assembly.

Additional Info

- **CITES**
 - Convention on International Trade in Endangered Species of Wild Fauna and Flora.
 - Regulates international trade in listed species so that such trade does not threaten their survival.
- **Convention on Biological Diversity (CBD)**
 - Three broad objectives:
 1. Conservation of biological diversity.
 2. Sustainable use of biodiversity components.
 3. Fair and equitable sharing of benefits arising from genetic resources.
- **Kunming-Montreal Global Biodiversity Framework**
 - Adopted under the CBD in **2022**.
 - Provides global biodiversity targets for **2030**.
- **IUCN Red List**
 - Assesses the global conservation status of species.
 - Categories include **Critically Endangered, Endangered, Vulnerable, Near Threatened** and others.

UN Declares November 27 as International Day to Eliminate Child Marriage

What's the News?

- The **United Nations General Assembly (UNGA)** has designated **November 27** as the **International Day for the**

Elimination of Child, Early and Forced Marriage.

- The resolution was **led by Sierra Leone**, with **India as a co-sponsor**, and was adopted by consensus.
- The observance seeks to strengthen global political commitment, awareness and action to eliminate child, early and forced marriage by **2030**.

Why November 27?

- The date has a strong **India connection**: the Union government launched the **Bal Vivah Mukht Bharat (Child Marriage Free India)** campaign on **November 27, 2024**.
- India therefore supported the adoption of the same date as an annual international observance against child marriage.

Bal Vivah Mukht Bharat

- **Nodal Ministry**: Ministry of Women and Child Development.
- **Objective**: Eliminate child marriage through prevention, awareness, community participation and stronger enforcement.
- **National target**: Reduce the prevalence of child marriage by **10% by 2026** and work towards a **child-marriage-free India by 2030**.
- It complements India's commitment under **Sustainable Development Goal (SDG) 5.3**, which calls for eliminating harmful practices such as **child, early and forced marriage** by 2030.

Child Marriage in India: Data

- **NFHS-5 (2019-21)**: **23.3%** of women aged 20-24 were married before attaining 18 years.
- **NFHS-6 (2023-24)**: The figure declined to **20.1%**.
- This represents a decline of **3.2 percentage points**, although roughly one in five women in this age group had still been married before 18.

Legal Framework

Prohibition of Child Marriage Act (PCMA), 2006

- Principal central legislation dealing with child marriage in India.
- Defines a **child** as:
 - **Female**: below **18 years**.
 - **Male**: below **21 years**.
- Provides the legal framework for preventing child marriages and taking action against those facilitating them.

Additional Info

- **UNGA**
 - Main deliberative and representative organ of the United Nations.

- All UN member states are represented in the General Assembly.
- **Relevant SDG**
 - **SDG 5:** Achieve gender equality and empower all women and girls.
 - **Target 5.3:** Eliminate harmful practices, including **child, early and forced marriage** and female genital mutilation.
- **Key Personality**
 - **Bhuwan Ribhu:** Founder of **Just Rights for Children (JRC)** and a prominent advocate for establishing a dedicated international day against child marriage.
 - **Dr Fatima Maada Bio,** First Lady of Sierra Leone, supported the international initiative, while Sierra Leone spearheaded the resolution at the UNGA.

International Literacy Day 2026: Literacy for People, Planet and Prosperity

What's the News?

- **International Literacy Day (ILD)** is observed annually on **8 September**.
- The 2026 observance marks the **60th anniversary** of International Literacy Day.
- The 2026 theme is **"Literacy for people, the planet and prosperity."**
- UNESCO organised the global celebration in **Chiapas, Mexico**, in collaboration with the Government of Mexico, bringing together education ministers, educators, learners, international organisations and civil society.
- The event also included the presentation of the **2026 UNESCO International Literacy Prizes**.

2026 Theme

"Literacy for people, the planet and prosperity" links literacy with three dimensions:

- **People**
 - Promotes inclusion, equality and participation.
 - Enables individuals to access information, exercise rights and participate effectively in society.
- **Planet**
 - Improves understanding of climate change, environmental risks and sustainable practices.

- Helps communities make informed decisions concerning natural resources and environmental protection.

Prosperity

- Improves access to education, employment and skills.
- Supports productivity, livelihoods and inclusive economic development.

Global Literacy Challenge

Despite substantial progress, major literacy gaps persist:

- Around **739 million youth and adults** worldwide lack basic literacy skills.
- **63%** of them are women.
- More than **77%** of non-literate youth and adults live in:
 - **Southern Asia:** about **347 million**
 - **Sub-Saharan Africa:** about **225 million**
- Around **4 in 10 students** do not achieve minimum reading proficiency by the end of primary education.
- About **273 million children and youth** remain out of school globally.

UNESCO International Literacy Prizes 2026

Six initiatives received UNESCO's two international literacy awards.

UNESCO King Sejong Literacy Prize

Supported by the **Republic of Korea**, it promotes **mother-tongue and multilingual literacy**.

2026 awardees:

- **Escuelas LEO Programme – Colombia**
- **Language Friendly School – Kingdom of the Netherlands**
- **Project PAL (Primary Accelerated Literacy) – Nigeria**

UNESCO Confucius Prize for Literacy

Supported by **China**, it focuses on functional literacy, particularly for rural adults and out-of-school youth, including the use of technology.

2026 awardees:

- **Accelerated Education for Out-of-school Displaced Youth – Lebanon**
- **Chiapas Puede State Literacy Programme – Mexico**
- **Language for Life – Thailand**

Each laureate receives **US\$30,000, a medal and a diploma**. UNESCO's international literacy prizes have recognised **more than 600 individuals, institutions and organisations since 1967**.

Literacy Initiatives in India

ULLAS – Nav Bharat Saaksharta Karyakram

- **ULLAS:** *Understanding of Lifelong Learning for All in Society*.

- Also known as the **New India Literacy Programme (NILP)**.
- It is a **Centrally Sponsored Scheme** implemented from **FY 2022-23 to 2026-27**.
- **Target group:** Non-literate persons aged **15 years and above** who missed formal schooling.
- **Total outlay: ₹1,037.90 crore**
 - Central share: ₹700 crore
 - State share: ₹337.90 crore
- Aligned with **National Education Policy (NEP) 2020**.
- Operates largely through **volunteerism and community participation** and uses both online and offline learning.

Five Components of ULLAS

- Foundational Literacy and Numeracy
- Critical Life Skills
- Basic Education
- Vocational Skills
- Continuing Education

India's literacy rate increased from about **74% in Census 2011 to 80.9% in 2023-24**. The Government's literacy strategy increasingly includes **digital literacy, financial literacy and lifelong learning**, rather than limiting literacy to basic reading and writing.

Additional Info

- **History of International Literacy Day**
 - UNESCO proclaimed International Literacy Day at its **14th General Conference in 1966**.
 - It was **first observed in 1967**.
 - The observance highlights literacy as a **fundamental human right** and a foundation for lifelong learning and sustainable development.
- **Sustainable Development Goal**
 - Literacy is directly linked with **SDG 4 – Quality Education**.
 - **SDG Target 4.6:** Ensure that all youth and a substantial proportion of adults, both men and women, achieve **literacy and numeracy**.
- **UNESCO**
 - Full form: **United Nations Educational, Scientific and Cultural Organization**.
 - It is a **specialised agency of the United Nations** dealing with education, science, culture and communication.
 - Headquarters: **Paris, France**.

National Forest Martyrs Day 2026: Remembering the Khejarli Sacrifice

What's the News?

- **National Forest Martyrs Day** is observed every year on **11 September** to honour forest personnel who lost their lives while protecting India's **forests, wildlife and natural resources**.
- The day also commemorates the **Khejarli sacrifice of 1730** in present-day Rajasthan.
- **Amrita Devi Bishnoi** and other members of the Bishnoi community resisted the felling of **Khejri trees**; **363 Bishnois** ultimately sacrificed their lives.
- The Union Environment Ministry formally declared **11 September as National Forest Martyrs Day in 2013**.

Why 11 September?

- The date is associated with the **Khejarli sacrifice**, one of India's earliest recorded examples of organised community action for environmental conservation.
- The observance connects this historical sacrifice with the work of present-day **forest guards, officers and other frontline personnel**, who face threats such as:
 - Poaching and wildlife crime
 - Illegal logging and timber smuggling
 - Forest fires
 - Human-wildlife conflict

Khejarli Sacrifice

- The incident occurred in **Khejarli village near Jodhpur, Rajasthan, in 1730**, during the rule of **Maharaja Abhay Singh of Marwar**.
- The ruler's men were sent to obtain wood from **Khejri trees**, reportedly for producing lime required for construction.
- **Amrita Devi Bishnoi** opposed the felling and embraced a Khejri tree.
- Her three daughters and other members of the Bishnoi community joined the resistance.
- In total, **363 people were killed while protecting the trees**.
- After learning of the incident, the ruler ordered that tree cutting and hunting in Bishnoi areas be stopped.

Bishnoi Community

- The **Bishnoi community**, concentrated particularly in Rajasthan, has a long tradition of protecting trees and wildlife.

- Its way of life is based on **29 principles**, several of which emphasise protection of animals, vegetation and the natural environment.
- The Khejarli episode is regarded as an important historical precursor to later community-led conservation movements in India.

Khejri Tree

- **Scientific name:** *Prosopis cineraria*
- **State tree:** Rajasthan
- It is particularly adapted to the **arid and semi-arid environment of western Rajasthan**.
- Ecological and livelihood importance includes:
 - Providing fodder for livestock.
 - Improving soil fertility through nitrogen fixation.
 - Helping stabilise desert ecosystems.
 - Supplying edible pods known locally as **sangri**, widely used in Rajasthani cuisine.

Additional Info

- **Chipko Movement**
 - Emerged prominently in the **Garhwal Himalayas during the 1970s**.
 - Villagers, particularly women, protected trees by embracing them to prevent commercial felling.
 - The Khejarli sacrifice is frequently described as an early precursor to this form of tree-protection action.
- **Amrita Devi Bishnoi Wildlife Protection Award**
 - Instituted by the Union Environment Ministry in memory of Amrita Devi.
 - Recognises individuals and institutions, particularly from rural communities, for **exemplary courage or contribution to wildlife protection**.
 - Traditionally carries a **₹1 lakh cash award**, along with a citation and medallion.
- **Constitutional Linkage**
 - **Article 48A – Directive Principles of State Policy:** Directs the State to protect and improve the environment and safeguard forests and wildlife.
 - **Article 51A(g) – Fundamental Duties:** Makes it a duty of every citizen to protect and improve the natural environment, including **forests, lakes, rivers**

and wildlife, and to have compassion for living creatures.

Digvijay Diwas 2026: Remembering Swami Vivekananda's Chicago Address

What's the News?

- **Digvijay Diwas** is observed on **11 September** to commemorate **Swami Vivekananda's historic address at the World's Parliament of Religions in Chicago in 1893**.
- In 2026, the address completed **133 years**.
- Prime Minister **Narendra Modi** recalled the speech, describing it as an expression of India's civilisational ethos whose message continues to resonate globally.
- The address highlighted **religious tolerance, universal acceptance, harmony and brotherhood**, while condemning sectarianism and fanaticism.

Digvijay Diwas

- **Observed:** 11 September every year.
- **Associated with:** Swami Vivekananda.
- **Event commemorated:** His first address at the **World's Parliament of Religions, Chicago**.
- **Year:** 1893.
- The term "**Digvijay**" in this context signifies the global recognition gained by Indian spiritual and philosophical thought through Vivekananda's message.
- A Government of India release has also referred to **11 September as Digvijay Diwas** in connection with the Chicago address.

Chicago Address

- Vivekananda began his address with the celebrated salutation "**Sisters and Brothers of America**."
- Major ideas included:
 - Acceptance and respect for different religions.
 - **Universal brotherhood** and peaceful coexistence.
 - Opposition to **bigotry, sectarianism and fanaticism**.
 - Presentation of India's **Vedantic and spiritual traditions** before an international audience.
- He emphasised not merely religious tolerance but the idea of **universal acceptance of diverse spiritual paths**.

World's Parliament of Religions

- Held in **Chicago, United States**, as part of the **World's Columbian Exposition of 1893**.
- The Parliament opened on **11 September 1893** and brought together representatives of different religious traditions.
- Vivekananda's participation became one of the event's most prominent episodes and helped introduce **Vedanta and Indian philosophical thought** to wider Western audiences.

Swami Vivekananda

- **Original name:** Narendranath Datta.
- **Born:** 12 January 1863, Kolkata.
- Spiritual disciple of **Sri Ramakrishna Paramahansa**.
- Played an important role in spreading **Vedanta and Yoga philosophy** internationally.
- Founded the **Ramakrishna Mission on 1 May 1897** for spiritual development and organised social service.
- His thought emphasised **character-building, education, service to humanity and the role of youth in nation-building**.

Additional Info

- **Ramakrishna Mission**
 - Founded by Swami Vivekananda in **1897**.
 - Headquarters: **Belur Math, West Bengal**.
 - Undertakes educational, healthcare, relief, rural-development and spiritual activities.
- **National Youth Day**
 - Observed on **12 January**, Swami Vivekananda's birth anniversary.
 - The Government of India declared it National Youth Day in **1984**, and nationwide observance began in **1985**.
- **Digvijay Diwas vs Kargil Vijay Diwas**
 - **Digvijay Diwas:** 11 September – Vivekananda's Chicago address of 1893.
 - **Kargil Vijay Diwas:** 26 July – commemorates India's victory in the **1999 Kargil War** and the culmination of **Operation Vijay**.

International Day for South-South Cooperation 2026: "Solidarity Rising"

What's the News?

- The **United Nations Day for South-South Cooperation** is observed annually on **12 September**.
- The **2026 theme** is **"Solidarity Rising: Global Alliance for Inclusive and Innovative Development."**
- The 2026 observance highlights cooperation among developing countries through the exchange of **knowledge, technology, skills, resources and development solutions**.
- It also marks the launch of the **Global Alliance for South-South and Triangular Cooperation**, a voluntary UN-facilitated platform convened by the **United Nations Office for South-South Cooperation (UNOSSC)**.
- A high-level UN event associated with the 2026 observance was held on **11 September 2026**. Thus, 11 September was the event date, while **12 September remains the official annual UN observance**.

South-South Cooperation

- **South-South Cooperation (SSC)** refers to collaboration among developing countries of the **Global South**.
- Countries share:
 - Knowledge and development experiences.
 - Technical expertise.
 - Technology and innovation.
 - Skills and institutional capacities.
 - Financial and other resources.
- It is based on principles such as:
 - National ownership.
 - Equality among partners.
 - Mutual benefit.
 - Respect for sovereignty.
 - Non-conditionality.
- SSC is considered a **complement to, rather than a replacement for, North-South cooperation**.

Major Areas

South-South Cooperation increasingly covers:

- Renewable energy.
- Digital innovation.
- Public health.
- Sustainable agriculture.
- Food and energy security.
- Education.
- Disaster preparedness.
- Climate resilience.
- Public-service delivery.

- Trade and investment.

2026 Theme

“Solidarity Rising: Global Alliance for Inclusive and Innovative Development”

The theme focuses on:

- Sharing successful development solutions among developing countries.
- Scaling innovations already developed in the Global South.
- Connecting countries requiring solutions with countries possessing relevant expertise.
- Building partnerships among governments, UN agencies, financial institutions, academia, civil society and the private sector.
- Accelerating achievement of the **Sustainable Development Goals (SDGs)**.

Global Alliance for South-South and Triangular Cooperation

- The **Global Alliance for South-South and Triangular Cooperation** is a voluntary platform facilitated by the United Nations.
- It is convened by **UNOSSC**.
- It aims to connect:
 - Countries seeking development solutions.
 - Countries possessing relevant knowledge and experience.
 - Development institutions capable of providing technical, financial or institutional support.
- The platform seeks to convert successful local and regional solutions into **scalable development programmes**.

Triangular Cooperation

- **Triangular Cooperation** generally involves:
 - Two or more developing countries undertaking a South-South initiative; and
 - Support from a developed country, international organisation or multilateral institution.
- It combines:
 - Experience and ownership from the Global South.
 - Additional technical, financial or institutional assistance from another partner.
- It therefore complements conventional South-South Cooperation by expanding available resources and expertise.

Growing Economic Role of Global South

- **South-South trade reached about \$6.8 trillion in 2025.**

- More than **half of developing-country exports** are now destined for other developing economies.
- Around three decades ago, the corresponding share was approximately **38%**.
- Foreign Direct Investment flows among developing countries have increased substantially since the 1990s.
- Developing economies accounted for around **32% of global FDI during 2020–2023**, compared with about **9% in the 1990s**.

These trends reflect the growing role of developing countries in global trade, investment, technology and development cooperation.

Historical Background

- The institutional foundations of South-South Cooperation were strengthened through the **Buenos Aires Plan of Action (BAPA)**.
- It was adopted on **12 September 1978** at the UN Conference on Technical Cooperation among Developing Countries in **Buenos Aires, Argentina**.
- BAPA established a framework for promoting **Technical Cooperation among Developing Countries (TCDC)**.
- The UN General Assembly initially designated **19 December** as the UN Day for South-South Cooperation.
- From **2012**, the observance was shifted to **12 September** to commemorate the adoption of BAPA.

United Nations Office for South-South Cooperation

- **UNOSSC** is the principal UN entity for promoting and coordinating South-South and triangular cooperation.
- Its institutional origin can be traced to a special unit established within the **United Nations Development Programme (UNDP)** in **1974**.
- Major functions include:
 - Supporting cooperation among developing countries.
 - Facilitating knowledge exchange.
 - Promoting partnerships.
 - Coordinating South-South activities across the UN system.
 - Supporting implementation of the SDGs.

India and South-South Cooperation

- India has traditionally regarded South-South Cooperation as an important part of its development partnership with other developing countries.
- India's cooperation includes:
 - Capacity-building programmes.

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- Lines of credit.
- Technical assistance.
- Digital and technology partnerships.
- Development projects.
- Humanitarian assistance.

India-UN Development Partnership Fund

- Established in **2017** by the Government of India in partnership with **UNOSSC**.
- India committed **\$150 million over 10 years**.
- It supports **Southern-owned, demand-driven sustainable-development projects**.
- Its major focus includes:
 - Least Developed Countries (LDCs).
 - Small Island Developing States (SIDS).
 - Commonwealth developing countries.
- Projects cover areas such as:
 - Poverty reduction.
 - Healthcare.
 - Education.
 - Renewable energy.
 - Climate resilience.
 - Water and sanitation.
 - Agriculture.
 - Livelihoods.

- The Fund supports initiatives linked to **all 17 Sustainable Development Goals**.

Additional Info

- **Global South**
 - Broadly refers to developing and emerging economies, particularly across **Asia, Africa, Latin America, the Caribbean and the Pacific**.
 - It is an economic and geopolitical concept rather than a strictly geographical classification.
- **Buenos Aires Plan of Action (BAPA)**
 - Adopted in **1978**.
 - One of the foundational documents of modern South-South Cooperation.
 - Promotes collective self-reliance and exchange of technical knowledge among developing countries.
- **BAPA+40**
 - Refers to the **Second High-level United Nations Conference on South-South Cooperation**, held 40 years after BAPA.
 - It reaffirmed the role of South-South and triangular cooperation in achieving sustainable development.

World First Aid Day 2026: "First Aid in Migration Contexts"

What's the News?

- **World First Aid Day 2026** was observed on **12 September**, the second Saturday of September.
- The 2026 theme is **"First Aid in Migration Contexts."**
- The theme highlights the importance of making lifesaving first-aid knowledge and services accessible to **migrants, refugees, asylum seekers and displaced people**, who often face greater health risks and barriers to medical care.
- World First Aid Day was initiated by the **International Federation of Red Cross and Red Crescent Societies (IFRC)** in **2000**.

2026 Theme

"First Aid in Migration Contexts"

The theme focuses on the particular risks faced by people on the move and the need for inclusive first-aid services throughout different stages of migration.

Why Migration?

- An estimated **304 million people** were living as international migrants worldwide by mid-2024.
- They represented about **3.7% of the global population**.
- Nearly **9,000 migrants die or go missing annually** while travelling on migration routes worldwide.
- More than **29,000 people have been reported dead or missing on the Central Mediterranean route since 2014**.

World First Aid Day

- Observed annually on the **second Saturday of September**.
- Established by the **IFRC in 2000**.
- Its main objective is to increase public awareness of the importance of first-aid knowledge and encourage more people to acquire basic lifesaving skills.
- The IFRC and its National Red Cross and Red Crescent Societies reach **more than 50 million people annually** through first-aid awareness activities.

Recent Themes

- **2026:** First Aid in Migration Contexts.
- **2025:** First Aid and Climate Change.
- **2024:** First Aid and Sports.
- **2023:** First Aid in the Digital World.
- **2022:** Lifelong First Aid.

First Aid

- First aid is the **immediate assistance provided to a person who is injured or suddenly becomes ill before**

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professional medical care is available.

- It is not a substitute for medical treatment.

Main Objectives

First aid aims to:

- **Preserve life.**
- **Prevent deterioration** of the person's condition.
- **Promote recovery.**
- Facilitate safe access or transportation to professional medical care.

Basic Approach

Four fundamental steps include:

1. **Safety:** Ensure that the surroundings are safe for the responder and injured person.
2. **Assessment:** Evaluate the person's condition.
3. **Seek Help:** Contact emergency medical services when required.
4. **Provide First Aid:** Give appropriate assistance within one's level of training.

First Aid in Migration

- First aid during migration requires more than treatment of physical injuries.
- Support may include:
 - Treatment of wounds and minor illnesses.
 - Management of dehydration or hypothermia.
 - Psychological first aid.
 - Referral to healthcare facilities.
 - Assistance to survivors of violence.
 - Providing health information in accessible languages.

Humanitarian Service Points

- Red Cross and Red Crescent National Societies operate **more than 600 Humanitarian Service Points (HSPs)** worldwide.
- These provide safe and neutral locations where migrants can access services irrespective of their legal status.
- Assistance may include:
 - First aid and healthcare.
 - Food and safe shelter.
 - Psychological support.
 - Protection services.
 - Help reconnecting separated families.
- The Red Cross and Red Crescent Movement reached around **17.9 million people through migration-related activities in 2024.**

Basic First-Aid Kit

A basic first-aid kit may include:

- Sterile gauze and adhesive bandages.
- Medical tape.
- Antiseptic wipes or solution.
- Disposable gloves.
- Scissors and tweezers.
- Digital thermometer.
- Cold pack.
- Triangular bandage.
- Emergency blanket.
- CPR face shield or breathing barrier.
- Emergency contact numbers.
- Necessary personal medicines, where applicable.

First-aid supplies should be checked periodically for **damage and expiry dates.**

Additional Info

- **International Federation of Red Cross and Red Crescent Societies (IFRC)**
 - World's largest humanitarian network.
 - Comprises **191 National Red Cross and Red Crescent Societies.**
 - Works in areas including disaster response, health, humanitarian assistance and community resilience.
- **Indian Red Cross Society (IRCS)**
 - Constituted under the **Indian Red Cross Society Act, 1920 (Act XV of 1920).**
 - **President of India:** President of the Society.
 - **Union Minister of Health and Family Welfare:** Traditionally serves as Chairman of its National Managing Body.
 - **National Headquarters:** New Delhi.
 - Functions include:
 - Medical and humanitarian relief.
 - First-aid training.
 - Blood services.
 - Disaster-risk reduction.
 - Emergency and community-health services.
- **Modern First-Aid Training**
 - Civilian first-aid training developed significantly during the **19th century.**
 - **Surgeon-Major Peter Shepherd and Colonel Francis Duncan** pioneered organised civilian first-aid training in Britain in **1878**, including techniques such as bandaging and splinting.

National Engineers' Day 2026: Honouring Sir M. Visvesvaraya What's the News?

India observed **National Engineers' Day** on **15 September 2026**, marking the **165th birth anniversary** of **Bharat Ratna Sir Mokshagundam Visvesvaraya** and recognising the contribution of engineers to infrastructure, technology, industry and nation-building. The 2026 observance is the **59th Engineers' Day**.

The theme for the **59th Engineers' Day** is **"Engineering Excellence for a Sustainable and Technologically Sovereign India."** It highlights sustainable development, indigenous technological capability and engineering innovation.

Why September 15?

15 September is the birth anniversary of **Sir Mokshagundam Visvesvaraya**, born in **1861 at Muddenahalli in present-day Karnataka**. He was a civil engineer, administrator and statesman noted particularly for his work in irrigation, water management, flood control and industrial development.

Sir M. Visvesvaraya

- **Full name:** Mokshagundam Visvesvaraya
- **Born:** 15 September 1861, Muddenahalli, Karnataka
- **Profession:** Civil engineer, administrator and statesman
- **Diwan of Mysore:** 1912–1918
- **Bharat Ratna:** 1955
- He died in **1962**, aged 100.

Major Contributions

- Developed and patented **automatic water-control floodgates**, first installed at the **Khadakvasla Reservoir near Pune in 1903**.
- Played an important role in developing the **Krishna Raja Sagara (KRS) Dam** across the **Cauvery River** in Karnataka.
- Advised Hyderabad on **flood-control measures** following the devastating Musi floods.
- As Diwan of Mysore, promoted **industrialisation, technical education and economic development**.
- Associated with the development of institutions and industries including the **Mysore Iron and Steel Works** and **Mysore Soap Factory**.
- His writings included **Reconstructing India** and **Planned Economy for India**, advocating industrialisation and planned economic development.

Engineers' Day 2026 Theme

Theme: *Engineering Excellence for a Sustainable and Technologically Sovereign India*

The theme focuses on two major areas:

- **Sustainable engineering:** Resource-efficient infrastructure, clean energy, climate resilience and environmentally responsible technologies.
- **Technological sovereignty:** Strengthening India's domestic capabilities in strategic and emerging technologies and reducing critical technological dependence.

Additional Info

- **National Engineers' Day:** 15 September – associated with Sir M. Visvesvaraya.
- **World Engineering Day for Sustainable Development:** 4 March – proclaimed by UNESCO.
 - The **2026 World Engineering Day** theme was **"Smart Engineering for a Sustainable Future."**
- The two observances are **different**; the World Engineering Day theme should not be confused with India's National Engineers' Day theme.

World Ozone Day 2026: Global Action for a Cooler Planet

What's the News?

- **World Ozone Day**, officially the **International Day for the Preservation of the Ozone Layer**, is observed every year on **16 September**.
- **2026 Theme:** **"Global Action for a Cooler Planet"**
- The 2026 observance also marks **10 years of the Kigali Amendment to the Montreal Protocol**, highlighting the global shift towards climate-friendly and energy-efficient cooling.
- India observed the **32nd World Ozone Day**, with the national celebration organised by the **Ministry of Environment, Forest and Climate Change (MoEFCC)** in Mumbai.

World Ozone Day

- The **UN General Assembly** proclaimed 16 September as the International Day for the Preservation of the Ozone Layer through **Resolution 49/114** in 1994.
- It has been observed since **1995**.
- The day commemorates the signing of the **Montreal Protocol on Substances that Deplete the Ozone Layer** in 1987.

Ozone Layer

- The **ozone layer** is concentrated mainly in the **stratosphere**.

- Ozone (O_3) absorbs most of the Sun's harmful **ultraviolet-B (UV-B) radiation**.
- Excessive UV exposure can contribute to:
 - skin cancer;
 - cataracts;
 - damage to crops and terrestrial ecosystems; and
 - harm to marine organisms.
- Major **Ozone-Depleting Substances (ODS)** include:
 - Chlorofluorocarbons (CFCs);
 - Halons;
 - Carbon tetrachloride;
 - Methyl chloroform;
 - Methyl bromide; and
 - Hydrochlorofluorocarbons (HCFCs).

Montreal Protocol

- **Adopted:** 1987
- **Objective:** Protect the stratospheric ozone layer by phasing out the production and consumption of ODS.
- It controls **nearly 100 chemicals** across different categories.
- It is supported by differentiated phase-out schedules for developed and developing countries.
- Nearly **99% of banned ozone-depleting substances** have been phased out globally.

Ozone Recovery

If current policies and compliance continue, ozone levels are projected to return to approximately 1980 levels by:

- **2040:** Most of the world
- **2045:** Arctic
- **2066:** Antarctic

Kigali Amendment

- Adopted in **Kigali, Rwanda, in 2016** as an amendment to the Montreal Protocol.
- It provides for the gradual **phase-down of Hydrofluorocarbons (HFCs)**.
- Unlike CFCs and HCFCs, **HFCs generally do not deplete the ozone layer**, but many are **potent greenhouse gases with high Global Warming Potential (GWP)**.
- Full implementation of the Kigali Amendment is estimated to avoid about **0.3–0.5°C of global warming by 2100**.

India and Ozone Protection

- India became a Party to the **Vienna Convention and Montreal Protocol in 1992**.
- India has already phased out controlled uses of:
 - **CFCs;**
 - **Carbon Tetrachloride (CTC);** and
 - **Halons.**

- India is currently implementing the accelerated phase-out of **HCFCs** and has met its 2015, 2020 and 2025 targets.
- India ratified the **Kigali Amendment in 2021**.

India's HFC Phase-down Schedule

Against its prescribed baseline, India is scheduled to reduce HFC production and consumption by:

- **2032:** 10%
- **2037:** 20%
- **2042:** 30%
- **2047:** 85%

India Cooling Action Plan

- **India Cooling Action Plan (ICAP)** was launched in **2019** by MoEFCC.
- India was among the **first countries to develop a comprehensive national cooling action plan**.
- It has a long-term approach covering:
 - reduction in cooling demand;
 - refrigerant transition;
 - improved energy efficiency;
 - alternative technologies;
 - cold chains;
 - buildings; and
 - refrigeration and air-conditioning.
- Its overarching objective is to provide **sustainable cooling and thermal comfort while delivering environmental and socio-economic benefits**.

Multilateral Fund

- The **Multilateral Fund for the Implementation of the Montreal Protocol** was established in **1991**.
- It provides financial and technical assistance to eligible developing countries for meeting their Montreal Protocol commitments.
- Its implementing agencies include:
 - **UNEP**
 - **UNDP**
 - **UNIDO**
 - **World Bank**
- More than **10,000 projects in 144 countries** have been approved, backed by around **US\$4.5 billion** in contributions.
- Between 1995 and 2021, supported projects are estimated to have avoided about **51.1 gigatonnes of CO₂-equivalent emissions**.

Additional Info

- **Vienna Convention for the Protection of the Ozone Layer**
 - Adopted in **1985**.
 - Provides the broader international framework for cooperation on ozone-layer protection.

- The **Montreal Protocol** provides legally structured controls on ozone-depleting substances under this framework.
- **Ozone vs HFCs**
 - **CFCs/HCFCs:** Ozone-depleting substances; many are also potent greenhouse gases.
 - **HFCs:** Generally do not destroy stratospheric ozone but contribute significantly to global warming.
 - Therefore, the **Montreal Protocol** initially focused on ozone depletion, while the **Kigali Amendment** extended its climate benefits through HFC phase-down.

World Bamboo Day 2026: Bamboo for a Regenerative Future

What's the News?

World Bamboo Day 2026 was observed on **18 September** to raise awareness about the environmental, economic and social importance of bamboo.

The 2026 theme is **"Bamboo for a Regenerative Future: A Global Call to Grow, Build and Prosper with Nature."** It highlights bamboo as a strategic renewable resource for **climate action, ecosystem restoration, sustainable livelihoods and low-carbon development.**

World Bamboo Day

- **Observed:** 18 September every year
- **Established:** 2009
- **Initiated by:** World Bamboo Organization (WBO)
- The observance originated in connection with the **8th World Bamboo Congress held in Bangkok, Thailand, in 2009.**
- It seeks to promote wider recognition and sustainable use of bamboo worldwide.

2026 Theme

"Bamboo for a Regenerative Future: A Global Call to Grow, Build and Prosper with Nature"

The theme focuses on moving bamboo from its recognised potential to wider practical deployment through cooperation among governments, communities, researchers, businesses and investors.

Why is Bamboo Important?

Environmental Role

Bamboo is a **perennial grass belonging to the family Poaceae** rather than a tree in botanical classification.

When sustainably managed, bamboo can support:

- **Land restoration** and soil conservation
- **Carbon sequestration** and climate mitigation
- Rehabilitation of degraded ecosystems
- Renewable biomass production
- Reduced dependence on conventional timber and some carbon-intensive materials

Economic Uses

Bamboo has applications in:

- Construction and housing
- Furniture
- Paper and pulp
- Textiles
- Handicrafts
- Food, including bamboo shoots
- Engineered bamboo products
- Energy and other bio-based products

National Bamboo Mission

India promotes bamboo cultivation and its value chain through the **National Bamboo Mission (NBM).**

- The restructured NBM was launched in **2018-19** as a **Centrally Sponsored Scheme.**
- It operates under the **Ministry of Agriculture & Farmers Welfare.**
- It focuses mainly on bamboo cultivation on **non-forest government and private lands.**
- Major interventions include:
 - Quality planting material
 - Expansion of bamboo cultivation
 - Post-harvest management
 - Treatment and seasoning facilities
 - Processing and value addition
 - Market infrastructure
 - Skill development and entrepreneurship
 - Reducing dependence on imports of bamboo and bamboo products.

Funding Pattern

Under the restructured Mission:

- **Centre : State = 60:40** for most States
- **90:10** for North-Eastern and Hilly States
- **100% Central funding** for Union Territories, Bamboo Technology Support Groups and specified national-level agencies.

Bamboo and the Indian Forest Act

Bamboo was earlier included within the definition of a **"tree"** under **Section 2(7) of the Indian Forest Act, 1927**, despite being botanically a grass.

The **Indian Forest (Amendment) Act, 2017** omitted the word **"bamboos"** from this definition. This eased restrictions on the **felling and transport of bamboo grown on non-forest land**, encouraging farmers and

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private landholders to undertake bamboo cultivation. Bamboo grown in forest areas, however, remains subject to applicable forest laws and regulations.

Additional Info

World Bamboo Organization

- **World Bamboo Organization (WBO)** promotes global awareness and sustainable development of bamboo.
- It established **World Bamboo Day in 2009**.
- Its work connects bamboo with environmental conservation, livelihoods, innovation, sustainable construction and international cooperation.

Sustainable Development Goals

Bamboo-based development has links with several **UN Sustainable Development Goals**, particularly:

- **SDG 9:** Industry, Innovation and Infrastructure
- **SDG 12:** Responsible Consumption and Production
- **SDG 13:** Climate Action
- **SDG 17:** Partnerships for the Goals

International Equal Pay Day 2026 Highlights Global Gender Pay Gap

What's the News?

International Equal Pay Day was observed on **18 September** to promote the principle of **equal pay for work of equal value** and highlight the persistent gender pay gap worldwide.

For 2026, the **International Labour Organization (ILO)** highlighted the message "**Equal Pay for Work of Equal Value – For Everyone, Everywhere.**" The United Nations does not list a separate official annual theme on its observance page.

International Equal Pay Day

- **Observed:** 18 September every year
- **First observed:** 2020
- **Established by:** United Nations General Assembly
- **UN Resolution:** A/RES/74/142
- The resolution was adopted by the UN General Assembly in 2019 **without a vote**.
- The observance promotes equal remuneration and draws attention to discrimination and structural inequalities affecting women in labour markets.

Gender Pay Gap

The **gender pay gap** refers broadly to the difference between the earnings of women and men.

- The UN's International Equal Pay Day page estimates the global gender pay gap at around **20%**.
- The ILO's 2026 message states that women globally earn about **18% less than men**.
- Women employees globally earn roughly **78 cents for every dollar earned by men**, according to current UN material.
- Women also spend **more than 2.5 times as many hours as men on unpaid care work**.

Differences between headline estimates can arise from the datasets, populations and wage measures used.

Why Does the Pay Gap Persist?

Major factors identified by international organisations are:

- Occupational and sectoral segregation
- Undervaluation of work predominantly performed by women
- Unequal unpaid care responsibilities
- Discriminatory recruitment and promotion practices
- Lower representation of women in higher-paid and leadership positions
- Greater concentration of women, particularly migrant women, in informal and insecure employment
- **"Motherhood penalty"**, where women's earnings and career progression can be adversely affected after having children.

Equal Pay for Work of Equal Value

The concept goes beyond paying men and women equally for identical jobs.

Under **ILO Equal Remuneration Convention, 1951 (Convention No. 100)**, men and women should receive equal remuneration for work assessed to be of **equal value**, even when the jobs themselves are different.

Objective job evaluation can consider factors such as:

- Skills and qualifications
- Responsibility
- Effort
- Working conditions

The Convention was adopted in **1951** and entered into force in **1953**. India ratified it in **1958**.

Equal Pay International Coalition

The **Equal Pay International Coalition (EPIC)** is a global multi-stakeholder initiative aimed at accelerating progress towards equal pay for women and men.

It is led by:

- **International Labour Organization (ILO)**
- **UN Women**
- **Organisation for Economic Co-operation and Development (OECD)**

EPIC works with governments, employers, workers' organisations and other stakeholders to promote legislation, pay transparency, objective job evaluation and social dialogue.

India and Equal Pay

Constitutional Provisions

The Constitution provides a broad framework for gender equality:

- **Article 14:** Equality before law and equal protection of laws
- **Article 15:** Prohibits discrimination on grounds including sex
- **Article 16:** Equality of opportunity in public employment
- **Article 39(d):** Directive Principle requiring the State to secure **equal pay for equal work for both men and women.**

Code on Wages, 2019

The **Code on Wages, 2019** has subsumed the **Equal Remuneration Act, 1976**, along with three other central wage laws.

It prohibits discrimination on the ground of gender in:

- Wages for the same work or work of a similar nature
- Recruitment for such work, subject to legally permitted restrictions.

The Code on Wages became operational along with the other three Labour Codes from **21 November 2025**.

Link with Sustainable Development Goals

Equal pay is particularly linked with:

- **SDG 5 – Gender Equality**
- **SDG 8 – Decent Work and Economic Growth**
 - **Target 8.5:** Achieve full and productive employment and decent work for all women and men, and **equal pay for work of equal value.**
- **SDG 10 – Reduced Inequalities**

Achieving pay equity supports women's economic empowerment, reduces lifetime income disparities and improves access to pensions and social protection.

International Red Panda Day 2026

Highlights Conservation of Endangered Red Panda

What's the News?

- **International Red Panda Day 2026** was observed on **19 September**, the **third Saturday of September**.
- The observance aims to raise awareness about **red panda conservation, habitat protection and threats such as forest fragmentation, poaching and illegal wildlife trade.**

- It is organised by the **Red Panda Network (RPN)** and involves zoos, schools and conservation organisations worldwide.

International Red Panda Day

- **Observed:** Third Saturday of September every year.
- **2026 Date:** **19 September 2026.**
- **Initiated by:** **Red Panda Network.**
- **Objective:** Conservation of wild red pandas and their Himalayan forest habitats through awareness, education and community participation.
- **2026 Theme:** No separate official theme was announced in the referenced material; the broader focus remains red panda and habitat conservation.

Red Panda

- **Scientific name:** *Ailurus fulgens*
- **Family:** Ailuridae
- **Order:** Carnivora
- It is the **only living member of the family Ailuridae** and is not closely related to the giant panda.
- **Habitat:** Temperate and high-altitude forests with dense **bamboo understory**, generally in the Eastern Himalayas and adjoining parts of China and Myanmar.
- **Diet:** Predominantly bamboo; it also consumes fruits, insects, eggs and other plant material.
- It is mainly **arboreal, solitary and crepuscular/nocturnal.**

Distribution in India

- The red panda occurs mainly in the **Eastern Himalayan region**, particularly:
 - **Sikkim**
 - **Arunachal Pradesh**
 - **Northern West Bengal**, especially the **Darjeeling–Kalimpong landscape.**
- **Singalila National Park** and **Neora Valley National Park** in West Bengal are important habitats.
- The **Red Panda is the State Animal of Sikkim.**

Conservation Status

- **IUCN Red List:** Endangered
- **CITES:** Appendix I
- **Wildlife (Protection) Act, 1972:** Schedule I
- The global population is estimated at **fewer than 10,000 breeding individuals.**

Major Threats

- **Habitat loss and degradation** due to forest clearance.
- **Habitat fragmentation** from roads, settlements and infrastructure.

- Loss of **bamboo and nesting trees**.
- **Poaching and illegal wildlife trade**.
- Accidental trapping in snares intended for other wildlife.
- Increasing human and livestock pressure in Himalayan forest landscapes.

Additional Info

- **Red Panda Network (RPN)**
 - International conservation organisation focused on protecting **wild red pandas and their habitat**.
 - Works substantially through **community-based conservation, education and habitat protection**.
 - International Red Panda Day promotes participation through conservation education, zoo programmes and public awareness activities.
- **Ecological Importance**
 - Red pandas are strongly dependent on healthy **temperate Himalayan forests and bamboo ecosystems**.
 - Their conservation also contributes to protection of the wider **Eastern Himalayan biodiversity hotspot and forest ecosystem**.

World Alzheimer's Day 2026 Highlights Importance of Early Dementia Diagnosis

What's the News?

- **World Alzheimer's Day** is observed every year on **21 September** as part of **World Alzheimer's Month**.
- **Theme 2026: "The Earlier You Know, The More You Can Do: A Dementia Diagnosis Matters."**
- The 2026 campaign focuses on **early diagnosis**, reducing stigma and discrimination, and improving timely access to treatment, care and support for people living with dementia.
- World Alzheimer's Day is coordinated globally by **Alzheimer's Disease International (ADI)** and was first observed in **1994**, marking ADI's 10th anniversary.

Alzheimer's Disease

- **Alzheimer's disease** is a progressive neurological disorder that damages brain cells and gradually affects **memory, thinking, behaviour and ability to perform daily activities**.

- It is the **most common form of dementia**, accounting for around **60–70% of dementia cases**.
- Dementia is **not an inevitable consequence of ageing**, although increasing age is its strongest known risk factor.

Common Early Symptoms

- Memory loss affecting everyday activities.
- Difficulty solving problems or making decisions.
- Confusion about time or place.
- Difficulty completing familiar tasks.
- Problems finding words or following conversations.
- Frequently losing or misplacing objects.
- Changes in mood, personality or social behaviour.

Global Burden

- Around **57 million people** were living with dementia worldwide in 2021.
- **Over 60%** live in low- and middle-income countries.
- Nearly **10 million new cases** occur globally each year.
- Dementia is the **7th leading cause of death globally** and a major cause of disability and dependency among older persons.

Dementia in India

- A nationally representative **Longitudinal Ageing Study in India (LASI)**-based study estimated dementia prevalence among Indians aged **60 years and above at 7.4%**, equivalent to about **8.8 million people**.
- The study found prevalence to be higher among:
 - **Women:** about **9.0%**, compared with 5.8% among men.
 - **Rural population:** about **8.4%**, compared with 5.3% in urban areas.
- If prevalence remains unchanged, the number of Indians aged 60+ living with dementia was projected to reach about **16.9 million by 2036**.

World Alzheimer Report 2026

- Alzheimer's Disease International released the **World Alzheimer Report 2026 – "A New Era in Dementia Clinical Trials."**
- It examines the growing role of **clinical trials in dementia diagnosis and treatment**, including issues related to recruitment, ethics, accessibility and inclusion.

- ADI reported **158 drugs being studied across 192 clinical trials** in the dementia-treatment pipeline.

Dementia Risk Reduction

Important modifiable risk factors include:

- Hypertension and diabetes.
- Smoking and harmful alcohol consumption.
- Physical inactivity.
- Obesity.
- Hearing and vision loss.
- Social isolation.
- Air pollution.
- Traumatic brain injury and stroke.

WHO's updated 2026 guidelines state that **up to 45% of dementia risk could potentially be prevented or delayed** by addressing modifiable risk factors across the life course.

India's Response

- **National Programme for Health Care of the Elderly (NPHCE)**
 - Launched by the **Ministry of Health & Family Welfare** in 2010-11.
 - Provides preventive, curative, rehabilitative and long-term healthcare for elderly persons through primary, secondary and tertiary healthcare facilities.
 - Includes **Regional Geriatric Centres** and **National Centres for Ageing**.
- **Longitudinal Ageing Study in India (LASI)**
 - Nationally representative study of India's ageing population.
 - Implemented through the **International Institute for Population Sciences (IIPS), Mumbai**.
 - Studies health, healthcare, socioeconomic conditions and ageing-related issues among older Indians.

Additional Info

- **Alzheimer's Disease International (ADI)**
 - International federation of Alzheimer and dementia associations.
 - Established in **1984**.
 - Coordinates **World Alzheimer's Month** and World Alzheimer's Day globally.
 - Publishes the annual **World Alzheimer Report**.
- **World Alzheimer's Month**
 - Observed throughout **September**.

- Introduced to extend dementia-awareness activities beyond World Alzheimer's Day.
- Focuses on awareness, early diagnosis, caregiver support and reduction of stigma surrounding dementia.

International Day of Peace 2026 Observed with Theme 'Invest in Peace'

What's the News?

- **International Day of Peace**, also known as **World Peace Day**, is observed annually on **21 September**.
- **Theme 2026: "Invest in Peace – For Everyone, Everywhere, Every Day."**
- The theme recognises **"everyday architects of peace"**—individuals and communities working locally to promote dialogue, cooperation, stability and peaceful societies.
- The observance promotes the ideals of **peace, non-violence and cessation of hostilities** worldwide.

Theme 2026

- **"Invest in Peace – For Everyone, Everywhere, Every Day"** stresses that peacebuilding is not limited to governments, diplomats or international organisations.
- It links peace with:
 - Safety and dignity.
 - Equal opportunities.
 - Community cooperation.
 - Sustainable development.
 - Human rights.
 - Dialogue and conflict prevention.
- The campaign highlights the contribution of volunteers, civil-society actors, peacekeepers and other community-level peacebuilders.

International Day of Peace

- The **United Nations General Assembly (UNGA)** established the International Day of Peace through **Resolution 36/67 in 1981**.
- The **first International Day of Peace was observed in 1982**.
- Originally, it was observed on the **third Tuesday of September**, coinciding with the opening of the regular UN General Assembly session.
- Through **UNGA Resolution 55/282 (2001)**:
 - **21 September** was fixed as the annual date.
 - The day was designated as a period of **global ceasefire and non-violence**.

- Countries and peoples were invited to observe a cessation of hostilities during the day.

UN Peace Bell

- A major tradition associated with the day is the ringing of the **Peace Bell at UN Headquarters in New York**.
- The Peace Bell was presented by the **United Nations Association of Japan in 1954**.
- It was made from coins donated by representatives of about **60 countries**, symbolising international solidarity and the aspiration for peace.

Peace and the United Nations

- Maintaining **international peace and security** is one of the principal purposes of the United Nations under its Charter.
- The UN peace architecture includes:
 - **Preventive diplomacy and mediation**
 - **Peacekeeping operations**
 - **Peacebuilding**
 - **Disarmament**
 - **Promotion of human rights and sustainable development**
- The 2026 campaign particularly emphasises investment in **health, education, nutrition, social protection, trustworthy institutions and dialogue** as foundations for sustainable peace.

Additional Info

- **UN Peacekeeping**
 - Helps conflict-affected countries create conditions for lasting peace.
 - Peacekeeping missions may include military, police and civilian personnel.
 - Activities can include protection of civilians, support for political processes, rule of law and institution-building.
- **Sustainable Development Goal 16**
 - **SDG 16: Peace, Justice and Strong Institutions.**
 - Seeks to promote peaceful and inclusive societies, provide access to justice and develop effective, accountable and inclusive institutions.
- **Declaration and Programme of Action on a Culture of Peace**
 - Adopted by the UN General Assembly in **1999**.
 - Promotes non-violence, dialogue, tolerance, human rights and peaceful resolution of disputes.

11th Ayurveda Day 2026: "Ayurveda for a Healthier Tomorrow"

What's the News?

- India is observing the **11th Ayurveda Day on 23 September 2026** with the theme **"Ayurveda for a Healthier Tomorrow"** (स्वस्थ भविष्य के लिए आयुर्वेद).
- The national celebration is being organised under the **Ministry of Ayush**, with the main programme in **Nagpur, Maharashtra**.
- The observance focuses on **evidence-based Ayurveda, research and innovation, preventive healthcare, community wellbeing and integration with modern healthcare systems**.

Ayurveda Day

- Ayurveda Day was first observed in **2016**.
- Earlier, it was celebrated on **Dhanvantari Jayanti/Dhanteras**, resulting in a changing date every year.
- From **2025**, the Government designated **23 September as the fixed annual date** for Ayurveda Day through a Gazette notification.
- The fixed date provides the observance with a **universal calendar identity** and facilitates wider international participation.
- More than **150 countries participated in the 2024 observance**.

Theme: "Ayurveda for a Healthier Tomorrow"

The 2026 theme emphasises the use of Ayurveda for:

- **Preventive and holistic healthcare**
- **Evidence-based research and innovation**
- **Addressing non-communicable diseases (NCDs)**
- **Strengthening community health and wellbeing**
- **Linking traditional medical knowledge with contemporary healthcare**
- **Advancing the broader vision of "One Health, One Future"**.

India's Growing Ayush Ecosystem

- **12,260 Ayushman Arogya Mandirs (Ayush)** were functional against a target of **12,500**.
- Ayush services are available alongside conventional healthcare at **13,249 public health facilities**, including:
 - **6,302 Primary Health Centres**
 - **3,191 Community Health Centres**
 - **475 District Hospitals**
 - **3,281 other health facilities**
- The government supports **25,322 Ayush doctors** and **5,666 Ayush paramedics**.

- More than **₹6,406.99 crore** was released to States/UTs under the **National Ayush Mission (NAM)** between 2014-15 and 2025-26.

Ayurveda Education and Research

- India has:
 - **593 Ayurveda colleges**
 - **45,245 undergraduate seats**
 - **5,673 postgraduate seats**
- **AYURGYAN Scheme**, launched in 2021-22, supports education, research and innovation in traditional medicine.
- The **SPARK – Studentship Programme for Ayurveda Research Ken** promotes research aptitude among undergraduate Ayurveda students.
- **CCRAS** has partnered with **Anuvadini AI** to translate Ayurveda research and educational materials into **13 Indian regional languages**.

Healthcare Integration

- **Ayush OPD services** have been integrated into the government's **eSanjeevani telemedicine platform**.
- In 2024, **IRDAI** directed insurers to facilitate coverage of different systems of medicine, including Ayurveda, subject to their underwriting policies.
- The **All India Institute of Ayurveda (AIIA), New Delhi** entered into common empanelment with the **General Insurance Council**, covering all **32 general insurers** for cashless treatment.
- Ayurveda, Siddha and Unani diagnostic terminology has also been incorporated into the **WHO International Classification of Diseases-11 (ICD-11)** framework for standardised recording.

Global Outreach

India's international Ayush cooperation includes:

- **27 country-to-country MoUs**
- **16 MoUs for Ayush Academic Chairs**
- **57 institute-to-institute MoUs**
- **46 Ayush Information Cells in 43 countries**
- **104 scholarships for foreign nationals**
- India also hosts the **WHO Global Traditional Medicine Centre (GCTM)** at Jamnagar, Gujarat.

Additional Info

- **Ministry of Ayush**
 - Established as a separate ministry in **2014**.
 - AYUSH represents **Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy**.
- **National Ayush Mission (NAM)**
 - A **Centrally Sponsored Scheme**.

- Focuses on strengthening Ayush healthcare services, educational institutions, quality control of medicines and cultivation of medicinal plants.

Ayurveda

- The term combines **“Ayu” (life)** and **“Veda” (knowledge/science)**.
- Its roots are traced to the **Rigveda**, while major classical texts include the **Charaka Samhita** and **Sushruta Samhita**.

Union Budget 2026-27

- Allocated **₹4,408 crore** to the Ministry of Ayush.
- Announced **three new All India Institutes of Ayurveda** along with measures to upgrade Ayush pharmacies and drug-testing laboratories.

World Rhino Day 2026: “Keep the Five Alive”

What's the News?

- **World Rhino Day** was observed on **22 September 2026** with the theme **“Keep the Five Alive”**.
- The observance raises awareness about the **five surviving rhinoceros species** and threats such as poaching, illegal wildlife trade, habitat loss and fragmentation.
- In India, the occasion highlighted the recovery of the **Greater One-Horned Rhinoceros**, the need for **India-Bhutan transboundary conservation**, and the initiation of **Project Rhino** for strengthening species conservation.

World Rhino Day

- World Rhino Day was first announced by **WWF-South Africa in 2010**.
- It has been observed internationally on **22 September since 2011**.
- The 2026 theme, **“Keep the Five Alive”**, refers to protecting all five surviving rhino species.

Five Living Rhino Species

- **Greater One-Horned Rhino** – India and Nepal
- **Javan Rhino** – Indonesia
- **Sumatran Rhino** – Indonesia
- **Black Rhino** – Africa
- **White Rhino** – Africa

Fewer than **27,000 rhinos** of all species remain globally.

Greater One-Horned Rhino in India

- Scientific name: **Rhinoceros unicornis**
- IUCN Red List status: **Vulnerable**
- Its major Indian populations occur in **Assam, West Bengal and Uttar Pradesh**.

- Assam recorded about **3,260 rhinos in 2026** and contains nearly **80% of the world's Greater One-Horned Rhino population**.
- Important habitats include:
 - **Kaziranga National Park**
 - **Orang National Park**
 - **Manas National Park**
 - **Pobitora Wildlife Sanctuary**
 - **Jaldapara National Park**
 - **Gorumara National Park**
 - **Dudhwa National Park**

India-Bhutan Joint Conservation

- **Manas National Park and Tiger Reserve in Assam** has witnessed a major recovery of the Greater One-Horned Rhino following a reintroduction programme initiated in **2006**.
- Its population recovered from **zero to an estimated 48 rhinos in the 2022 census**.
- Some rhinos from Manas increasingly move across the international border into **Bhutan**, creating a need for coordinated transboundary management.
- Conservation measures require cooperation in:
 - Wildlife monitoring
 - Anti-poaching measures
 - Habitat management
 - Movement corridors
 - Cross-border information sharing
- The **UNESCO World Heritage Committee** has also encouraged India and Bhutan to continue transboundary cooperation for conservation of the wider **Manas landscape**.

Project Rhino

- The Government has initiated **Project Rhino** to strengthen conservation of the Greater One-Horned Rhinoceros.
- It will provide **financial and technical assistance to rhino range States** for:
 - Protection and anti-poaching measures
 - **Habitat management**
 - **Genetic improvement**
 - Understanding **population dynamics**
- The initiative builds on India's experience in restoring rhino populations in areas such as **Manas and Dudhwa**.

Additional Info

- **Indian Rhino Vision 2020 (IRV 2020)**
 - Conservation programme involving the **Assam Forest Department, Bodoland Territorial Council, WWF-India and International Rhino Foundation**.

- Used **translocation** to establish additional viable rhino populations, particularly in Manas.
- The programme played an important role in rebuilding the Manas rhino population after it had been wiped out by poaching and conflict.
- **Manas National Park**
 - Located in **Assam** along the Bhutan border.
 - It is a **UNESCO World Heritage Site**, National Park, Tiger Reserve and Biosphere Reserve.
 - It forms a contiguous transboundary ecosystem with protected forests in Bhutan, making bilateral conservation particularly important.
- **Major Threats to Rhinos**
 - Poaching for rhino horn
 - Illegal wildlife trade
 - Habitat loss and fragmentation
 - Invasive species and grassland degradation
 - Small and isolated populations
 - Human-wildlife conflict

International Day of Sign Languages 2026: "Declaring Deaf People's Human Rights"

What's the News?

- **International Day of Sign Languages (IDSL)** is observed annually on **23 September** to highlight the importance of sign languages in ensuring the human rights and inclusion of deaf people.
- The **2026 theme is "Declaring Deaf People's Human Rights."**
- The theme stresses recognition, protection and effective implementation of deaf people's rights, including access to education and public services through **national sign languages**.
- The year 2026 is significant as it marks **75 years of the World Federation of the Deaf (WFD)** and **20 years of the UN Convention on the Rights of Persons with Disabilities (CRPD)**.

International Day of Sign Languages

- The **UN General Assembly** proclaimed 23 September as the International Day of Sign Languages through **Resolution A/RES/72/161** in 2017.
- It was **first observed in 2018**.
- The date commemorates the establishment of the **World Federation of the Deaf** on **23 September 1951**.

- The observance seeks to promote the preservation of sign languages as part of **linguistic and cultural diversity** and their role in achieving the human rights of deaf persons.

2026 Theme

“Declaring Deaf People’s Human Rights”

- Focuses on translating formally recognised rights into practical access in areas such as:
 - Education
 - Public services
 - Employment
 - Information and communication
 - Social and political participation
- The same overarching theme is being used for the **International Week of Deaf People**, observed from **21–27 September 2026**.

Sign Languages

- Sign languages are **fully developed natural languages** with grammatical structures distinct from spoken languages.
- Globally:
 - More than **70 million deaf people** use sign languages.
 - Over **80%** live in developing countries.
 - More than **300 different sign languages** are used worldwide.
- An **International Sign** system is also used for communication at international meetings and among sign-language users from different countries.

India and Indian Sign Language

- **Indian Sign Language (ISL)** is used by the deaf community across India.
- The **Indian Sign Language Research and Training Centre (ISLRTC)**:
 - Was established in **2015**.
 - Is an autonomous organisation under the **Department of Empowerment of Persons with Disabilities (DEPwD)**, Ministry of Social Justice and Empowerment.
 - Works on ISL research, teaching, interpreter training and development of ISL resources.
 - Maintains the **Indian Sign Language Dictionary**.
- **National Education Policy (NEP) 2020, Para 4.22** provides for:
 - Standardisation of ISL across India.
 - Development of national and state curriculum materials for

students with hearing impairment.

Additional Info

Convention on the Rights of Persons with Disabilities (CRPD)

- Adopted by the UN in **2006**.
- India ratified the Convention in **2007**.
- India subsequently enacted the **Rights of Persons with Disabilities Act, 2016**, which provides the principal statutory framework for disability rights and equal participation in India.

World Federation of the Deaf (WFD)

- Established: **1951**
- Represents **140 national member organisations**.
- Works for the human, linguistic and cultural rights of deaf people, including the recognition and preservation of national sign languages.

World Maritime Day 2026: From Policy to Practice

What’s the News?

World Maritime Day 2026 was observed on **24 September**, the last Thursday of September, under the theme **“From Policy to Practice: Powering Maritime Excellence.”**

The observance is led by the **International Maritime Organization (IMO)** and highlights the importance of safe, secure, efficient and environmentally sustainable international shipping. The 2026 theme particularly focuses on translating global maritime rules into **national legislation, effective enforcement and day-to-day maritime operations**.

Theme 2026–27

Theme: *From Policy to Practice: Powering Maritime Excellence*

For the first time, IMO has adopted the World Maritime Day theme for a **two-year period – 2026 and 2027**.

The theme has three broad components:

- **From Policy to Practice:** Converting internationally agreed maritime rules into national laws, enforcement mechanisms and operational practices.
- **Powering:** Strengthening implementation through **technical assistance, capacity building, training and knowledge sharing**.
- **Maritime Excellence:** Promoting shipping that is consistently **safe, secure, efficient and environmentally sound**.

Major areas of focus include maritime safety, new technologies,

decarbonisation, digitalisation, cybersecurity, maritime security and prevention of marine pollution.

World Maritime Day

- It is a **United Nations international observance** coordinated by IMO.
- Observed annually on the **last Thursday of September**.
- It was conceived in **1978** to promote awareness of IMO's work and major maritime issues.
- Shipping transports **over 80% of world merchandise trade by volume**, making maritime transport central to global supply chains and international commerce.
- The **2026 World Maritime Day Parallel Event** is scheduled in **Busan, Republic of Korea**, on **26–27 October 2026**.

International Maritime Organization

The **International Maritime Organization (IMO)** is the UN specialised agency responsible for the global regulatory framework governing international shipping.

- **Headquarters:** London, United Kingdom
- **Members:** **176 Member States and 3 Associate Members**
- **Secretary-General:** Arsenio Dominguez
- IMO Convention adopted: **1948**
- Convention entered into force: **1958**
- IMO first met: **1959**

Its principal areas of work include:

- Maritime safety and security
- Prevention of pollution from ships
- Efficiency of navigation
- Seafarer training and certification
- Facilitation of international maritime traffic
- Maritime decarbonisation and sustainable shipping

Major IMO Conventions

- **SOLAS Convention:** Safety of Life at Sea; principal international treaty dealing with merchant-ship safety.
- **MARPOL Convention:** Prevention of pollution from ships.
- **STCW Convention:** International standards for the **training, certification and watchkeeping of seafarers**.

Additional Info

- **India and IMO**
 - India is a member of IMO.
 - India has been elected to the **40-member IMO Council for the 2026–27 biennium**.
 - It is in **Category (b)**, comprising 10 States with the largest

interests in **international seaborne trade**.

• SDG Linkages

- **SDG 9:** Industry, Innovation and Infrastructure
- **SDG 13:** Climate Action
- **SDG 14:** Life Below Water
- **SDG 17:** Partnerships for the Goals

World Lung Day 2026: “A Lifetime of Lung Health”

What's the News?

- **World Lung Day** is observed annually on **25 September** to raise awareness about lung health and the prevention and treatment of respiratory diseases.
- The **2026 theme is “A Lifetime of Lung Health.”**
- The campaign stresses protection of respiratory health across the entire life course – from early lung development and childhood growth to adulthood and healthy ageing.
- It is coordinated by the **Forum of International Respiratory Societies (FIRS)**.

Theme 2026: A Lifetime of Lung Health

The theme follows a **life-course approach**, recognising that lung health is influenced by exposures and interventions throughout life.

Its four major focus areas are:

- **Supporting healthy lung development** – particularly before birth and during early childhood.
- **Supporting healthy lung growth** – enabling children and adolescents to reach their optimal respiratory capacity.
- **Maintaining healthy lungs** – through prevention, early diagnosis and healthier environments.
- **Supporting healthy lungs throughout life** – including healthy respiratory ageing.

Threats to Lung Health

Important determinants of respiratory health include:

- **Tobacco and nicotine exposure**, including second-hand smoke.
- **Outdoor and household air pollution.**
- Respiratory infections.
- Occupational exposure to dust, fumes and hazardous substances.
- Poor access to diagnosis, medicines and healthcare.
- Environmental and climatic conditions.

Major respiratory diseases include **asthma, Chronic Obstructive Pulmonary**

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Disease (COPD), tuberculosis, pneumonia and lung cancer.

World Lung Day

- The idea emerged through the **Forum of International Respiratory Societies (FIRS)**.
- The first World Lung Day was observed on **25 September 2017**.
- It was conceived following discussions at the **2016 FIRS Assembly Meeting in Kyoto, Japan**, amid concern over the growing global burden of respiratory diseases.
- The observance promotes:
 - Prevention of respiratory disease.
 - Early diagnosis and treatment.
 - Clean air.
 - Tobacco control.
 - Vaccination.
 - Physical activity.
 - Equitable access to respiratory medicines and healthcare.

Forum of International Respiratory Societies

- **FIRS** is an international coalition of major professional respiratory societies.
- It brings together **nine leading respiratory organisations**, representing around **100,000 respiratory health professionals worldwide**.
- Members include organisations such as:
 - American Thoracic Society (ATS).
 - European Respiratory Society (ERS).
 - Asian Pacific Society of Respirology (APSR).
 - American College of Chest Physicians (CHEST).
 - International Union Against Tuberculosis and Lung Disease.
 - Global Initiative for Asthma (GINA).
 - Global Initiative for Chronic Obstructive Lung Disease (GOLD).

India Context

- **National Tuberculosis Elimination Programme (NTEP):**
 - Implements India's public-health response to tuberculosis through prevention, screening, diagnosis and treatment.
- **National Tobacco Control Programme (NTCP):**
 - Focuses on tobacco-control awareness, enforcement and implementation of measures under the **Cigarettes and Other Tobacco Products Act (COTPA), 2003**.

- **National Clean Air Programme (NCAP):**
 - Implemented by the **Ministry of Environment, Forest and Climate Change** to improve air quality in cities with persistent air-pollution problems.
 - Air pollution is an important environmental risk factor for chronic respiratory disease.
- **Healthy Lungs for Life:**
 - A global lung-health awareness campaign associated with FIRS and the European Lung Foundation.
 - Promotes **clean air, physical activity, smoking cessation, vaccination, healthy nutrition and climate action**.

World Tourism Day 2026: Digital Agenda and AI to Redesign Tourism What's the News?

- **World Tourism Day 2026** is observed on **27 September** with the theme **"Digital Agenda and Artificial Intelligence to Redesign Tourism."**
- **El Salvador** is hosting the official global celebrations.
- The theme focuses on using **AI, digital platforms and data-driven systems** to improve travel experiences, destination management, sustainability and inclusion.
- In India, the observance also highlights the expanding role of tourism in **economic growth, employment and digital transformation**.

World Tourism Day

- World Tourism Day is observed annually on **27 September**.
- The date commemorates the adoption of the **Statutes of the World Tourism Organization on 27 September 1970**.
- The observance was instituted in **1979** and celebrated for the first time in **1980**.
- It is led by **UN Tourism**, formerly known as the **United Nations World Tourism Organization (UNWTO)**.

India's Tourism Sector

Key indicators highlight tourism's economic importance:

Indicator	Latest Figure
Tourism contribution to GDP	5.22%
Tourism-supported jobs, 2023-24	8.46 crore
Domestic Tourist Visits, 2025	428.55 crore

Foreign Tourist Visits, 2025	2.53 crore
Foreign Exchange Earnings from tourism, 2025	₹2,76,831 crore

- Tourism employment increased from **6.94 crore in 2019-20 to 8.46 crore in 2023-24**.
- Domestic Tourist Visits increased substantially from **67.7 crore in 2021 to 428.55 crore in 2025**.

Digital Transformation of Tourism

India is developing a more technology-enabled tourism ecosystem through:

- **e-Visa**
 - Introduced initially for nationals of **43 countries**.
 - Expanded to nationals of **172 countries**.
 - Entry through e-Visa is available at **88 international ports**.
- **Incredible India Digital Platform**
 - Provides digital information and services for tourists.
 - Supports destination discovery and travel planning.
- **NIDHI+**
 - **National Integrated Database of Hospitality Industry**.
 - Creates a digital database of accommodation establishments and tourism-service providers.
- **Artificial Intelligence**
 - Personalised travel recommendations.
 - Multilingual assistance and translation.
 - Visitor-flow and crowd management.
 - Data-based destination planning.
 - Improved accessibility and customer services.

New Tourism Initiatives

- **National Digital Tourism Stack**
 - Designed as digital public infrastructure for the tourism sector.
 - Intended to make tourism services and destinations more **discoverable, accessible and trustworthy**.
- **Dekho Apna Desh 2.0**
 - Focuses on promoting **lesser-known and tourism-ready destinations**.
 - Seeks to distribute tourist footfall more evenly across destinations.

Additional Info

- **UN Tourism**
 - Former name: **UN World Tourism Organization (UNWTO)**.

- UN specialised agency responsible for promoting responsible, sustainable and accessible tourism.
- Headquarters: **Madrid, Spain**.
- **Tourism Satellite Account (TSA)**
 - Statistical framework used to measure tourism's **direct and indirect contribution to GDP and employment**.
 - India's estimated **5.22% tourism contribution to GDP** is based on TSA calculations.
- **Related Indian initiatives**
 - **Swadesh Darshan 2.0**: Development of sustainable and responsible tourism destinations.
 - **PRASHAD: Pilgrimage Rejuvenation and Spiritual Heritage Augmentation Drive** for developing pilgrimage and spiritual tourism destinations.
 - **UDAN**: Improves regional air connectivity, including access to tourism destinations.

Bhagat Singh's 119th Birth Anniversary Commemorated

What's the News?

- The **119th birth anniversary of Shaheed Bhagat Singh** was commemorated on **28 September 2026**, remembering his role in India's revolutionary freedom movement.
- Prime Minister **Narendra Modi** paid tribute to Bhagat Singh, highlighting his courage, sacrifice and influence on India's youth.
- Bhagat Singh is remembered for his association with the **Hindustan Socialist Republican Association (HSRA)**, revolutionary activities against British rule, political writings and advocacy of socialism and social equality.

Bhagat Singh

- **Born**: 1907
- **Birthplace**: **Banga village, Lyallpur district, Punjab Province, British India**, now in Pakistan.
- **Parents**: Kishan Singh and Vidyavati.
- Studied at **National College, Lahore**, founded by Lala Lajpat Rai.
- His political thought increasingly emphasised **anti-imperialism, socialism, secularism, equality and opposition to economic exploitation**.

Revolutionary Organisations

- **Naujawan Bharat Sabha**

- Established in **Lahore in 1926** by Bhagat Singh and his revolutionary associates.
- Sought to mobilise **students, workers and peasants** against British colonial rule.
- Promoted nationalist, revolutionary and egalitarian ideas.
- **Hindustan Socialist Republican Association (HSRA)**
 - Evolved from the **Hindustan Republican Association (HRA)**.
 - Bhagat Singh was among the founder-members of its reorganised socialist form in **1928**.
 - Other prominent revolutionaries included **Chandrashekhar Azad, Sukhdev Thapar and Shivaram Rajguru**.

Major Revolutionary Activities

- **Saunders Killing**
 - Lala Lajpat Rai was injured during a police lathi charge while protesting against the **Simon Commission** and later died.
 - Revolutionaries planned to target police officer **James A. Scott** in retaliation.
 - In a case of mistaken identity, **John P. Saunders**, an Assistant Superintendent of Police, was killed by Bhagat Singh and his associates in **1928**.
- **Central Legislative Assembly Bombing**
 - Bhagat Singh and **Batukeshwar Dutt** threw bombs in the **Central Legislative Assembly, Delhi**, in **1929**.
 - The action protested against the **Public Safety Bill** and **Trade Disputes Bill**.
 - The bombs were intended primarily as a political demonstration rather than to cause mass casualties.
 - Both remained at the site, raised revolutionary slogans, distributed leaflets and surrendered to use the subsequent trial to publicise their political ideas.

Prison Hunger Strike

- Bhagat Singh and other revolutionaries undertook a prolonged **hunger strike in prison** against discriminatory and harsh treatment of Indian political prisoners.
- Their demands included improved prison conditions and recognition of

political prisoners as a distinct category.

- Fellow revolutionary **Jatindra Nath Das** died after a **63-day hunger strike**, drawing nationwide attention to prison conditions under colonial rule.

Lahore Conspiracy Case

- Bhagat Singh was subsequently tried in the **Lahore Conspiracy Case**, principally in connection with the killing of Saunders and associated revolutionary activities.
- **Bhagat Singh, Sukhdev Thapar and Shivaram Rajguru** were executed at **Lahore Central Jail on 23 March 1931**.
- Bhagat Singh was **23 years old** at the time of his execution.

Political Thought and Writings

- Bhagat Singh was also a prolific reader and political writer whose ideas developed beyond armed resistance to include questions of **socialism, class exploitation, rationalism and social transformation**.
- His best-known essay, **"Why I Am an Atheist"**, was written while he was imprisoned in 1930.
- He also wrote for publications such as **Kirti, Pratap and Vir-Arjun**, sometimes using pseudonyms.

Additional Info

- **Shaheed Diwas**
 - **23 March** is observed as **Shaheed Diwas** in remembrance of the martyrdom of Bhagat Singh, Rajguru and Sukhdev.
- **Inquilab Zindabad**
 - Meaning **"Long Live the Revolution"**, the slogan became closely associated with Bhagat Singh and the revolutionary movement.
- Bhagat Singh's prison writings show that his conception of revolution extended beyond political independence to broader **social and economic transformation**.

World Heart Day 2026: "Don't Miss a Beat"

What's the News?

- **World Heart Day 2026** was observed on **29 September** to raise awareness about **cardiovascular diseases (CVDs)**, their warning signs, prevention and treatment.
- The 2026 theme/campaign is **"Don't Miss a Beat"**, led by the **World Heart Federation (WHF)**.

- The campaign stresses that heart disease can **“hide in plain sight”** and focuses on recognising symptoms early, protecting heart health and encouraging stronger government action on CVDs.

Theme 2026: “Don’t Miss a Beat”

The campaign is centred on three broad actions:

- **See the Signs:** Recognise CVD symptoms that may otherwise be overlooked, including symptoms among women and people with uncontrolled hypertension.
- **Protect Your Heart:** Reduce preventable or manageable risk factors through healthy diet, physical activity, tobacco avoidance and management of blood pressure, diabetes and cholesterol.
- **Demand Action:** Encourage governments to make **equitable cardiovascular healthcare** a policy priority. Fewer than **20 countries** currently have a standalone national plan specifically addressing CVD.

Cardiovascular Diseases

CVDs are disorders of the **heart and blood vessels** and include:

- Coronary heart disease.
 - Cerebrovascular disease or stroke.
 - Rheumatic heart disease.
 - Congenital heart disease.
 - Other cardiac and vascular conditions.
- CVD remains the **leading cause of death globally**, accounting for more than **20 million deaths annually**. Heart attacks and strokes constitute the majority of CVD deaths.

Major Risk Factors

Important modifiable CVD risk factors include:

- **High blood pressure.**
- Tobacco use.
- Unhealthy diet and excessive salt intake.
- Physical inactivity.
- Diabetes/high blood glucose.
- High blood lipids/cholesterol.
- Obesity.
- Harmful alcohol consumption.
- Air pollution.

Many cardiovascular deaths are associated with risk factors that can be **prevented or effectively managed**.

World Heart Day: Background

- The concept was proposed by cardiologist **Dr Antoni Bayès de Luna**, then President of the World Heart Federation.

- The first official World Heart Day campaign was held in **2000** with the theme **“Let it Beat”**.
- It was initially observed on the **last Sunday of September**.
- From **2011 onwards, 29 September** became the fixed annual date.
- The observance is coordinated by the **World Heart Federation**, working with governments, health organisations and its global network.

India’s Response to CVDs

National Programme for Prevention and Control of Non-Communicable Diseases (NP-NCD)

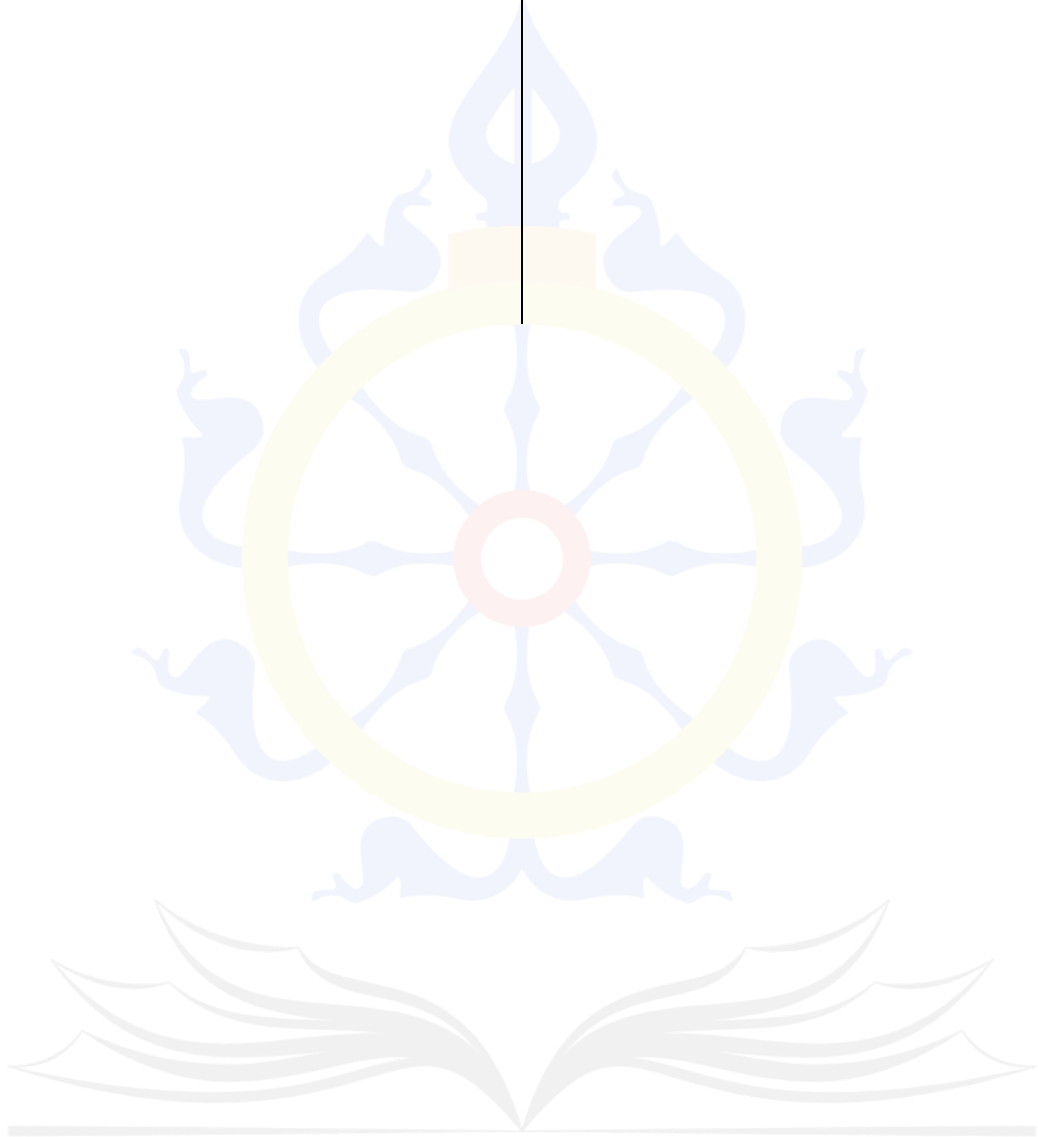
- Implemented under the **National Health Mission (NHM)**.
- It is the expanded form of the erstwhile **NPCDCS – National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke**.
- Focuses on health promotion, screening, early diagnosis, treatment, referral and follow-up.
- Population-based screening targets persons aged **30 years and above** for major NCDs, including **hypertension and diabetes**.

Other measures include:

- **Ayushman Arogya Mandirs:** Comprehensive primary healthcare, including NCD screening and management.
- **PM-JAY:** Financial protection for eligible secondary and tertiary healthcare.
- **Pradhan Mantri Bhartiya Janaushadhi Pariyojana:** Affordable generic medicines.
- **AMRIT pharmacies:** Affordable medicines and implants, including those required for cardiovascular treatment.

Additional Info

- **World Heart Federation (WHF)**
 - Global organisation dedicated to cardiovascular health.
 - Headquarters: **Geneva, Switzerland**.
 - Works through a network of **200+ member organisations** worldwide.
- **2026 campaign indicators**
 - CVD causes over **20 million deaths annually**.
 - Around **1 in 5 people** are projected to die prematurely from heart disease.
 - Around **50% of babies born with congenital heart disease** are not diagnosed at birth.
 - Fewer than **20 countries** have a dedicated national CVD plan.



State Affairs

Bihar and Jharkhand Sign Sone River Water-Sharing Agreement

What's the News?

- **Bihar and Jharkhand** have signed a Memorandum of Understanding (MoU) to share the waters of the **Sone River**, ending a dispute pending for nearly **25 years** since Jharkhand was carved out of Bihar.
- Under the agreement:
 - **Bihar: 5.75 million acre-feet (MAF).**
 - **Jharkhand: 2.00 MAF.**
- The settlement covers the **7.75 MAF** originally allocated to undivided Bihar under the **Bansagar Agreement, 1973.**
- It is expected to improve **irrigation, drinking-water availability and long-term water security**, particularly in drought-prone areas of southern Bihar and Jharkhand.

Sone Water-Sharing Agreement

- The agreement formally divides undivided Bihar's Sone water entitlement between the two successor states.
- **Bihar's beneficiaries:** Bhojpur, Buxar, Rohtas, Kaimur, Aurangabad, Arwal, Gaya and Patna districts.
- **Jharkhand's beneficiaries:** Palamu, Garhwa and other adjoining regions.
- Jharkhand has also agreed to provide the required **No Objection Certificate (NOC) for the proposed Indrapuri Reservoir.**
- The settlement can facilitate:
 - Development of new reservoir infrastructure.
 - Expansion of irrigation facilities.
 - Reduction in drinking-water shortages.
 - Proposed **Sone-Falgu river-linking project**, aimed at improving water availability in parts of southern Bihar.

Why Was There a Dispute?

- Under the **Bansagar Agreement of 1973**, **14.25 MAF** of Sone River water was allocated among:
 - **Undivided Bihar: 7.75 MAF.**
 - **Madhya Pradesh: 5.25 MAF.**
 - **Uttar Pradesh: 1.25 MAF.**
- After the creation of **Jharkhand in 2000**, no final division of undivided Bihar's **7.75 MAF** entitlement had been agreed between Bihar and Jharkhand.

- Bihar continued to hold the original allocation, while Jharkhand used part of the available water without a formally defined separate entitlement.
- Consensus on resolving the issue was advanced through the **27th Eastern Zonal Council**, followed by technical and inter-governmental consultations.

Bansagar Agreement

- It is an interstate agreement involving **Madhya Pradesh, Uttar Pradesh and Bihar** for sharing the waters of the Sone River and development of the **Bansagar Dam.**
- **Bansagar Dam** is constructed across the Sone River in Madhya Pradesh.
- The **Bansagar Control Board** was constituted to ensure coordinated and efficient implementation of the dam project.
- The planned live storage of the Bansagar Reservoir was **4 MAF**, with:
 - Madhya Pradesh: **2 MAF.**
 - Bihar: **1 MAF.**
 - Uttar Pradesh: **1 MAF.**

Additional Info

- **Sone River**
 - A major **right-bank tributary of the Ganga.**
 - Its basin is important for irrigation and agriculture across parts of central and eastern India.
 - Major water-resource infrastructure associated with it includes **Bansagar Dam and Indrapuri Barrage.**
- **Inter-State River Water Disputes**
 - **Article 262 of the Constitution** empowers Parliament to provide for adjudication of disputes concerning the use, distribution or control of waters of inter-state rivers or river valleys.
 - Parliament may also exclude the jurisdiction of the Supreme Court and other courts over such disputes.
 - The **Inter-State River Water Disputes Act, 1956** provides the statutory mechanism for adjudicating such disputes through Water Disputes Tribunals when negotiations fail.
- **Cooperative Federalism**
 - The Sone settlement was achieved through negotiations involving the **Union Government and the two**

state governments, rather than through prolonged adjudication.

- It illustrates the role of mechanisms such as **Zonal Councils** in resolving interstate issues through consultation.

Odisha Gets ₹3,406-Crore Silicon Carbide Semiconductor Facility

What's the News?

- **SiCSem Private Limited** has received approval to establish a **₹3,406.25-crore Silicon Carbide (SiC) semiconductor manufacturing facility** in Odisha.
- The unit will be set up at **IDCO Infovalley-II, Arisol Mouza, Jatni Tahasil, Khordha district**, under the jurisdiction of the **Falta Special Economic Zone (FSEZ)**.
- Spread across **21.889 acres**, the facility will manufacture **SiC diodes and SiC MOSFETs**.
- It is expected to generate about **1,270 jobs** and strengthen India's domestic capability in advanced power-semiconductor manufacturing.

Project Capacity

- **Annual production capacity:**
 - 4.8 million SiC diodes
 - 91.2 million SiC MOSFETs
- **Investment:** ₹3,406.25 crore
- **Land area:** 21.889 acres
- **Employment:** Around 1,270 persons
- **Projected exports:** ₹7,043 crore over five years
- **Projected Net Foreign Exchange (NFE) earnings:** About ₹4,523 crore over five years.
- The project has been approved by the **Unit Approval Committee (UAC) of Falta SEZ**.

Silicon Carbide Semiconductors

- **Silicon Carbide (SiC)** is a **compound semiconductor** made from silicon and carbon.
- It is a **wide-bandgap semiconductor**, allowing devices to operate efficiently at:
 - higher voltages;
 - higher temperatures; and
 - higher power levels than many conventional silicon-based devices.
- Major applications include:
 - **Electric Vehicles (EVs) and fast chargers**
 - solar power inverters and renewable-energy systems
 - railways

- data centres
- industrial power electronics
- missiles and defence equipment
- consumer appliances.

SiC MOSFET

- **MOSFET:** Metal-Oxide-Semiconductor Field-Effect Transistor.
- It acts as an electronic **power switch**.
- SiC MOSFETs reduce energy losses and enable efficient power conversion, making them particularly important for **EVs, renewable energy and high-power electronics**.

India Semiconductor Mission

- The **India Semiconductor Mission (ISM)** operates under the **Ministry of Electronics and Information Technology (MeitY)**.
- It aims to develop a comprehensive domestic semiconductor and display ecosystem covering:
 - semiconductor design;
 - fabrication;
 - assembly;
 - testing; and
 - packaging.
- SiCSem's integrated SiC project was among the semiconductor projects approved for Odisha under ISM.
- The project involves technology collaboration for **SiC fabrication and semiconductor packaging** and contributes to India's efforts to reduce dependence on imported semiconductor components.

Falta Special Economic Zone

- **Falta SEZ** functions under the **Department of Commerce, Ministry of Commerce and Industry**.
- Its administrative jurisdiction extends beyond West Bengal to SEZs in several eastern and northeastern states, including **Odisha**.
- A **Special Economic Zone (SEZ)** is a specifically notified area where units receive a specialised regulatory and fiscal framework to encourage:
 - exports;
 - investment;
 - manufacturing; and
 - employment.
- India's SEZ framework is primarily governed by the **Special Economic Zones Act, 2005** and **SEZ Rules, 2006**.

Additional Info

- **Odisha's semiconductor ecosystem**
 - SiCSem is part of Odisha's expanding semiconductor and electronics manufacturing cluster around **Info Valley, Bhubaneswar-Khordha region**.

- Odisha has also attracted projects in areas such as **advanced semiconductor packaging and glass substrates.**
- **Why SiC matters**
 - Conventional silicon remains dominant in electronics, but **SiC is particularly suited to high-power applications.**
 - Its efficiency can reduce power losses, improve EV driving range and enable smaller cooling systems.
 - Domestic SiC manufacturing has strategic relevance for **energy security, electric mobility, defence electronics and technology supply-chain resilience.**

Odisha Plans 870-Acre 'Silicon Valley' Hub at Naraj

What's the News?

- The **Odisha government** plans to develop an **870-acre "Odisha Silicon Valley" at Naraj near Cuttack** as an integrated hub for **semiconductors, electronics and information technology.**
- Chief Minister **Mohan Charan Majhi** announced the plan during **SEMICON India 2026.**
- Odisha received investment proposals worth about **₹23,600 crore**, with the potential to generate around **6,100 jobs.**
- The initiative is part of Odisha's effort to develop a complete semiconductor ecosystem and diversify from a predominantly mineral-based industrial economy towards technology-intensive manufacturing.

Odisha Silicon Valley

- **Location:** Naraj, near Cuttack.
- **Area:** Around **870 acres.**
- **Focus sectors:**
 - Semiconductor fabrication and manufacturing
 - Electronics manufacturing
 - Semiconductor packaging and related supply chains
 - Information technology and innovation
- Naraj lies along the **Cuttack-Bhubaneswar urban corridor** and has connectivity to **Paradip and Dhamra ports** and major national highways.
- Its proximity to the **Mahanadi River** is significant because semiconductor fabrication and assembly facilities

require substantial and reliable water supplies.

Semiconductor Investment in Odisha

- Odisha's semiconductor investment pipeline around **Bhubaneswar's Info Valley cluster** exceeds **₹45,000 crore.**
- The State government has approved **five semiconductor projects worth around ₹11,000 crore**, projected to create:
 - Nearly **4,500 direct jobs**
 - More than **16,000 indirect jobs**
- Two major projects approved under the **India Semiconductor Mission** are being developed by:
 - **SiCSem Pvt. Ltd.** – silicon carbide semiconductor fabrication and integrated packaging facility.
 - **3D Glass Solutions** – advanced glass-substrate packaging facility.
- Other investors include **RIR Power Electronics, Sancode Technologies and ASP Semicon.**

QuadQuantum Project

- Odisha signed a **Letter of Intent (LoI)** with **QuadQuantum** for establishing a semiconductor facility to manufacture **silicon carbide (SiC) substrate wafers.**
- **Silicon carbide (SiC):**
 - A wide-bandgap semiconductor material.
 - Particularly useful in **power electronics, electric vehicles, renewable-energy systems and other high-power applications** because of its ability to operate efficiently at high temperatures and voltages.

Policy Support

- Odisha provides an **additional 25% fiscal support** for eligible **India Semiconductor Mission-approved projects** in areas such as:
 - Semiconductor equipment manufacturing
 - Semiconductor-grade gases
 - Raw materials
 - Other supply-chain segments
- The policy framework also supports areas such as **skill development, engineer relocation, internships, R&D and international patents.**

Additional Info

- **India Semiconductor Mission (ISM)**
 - Central initiative for developing India's **semiconductor and display manufacturing ecosystem.**

- It seeks to strengthen domestic capabilities across fabrication, packaging, design and associated supply chains.
- **SEMICON India**
 - A major platform bringing together the government, semiconductor companies, investors, technology providers and international partners.
 - Odisha held engagements with companies such as **Lam Research, Applied Materials, SiCsem and 3D Glass Solutions**, besides delegations from **Japan, Sweden and Taiwan**.
- **Paradip Port:** Major port located in Odisha on the **Bay of Bengal**.
- **Dhamra Port:** Deep-draft port in Odisha's **Bhadrak district**, providing another maritime gateway for industrial and logistics operations.

Oxford Global Cities Index 2026: Delhi Ranks 268th, Highest in India

What's the News?

- **Delhi ranked 268th** among 1,000 cities in the **Oxford Economics Global Cities Index 2026**, making it the **highest-ranked Indian city**.
- Delhi improved from **273rd position in 2025**.
- Around **100 Indian cities** feature among the 1,000 cities assessed globally.
- **New York** retained the top position, followed by **London and Paris**.
- **Bengaluru**, ranked **311th**, was identified as one of the index's **"Cities to Watch."**

Global Cities Index

- Published by **Oxford Economics**, a global economic forecasting and advisory organisation.
- The index evaluates the **1,000 major urban economies** covered by Oxford Economics' Global Cities Forecasting Service.
- Cities are assessed across **five categories**:
 - **Economics:** economic size, structure and growth potential.
 - **Human Capital:** education, skills, labour-force strength and ability to attract talent.
 - **Quality of Life:** income, housing, health, safety and access to amenities.

- **Environment:** air quality, green space, emissions, climate risks and resilience.
- **Governance:** institutional stability, regulatory quality, rule of law and government effectiveness.
- Each category receives a **0–100 score**, which contributes to the city's overall score.
- The index combines current indicators with **economic forecasts**, making it partly forward-looking.

India's Rankings

Indian City	Global Rank
Delhi	268
Bengaluru	311
Mumbai	330
Chennai	381
Hyderabad	421
Pune	427
Thrissur	477
Kochi	489
Kolkata	496
Kozhikode	499

- No Indian city entered the **global top 250**.
- **55 Indian cities** feature among the world's **100 fastest-growing city economies**, highlighting India's increasing contribution to global urban economic growth.

Delhi's Performance

Delhi received an **overall score of 57.6**.

Category	Delhi's Global Rank
Human Capital	13
Economics	116
Governance	415
Quality of Life	781
Environment	915

- **Human Capital** is Delhi's strongest component, reflecting its large skilled workforce, educational base and labour-market scale.
- Its relatively low **Quality of Life and Environment rankings** considerably reduce its overall position.
- Delhi is currently estimated to be the **63rd-largest city economy globally** and is projected to rise to around **14th by 2050**, with economic output exceeding **\$2 trillion**.

Top Global Cities

Rank	City	Country
1	New York	United States
2	London	United Kingdom
3	Paris	France
4	Seattle	United States
5	San Francisco	United States
6	Dublin	Ireland

7	Boston	United States
8	San Jose	United States
9	Tokyo	Japan
10	Zurich	Switzerland

- European and North American cities dominate the higher positions; they account for **78 of the top 100 cities**.

Bengaluru: "City to Watch"

- Bengaluru ranked **311th globally**, improving by **20 positions**.
- It recorded an overall index score of **53.2**.
- Category scores include:
 - Economics: **55.5**
 - Human Capital: **61.8**
 - Quality of Life: **41.3**
 - Environment: **62.8**
 - Governance: **57.4**
- Oxford Economics included Bengaluru in its new "**Cities to Watch**" category, highlighting cities expected to gain economic and global significance.
- Bengaluru's **real GDP is projected to grow by about 9.2% annually during 2026–30**, placing it among the fastest-growing major urban economies.

Additional Info

- Oxford Economics**
 - Established as an economic forecasting organisation associated originally with **Oxford University's business community**.
 - Provides economic forecasts, modelling and city-level analysis covering economies worldwide.
 - It is separate from the **University of Oxford**.
- Urban Growth Outlook**
 - Oxford Economics expects **Indian and Chinese cities** to account for an increasingly large share of global urban economic growth toward 2050.
 - Large Indian cities combine strong **population growth, workforce expansion and productivity gains**, but face constraints relating to infrastructure, environment and urban liveability.
- Do not confuse the index with:**
 - Kearney Global Cities Index** – published by Kearney.
 - Global Financial Centres Index (GFCI)** – published by Z/Yen Group in partnership with the China Development Institute.
 - Oxford Economics Global Cities Index** – evaluates 1,000 cities

across Economics, Human Capital, Quality of Life, Environment and Governance.

Gujarat Restructures Porbandar Forest Division for Asiatic Lion Rehabilitation

What's the News?

- The **Gujarat Government** has reorganised the **Porbandar Forest Division** to strengthen forest administration and facilitate **Asiatic lion rehabilitation in the Barda landscape**.
- The restructuring changes forest-range boundaries, village and beat jurisdictions and transfers certain forest areas between divisions.
- The move supports the development of **Barda Wildlife Sanctuary as a second habitat for Asiatic lions**, reducing excessive dependence on the Greater Gir landscape.

Porbandar Forest Division Reorganisation

Administrative changes include:

- Porbandar Range**
 - Area: **6,840.84 hectares**
 - Coverage: **80 villages**
 - Beats include Porbandar City, Gosabara, Mokar, Visavada, Kantela, Madhavpur and Satiya.
- Ranavav Range**
 - Area: **13,051.25 hectares**
 - Coverage: **27 villages**
 - Includes Godana, Bileshwar, Savdivadar and Ranavav beats.
- Bhanvad Range**
 - 305.94 hectares** from the Jamnagar Forest Division's RFW Bhatia Range have been transferred to the Bhanvad Range under Porbandar Forest Division.
 - The transferred area includes forests associated with villages such as Kandarda Jogana, Sajdiyala, Juna and Jambusar.
- Kutiyana, Porbandar Social Forestry and Ranavav Social Forestry ranges** have also been brought under the administrative control of the Porbandar Forest Division.
- Provision has been made for **two Assistant Conservators of Forests** to strengthen administration.

Barda Wildlife Sanctuary

- Located across **Porbandar and Devbhumi Dwarka districts** of Gujarat.
- Area: **192.31 sq. km**.

- It is being developed as a **second home for Asiatic lions** outside their principal Greater Gir landscape.
- Lions historically occurred in Barda until **1879**. A male lion naturally recolonised the sanctuary in **2023**, after about **143 years**.
- The population subsequently increased to **17 lions – 6 adults and 11 cubs**.

Habitat and Prey-Base Development

A viable second lion habitat requires sufficient natural prey. Therefore:

- The Gujarat Forest Department has undertaken translocation of **spotted deer (chital)** and **sambar** from the Gir Protected Area to Barda.
- Habitat improvement, grassland management, veterinary care, disease surveillance and wildlife-corridor management are also part of the conservation strategy.
- Around **₹180 crore** worth of wildlife-conservation initiatives have been associated with strengthening the Barda landscape and related lion-conservation measures.

Project Lion

- **Project Lion** was announced in **2020** for the long-term conservation of the Asiatic lion.
- It follows a **landscape-level conservation approach**, rather than restricting conservation measures to Gir National Park alone.
- Key objectives include:
 - Securing and restoring lion habitats.
 - Developing wildlife corridors and satellite populations.
 - Strengthening disease surveillance and veterinary facilities.
 - Increasing community participation and livelihood opportunities.
 - Improving scientific monitoring and conservation technology.
- The Union Environment Ministry has approved a **10-year lion-conservation project with an outlay of ₹2,927.71 crore**.

Additional Info

- **Asiatic Lion**
 - Scientific name: ***Panthera leo persica***.
 - India's wild Asiatic lion population is confined to **Gujarat's Saurashtra landscape**.

- Population increased from **674 in 2020 to 891 in 2025**, an increase of about **32%**.
- Their distribution has expanded to roughly **35,000 sq. km** across the wider Saurashtra landscape.
- The Asiatic lion is included in **CITES Appendix I**, providing the highest level of international trade protection under CITES.

- **Why a second habitat matters**

- A geographically dispersed lion population reduces risks associated with concentrating most animals in one landscape.
- Major threats include **disease outbreaks, natural disasters, habitat pressures and human-wildlife conflict**.
- Gujarat has also established **lion gene-pool centres at Rampara in Morbi and Satvirda in Porbandar district**.

Defence

IAF Successfully Tests Indigenous Khagantak-243 Long-Range Glide Bomb

What's the News?

- The **Indian Air Force (IAF)** successfully conducted a drop trial of the indigenously designed and developed **Khagantak-243 Long-Range Glide Bomb (LRGB)**.
- The trial met its stated objectives and strengthens India's indigenous **stand-off precision-strike capability**.
- Khagantak-243 is a **300-kg-class precision-guided munition** with a reported range of **over 140 km** when released from high altitude.
- It has been developed jointly by **JSR Dynamics** and **Bharat Electronics Limited (BEL)** under India's defence-indigenisation push.

Khagantak-243?

- **Type:** Air-launched Long-Range Glide Bomb
- **Category:** Stand-off precision-guided munition
- **Weight class:** Around **300 kg**
- **Reported range:** More than **140 km** when released from around **12,000 metres altitude**
- **Warhead:** Mk-81 general-purpose blast-fragmentation type
- **Design:**
 - Cylindrical body
 - Swivel-type mid-body glide wings
 - Five aft control surfaces
- **Initial integration platform:** Su-30MKI fighter aircraft.

Guidance System

Khagantak-243 reportedly employs multiple guidance mechanisms to improve accuracy and survivability in contested environments.

- **Mid-course guidance:**
 - Inertial Navigation System (**INS**)
 - Jamming-resistant satellite-navigation inputs
- Depending on configuration, terminal guidance can incorporate:
 - **Electro-Optical/Infrared (EO/IR)** seeker
 - Passive-homing systems
- The wider Khagantak family follows a **modular design**, allowing different guidance and warhead configurations according to mission requirements.

How Does a Glide Bomb Work?

- A glide bomb is released from an aircraft but, unlike a conventional free-fall bomb, uses **aerodynamic wings and control surfaces** to travel a substantial horizontal distance towards its target.
- It generally **does not require continuous propulsion** like a cruise missile.
- Greater release altitude provides more potential glide range.
- Precision guidance enables the weapon to correct its flight path while approaching the designated target.

Stand-off Strike

A **stand-off weapon** allows an aircraft to attack a target from outside or near the edge of heavily defended airspace.

Advantage: The launching aircraft can engage high-value targets while reducing its exposure to enemy **surface-to-air missiles and air-defence systems**.

Development Partners

- **JSR Dynamics**
 - Indian private-sector defence company based in Nagpur.
 - Responsible for major elements of the **weapon body and control systems**.
- **Bharat Electronics Limited (BEL)**
 - Defence Public Sector Undertaking under the **Ministry of Defence**.
 - Provides **electronics and guidance subsystems** for Khagantak-243.
 - The IAF had earlier placed an order with BEL for an undisclosed number of Khagantak-243 munitions.

Why is it Significant?

- **Enhanced Precision Strike:** Enables the IAF to strike targets from long distances with greater accuracy.
- **Aircraft Survivability:** Stand-off employment reduces the need for fighter aircraft to penetrate dense enemy air-defence zones.
- **Lower Import Dependence:** Adds an indigenous option to India's inventory of precision-guided air-to-ground weapons.
- **Public-Private Collaboration:** Combines capabilities of private-sector **JSR Dynamics** and public-sector **BEL**.
- **Aatmanirbhar Bharat:** Supports domestic development and production of

sophisticated defence systems instead of dependence on imported munitions.

- **Cost-effective Capability:** Unpowered glide weapons can provide long-range precision-strike capability without the complex propulsion system required by cruise missiles.

Additional Info

- **Su-30MKI**
 - Twin-engine, twin-seat multirole fighter operated by the Indian Air Force.
 - Developed from Russia's Su-30 family and produced in India under licence by **Hindustan Aeronautics Limited (HAL)**.
 - It is also used as a platform for several major Indian stand-off weapons.
- **INS – Inertial Navigation System**
 - Uses onboard motion sensors to calculate a weapon's position and movement.
 - Does not require continuous external radio signals, making it useful when satellite-navigation signals are degraded or jammed.
- **BEL**
 - Full form: **Bharat Electronics Limited**
 - Administrative Ministry: **Ministry of Defence**
 - Headquarters: **Bengaluru**
 - Major Indian producer of defence electronics, including radars, communication systems and electronic-warfare equipment.

Ahuti Mk II Becomes India's Fastest Multirotor UAV

What's the News?

- Hyderabad-based defence-tech startup **Apollyon Dynamics** has developed **Ahuti Mk II**, an electric multirotor interceptor UAV that achieved a certified top speed of **498 kmph**.
- The achievement was recognised by the **India Book of Records** as the maximum speed achieved by a multirotor UAV in India.
- It surpassed the previously cited Indian multirotor benchmark of about **325 kmph**.
- Unlike conventional drones designed primarily for surveillance or payload delivery, Ahuti Mk II is intended to **intercept hostile drones and loitering munitions**.

Ahuti Mk II?

- **Developer:** Apollyon Dynamics

- **Type:** Electric multirotor interceptor UAV
- **Top speed:** **498 kmph**
- **Purpose:** Counter-drone/interceptor operations
- **Targets:** Hostile UAVs and loitering munitions
- **Incubated at:** **BITS Pilani, Hyderabad Campus**
- The platform evolved from the original **Ahuti**, which achieved around **300 kmph in 2025**.
- The Mk II's speed represents an improvement of about **66%** over the original platform.

How Was the High Speed Achieved?

- Ahuti Mk II was substantially redesigned specifically for the **high-speed interception role**.
- Its:
 - Airframe
 - Propulsion system
 - Motor configuration

underwent around **10 design iterations**.

- The electric propulsion system can reportedly draw a burst current of approximately **400 amperes**, enabling rapid acceleration and high speed.
- The design prioritises **speed, autonomy and cost efficiency** rather than the hovering endurance typical of conventional multirotor UAVs.

Why is it Significant?

- **Counter-Drone Capability:** High speed enables the interceptor to rapidly close the distance with incoming hostile UAVs.
- **Response to Loitering Munitions:** Such systems are increasingly relevant because low-cost one-way attack drones can overwhelm conventional air-defence networks.
- **Cost-Effective Defence:** Interceptor drones can potentially provide a cheaper response to inexpensive aerial threats than using high-cost surface-to-air missiles for every target.
- **Indigenous Defence Technology:** Highlights the growing role of Indian defence startups in developing autonomous and unmanned military systems.
- **Reduced Personnel Exposure:** Unmanned interceptors can undertake high-risk engagements without directly exposing military personnel.

Multirotor UAV?

A **multirotor UAV** uses multiple rotors to generate lift, propulsion and directional control.

Common configurations include:

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- **Quadcopter:** 4 rotors
- **Hexacopter:** 6 rotors
- **Octocopter:** 8 rotors

Advantages

- Vertical take-off and landing (**VTOL**)
- Ability to hover
- High manoeuvrability
- No conventional runway required

Limitations

- Generally lower endurance than fixed-wing UAVs
- High energy consumption
- Speed is normally sacrificed in favour of stability and hovering

Ahuti Mk II is unusual because its design emphasises **extreme speed rather than prolonged hovering**.

Interceptor Drone?

An **interceptor drone** is designed to detect, pursue and neutralise hostile aerial systems.

Possible counter-drone methods include:

- Physical interception
- Kinetic engagement
- Electronic warfare
- Radio-frequency/GNSS jamming
- Directed-energy systems

Ahuti Mk II focuses on **rapid physical interception**, making speed a critical operational parameter.

Additional Info

- **Loitering Munition**
 - An unmanned weapon capable of remaining airborne over a target area before attacking a selected target.
 - Combines characteristics of a **UAV and guided munition**.
 - Often called a **one-way attack drone** or, informally, a kamikaze drone.
- **Apollyon Dynamics**
 - Hyderabad-based defence technology startup.
 - Founded by **Jayant Khatri and Sourya Choudhary**.
 - Incubated at **BITS Pilani, Hyderabad Campus**.
 - The company says it has already fielded some unmanned systems with **Indian Army units**.
- **India Book of Records**
 - A record-keeping organisation documenting notable achievements in India.
 - Its recognition of the 498-kmph performance establishes Ahuti Mk II's **Indian multirotor speed record**.
 - Claims regarding it being the fastest multirotor in the wider

South Asian region are company assessments based on publicly available data and should not be treated as an independently certified international record.

Indian Army Establishes AASHVAST Lab for Drone and Defence Electronics Security

What's the News?

- The **Indian Army** has established **AASHVAST**, a specialised software analysis and validation facility in **New Delhi**, under the **Directorate General of Electronics and Mechanical Engineering (DG EME)**.
- It will examine **military drones and other electronic defence systems** for hidden hardware, software and firmware vulnerabilities, including unauthorised or potentially risky foreign components.
- The facility was inaugurated by **Chief of the Army Staff General Dhiraj Seth** and is intended to strengthen **cyber resilience, operational readiness and supply-chain security** of critical military platforms.

What is AASHVAST?

- **AASHVAST: Assessment and Analysis of Electronic Systems Hardware for Vulnerabilities and Security Threats.**
- It is designed to conduct deeper security validation beyond conventional physical inspection of defence equipment.
- A drone may appear authentic externally, while its **firmware or embedded software** could contain altered operating parameters, hidden access mechanisms or unauthorised code.

How Does AASHVAST Work?

- **Air-gapped system:** Operates offline and remains isolated from external networks.
- **Read-only analysis:** Examines equipment without writing or modifying data on the system being tested.
- It can extract and analyse software from a drone's **flight controller, camera payload or stored software image**.
- It checks for:
 - Hidden passwords and embedded credentials.
 - Encryption keys and undisclosed command pathways.
 - Remote-access tools or software backdoors.

- Unauthorised hardware/software modifications.
- Whether software updates originate only from the authorised manufacturer.
- Vulnerabilities can be classified by severity and incorporated into a consolidated security assessment for technical personnel and equipment-acceptance authorities.

Focus on Drone Supply-Chain Security

- A key concern is the possible presence of **unauthorised Chinese-origin components or software** in sensitive defence equipment.
- AASHVAST can help identify whether components or software differ from the platform's approved configuration.
- This strengthens **defence supply-chain assurance**, where hardware provenance, embedded code and communication pathways must be verified before operational deployment.

Protection Against Electronic Warfare Threats

- AASHVAST can assess drone navigation-security controls against threats such as:
 - **GPS jamming:** Deliberate interference that blocks or overwhelms genuine navigation signals.
 - **GPS spoofing:** Transmission of counterfeit navigation signals to mislead a system about its location, time or direction.
- Such capabilities are significant because modern unmanned platforms depend heavily on navigation, communications and embedded electronic systems.

Additional Info

- **DG EME**
 - Technical organisation of the Indian Army responsible for electronics and mechanical engineering support.
 - Its functions include **maintenance, repair and technical evaluation** of military equipment and electronic systems.
- **Firmware**
 - Embedded software stored within electronic hardware that controls the device's basic functions.
 - In drones, it can influence flight behaviour, command acceptance and operational restrictions.

India and Japan Conduct Exercise Veer Guardian 2026 in Jodhpur

What's the News?

- The **Indian Air Force (IAF)** and **Japan Air Self-Defence Force (JASDF)** are conducting the second edition of bilateral air exercise **Veer Guardian-2026** at **Air Force Station Jodhpur, Rajasthan**.
- The **14-day exercise** focuses on advanced air operations, tactical proficiency, interoperability and operational coordination between the two air forces.
- It also marks the **first deployment of Japanese fighter aircraft to India** for Veer Guardian.
- The exercise reflects the expanding defence and strategic partnership between **India and Japan**.

Participating Aircraft

- **Indian Air Force**
 - **LCA Tejas**
 - **Su-30MKI**
 - **Rafale**
- **Japan Air Self-Defence Force**
 - **Mitsubishi F-2A multirole fighter aircraft**
- The Japanese contingent includes **three F-2A fighters** from the **8th Air Wing** based at **Tsuiki Air Base** and around **110 personnel**.
- Japan also deployed **C-2 transport aircraft** for transportation and logistical support.

Training & Objectives

- Major activities include:
 - Advanced operational missions and **air-combat manoeuvring**.
 - Joint **mission planning**.
 - Professional and **subject-matter expert exchanges**.
 - Interaction on **aircraft engineering and aerospace safety**.
- The exercise seeks to enhance:
 - **Interoperability** between the IAF and JASDF.
 - Understanding of each other's operational procedures.
 - Tactical proficiency and coordination during complex air operations.
 - Exchange of operational and technical best practices.

Veer Guardian

- **Veer Guardian** is a bilateral fighter-aircraft exercise between the **IAF and JASDF**.

- Its **inaugural edition** was held in Japan in **2023**, primarily at **Hyakuri Air Base**.
- During the first edition:
 - India deployed **Su-30MKI fighters**, supported by **C-17 Globemaster III transport aircraft** and an **IL-78 aerial-refuelling aircraft**.
 - Japan participated with **F-2 and F-15 fighters**.
 - Training included **air combat manoeuvring, interception and air-defence missions**, including Visual and Beyond Visual Range operations.

India-Japan Defence Cooperation

- Bilateral defence relations form an important component of the **India-Japan Special Strategic and Global Partnership**.
- Major India-Japan military exercises include:
 - **Veer Guardian**: Air forces.
 - **Dharma Guardian**: Armies.
 - **JIMEX (Japan-India Maritime Exercise)**: Navies.
 - **Shinyuu Maitri**: Air-force transport operations.
- Japan also participates with India, the United States and Australia in the **Malabar naval exercise**.
- India and Japan also have a **Foreign and Defence Ministers' 2+2 Dialogue**, providing an institutional mechanism for strategic and security cooperation.

Additional Info

- **Japan Air Self-Defence Force (JASDF)**
 - Air component of Japan's **Self-Defence Forces**.
 - Responsible primarily for the defence and surveillance of Japanese airspace.
- **Mitsubishi F-2**
 - Multirole fighter aircraft operated by the JASDF.
 - Developed jointly by **Japan and the United States**, with its design derived from the **F-16 platform** but incorporating substantial Japanese modifications.
 - Designed for both **air-to-air and air-to-surface/maritime strike roles**.

India's Nuclear Arsenal Estimated at 190 Warheads

What's the News?

- The **Federation of American Scientists (FAS)** has estimated that India may have assembled around **190 nuclear warheads**.
- More than **160 warheads** are estimated to be associated with operational delivery systems, while around **30 additional warheads** are linked to newer missile systems under production.
- The estimate is based on **open-source information, official/state-originating data and commercial satellite imagery**; India does not publicly disclose the size of its nuclear arsenal.
- The **SIPRI Yearbook 2026** separately estimated India's nuclear inventory at **190 warheads**, compared with about **170 for Pakistan**.

Nuclear Arsenal Estimate

- FAS estimates that India has produced approximately **730 kg ±170 kg of weapon-grade plutonium**.
- Assuming roughly **4 kg of plutonium per warhead**, this could theoretically support about **140–225 nuclear warheads**.
- However, this is a theoretical range because:
 - The amount of plutonium actually converted into weapons is unknown.
 - Some fissile material may be maintained as a reserve.
 - Different warhead designs require different quantities of fissile material.
- FAS expects the stockpile to potentially increase as India develops additional nuclear-capable delivery systems.

Nuclear Force Modernisation

India is modernising all three components of its **nuclear triad**:

- **Air-based**: Nuclear-capable combat aircraft.
- **Land-based**: Ballistic missile systems, particularly the **Agni series**.
- **Sea-based**: Nuclear-powered ballistic missile submarines (**SSBNs**) carrying submarine-launched ballistic missiles.

The expansion of sea-based capabilities strengthens **second-strike capability**—the ability to retaliate with nuclear weapons even after absorbing a nuclear first strike.

India's Nuclear Doctrine

India continues to officially follow:

- **Credible Minimum Deterrence:** Maintaining nuclear forces sufficient to deter nuclear aggression rather than pursuing numerical parity with other nuclear powers.
- **No First Use (NFU):** Nuclear weapons are intended primarily for retaliation against a nuclear attack.
- India has maintained the NFU posture following the development of its declared nuclear-weapons capability after the **Pokhran-II tests of 1998**.

Global Nuclear Forces

According to SIPRI's 2026 estimates:

Country	Estimated Nuclear Warheads
Russia	5,420
United States	5,042
China	620
France	370
United Kingdom	225
India	190
Pakistan	170
Israel	90
North Korea	60

Globally, about **12,187 nuclear warheads** were estimated to exist, of which around **9,745** were held in military stockpiles for potential use.

Additional Info

- **Federation of American Scientists (FAS)**
 - US-based non-profit organisation.
 - Its **Nuclear Information Project** tracks nuclear arsenals, delivery systems and arms-control developments.
 - The India assessment forms part of the *Nuclear Notebook* research series.
- **Stockholm International Peace Research Institute (SIPRI)**
 - Independent international institute based in **Stockholm, Sweden**.
 - Research areas include **armaments, arms control, disarmament, conflict and international security**.
 - Publishes the annual **SIPRI Yearbook**.
- **Nuclear Triad**
 - Refers to nuclear weapons deliverable through **aircraft, land-based missiles and submarine-based missiles**.
 - A survivable sea-based component is especially important for

maintaining a credible **second-strike capability**.

- **Fissile Material**
 - Nuclear weapons principally use **highly enriched uranium (HEU)** or **separated plutonium**.
 - Estimates of fissile-material stocks help assess a state's potential nuclear-warhead production capacity, but they do **not directly indicate the number of assembled weapons**.

22nd India-US Exercise Yudh Abhyas Begins in Two-Theatre Format

What's the News?

- The **22nd edition of Exercise Yudh Abhyas**, the annual bilateral military exercise between the **Indian Army and the US Army**, has begun in India.
- For the **first time, the exercise is being conducted in a two-theatre format**, covering:
 - **Mahajan Field Firing Ranges near Bikaner, Rajasthan** – desert warfare.
 - **Auli, Uttarakhand** – high-altitude and mountain warfare.
- Around **700 personnel**, approximately **350 troops from each country**, are participating.
- Training covers long-range precision fires, high-altitude operations, air mobility, command-and-control and counter-drone warfare.

Two-Theatre Format

The 2026 edition shifts troops between two sharply different operational environments:

- **Rajasthan Phase**
 - Focus on desert warfare.
 - Long-range and precision fires.
 - Integrated artillery and aviation operations.
 - Command-post and field-training exercises.
- **Uttarakhand Phase**
 - Conducted at **Auli**, located at about **2,500 metres altitude**.
 - Focus on high-altitude warfare, infantry manoeuvres and mountain logistics.
 - Includes air mobility and deployment of lightweight artillery in difficult terrain.

The exercise culminates in a **combined live-fire demonstration** involving integrated Indian and US weapon systems.

Weapons and Systems

Indian Army

- **Pinaka** Multi-Barrel Rocket Launcher
- **K9 Vajra** 155-mm tracked self-propelled howitzer
- **M777** 155-mm Ultra-Light Howitzer
- **Chinook** heavy-lift helicopters for transporting equipment in mountainous terrain

US Army

- **HIMARS** – High Mobility Artillery Rocket System
- **AH-64E Apache** attack helicopters
- Advanced long-range precision-fire and command-and-control systems

The participation of **Apache attack helicopters** is a notable addition to Yudh Abhyas.

Counter-Drone Training

- Counter-Unmanned Aircraft System (**Counter-UAS**) operations form an important part of the exercise.
- Training includes:
 - Detection and tracking of drones
 - Electronic jamming
 - Spoofing
 - Interception and neutralisation
- The US **MLIDS counter-drone system** is also being deployed in India during the exercise.

US Army Participation

- The US contingent includes personnel from the **11th Airborne Division**, which is based in Alaska and specialises in Arctic and cold-weather operations.
- The **3rd Multi-Domain Task Force (3MDTF)** is also participating.
 - It specialises in integrating capabilities such as:
 - Long-range precision fires
 - Intelligence and surveillance
 - Electronic warfare
 - Integrated command-and-control

Exercise Yudh Abhyas

- **Type:** Bilateral Army exercise
- **Countries:** India and United States
- **Started:** 2004
- **Frequency:** Annual
- **Objective:** Improve interoperability, tactical coordination and joint operational capabilities between the Indian Army and US Army.
- The exercise is generally hosted **alternately by India and the United States**.
- The **21st edition** was conducted in **Alaska, USA**, with training in sub-Arctic conditions.

Additional Info

- **Major India-US Military Exercises**
 - **Yudh Abhyas:** Indian Army-US Army.
 - **Vajra Prahar:** Special Forces exercise.
 - **Cope India:** Air exercise involving the Indian Air Force and US Air Force.
 - **Tiger Triumph:** India-US tri-services exercise.
 - **Malabar:** Naval exercise involving **India, US, Japan and Australia**.
- **Mahajan Field Firing Ranges**
 - Located in **Rajasthan**.
 - Major Indian Army training area suited to large-scale mechanised and desert warfare exercises.
- **Auli**
 - Located in **Uttarakhand**.
 - Provides terrain suitable for high-altitude and mountain warfare training.
 - Its location allows troops to practise logistics, mobility and artillery deployment under difficult mountainous conditions.

India-US Joint Military Exercise Yudh Abhyas 2026 Begins at Auli and Mahajan

What's the News?

- The **22nd edition of Exercise Yudh Abhyas**, the annual bilateral military exercise between the **Indian Army and the United States Army**, has commenced in India.
- For the 2026 edition, the exercise is being conducted **simultaneously at two locations**:
 - **Auli Foreign Training Node, Uttarakhand**
 - **Mahajan Field Firing Range, Rajasthan**
- Around **600 personnel from each country**, or approximately **1,200 troops in total**, are participating.
- The exercise focuses on **Integrated Battle Groups (IBGs)**, **infantry operations, interoperability, emerging technologies, drones and multi-domain warfare**.

Exercise Yudh Abhyas

- **Type:** Bilateral Army-to-Army military exercise
- **Participants:** India and the United States
- **Edition:** 22nd
- **Started:** Institutionalised in **2004**

- **Objective:** Improve coordination, interoperability and exchange of operational practices between the two armies.
- Training includes:
 - joint planning and execution;
 - tactical field operations;
 - sharing of tactics, techniques and procedures;
 - employment of emerging military technologies; and
 - coordinated operations across varied terrain.

Dual-Terrain Training

Auli, Uttarakhand

- Auli provides a **high-altitude Himalayan training environment**.
- Training focuses on:
 - mountainous and semi-mountainous terrain;
 - infantry-dominated operations;
 - high-altitude operational adaptability; and
 - employment of **Integrated Battle Groups**.

Mahajan, Rajasthan

- The **Mahajan Field Firing Range** provides an arid and semi-desert training environment.
- Activities include:
 - field manoeuvres;
 - live-fire training;
 - demonstration of contemporary weapon systems; and
 - integration of advanced military technologies.
- Conducting the exercise simultaneously in contrasting terrain allows the forces to test operational adaptability under different geographical conditions.

Integrated Battle Groups

- **Integrated Battle Groups (IBGs)** are agile, self-contained combat formations designed for rapid mobilisation and deployment.
- Depending on the operational requirement, they can combine elements such as:
 - infantry;
 - artillery;
 - armoured units;
 - engineers;
 - air defence; and
 - logistics.
- Yudh Abhyas 2026 focuses particularly on the employment of **infantry-dominated IBGs in mountainous and semi-mountainous terrain**.

Technology and Multi-Domain Warfare

Technology infusion is a major component of the exercise.

- Training involves **drones and autonomous systems** for:
 - surveillance;
 - reconnaissance; and
 - battlefield situational awareness.
- Subject-matter experts from both armies are exchanging knowledge on:
 - emerging technologies; and
 - developments in **multi-domain warfare**.
- Multi-domain operations involve coordinated military activity across domains such as **land, air, maritime, cyber and space**, depending on operational requirements.

Additional Info

India-US Defence Exercises

- **Yudh Abhyas:** Army exercise
- **Vajra Prahar:** Special Forces exercise
- **Cope India:** Air exercise involving the Indian and US Air Forces
- **Tiger Triumph:** India-US tri-service exercise
- **Malabar:** Naval exercise involving **India, the US, Japan and Australia**
- **Auli**
 - Located in **Chamoli district, Uttarakhand**.
 - Its high-altitude terrain makes it suitable for mountain and cold-weather military training.
- **Mahajan Field Firing Range**
 - Located in **Rajasthan**, in the Bikaner region.
 - It is a major Indian Army training area suitable for large-scale manoeuvres and live-fire exercises.

India-Mongolia Exercise Nomadic Elephant 2026 Begins in Pithoragarh

What's the News?

- The **18th edition of Exercise Nomadic Elephant**, the bilateral military exercise between **India and Mongolia**, has commenced at the **Foreign Training Node, Pithoragarh, Uttarakhand**.
- The **Indian Army and Mongolian Armed Forces** are represented by **45 personnel each**.
- The platoon-level exercise focuses on enhancing joint capabilities for

counter-insurgency operations in semi-urban and mountainous terrain under a United Nations mandate.

Exercise Nomadic Elephant

- It is an **annual bilateral military exercise** between the **Indian Army and Mongolian Armed Forces**.
- It is conducted at the **platoon level** and hosted **alternately by India and Mongolia**.
- The **2026 exercise is the 18th edition**.
- The **17th edition** was conducted at **Ulaanbaatar, Mongolia, in 2025**.
- Its broad objectives are:
 - Improving **interoperability** between the two armies.
 - Exchanging **operational best practices**.
 - Refining joint tactical drills and procedures.
 - Strengthening defence cooperation and mutual understanding.

Training Focus

The exercise covers both conventional tactical skills and emerging technology-based military capabilities:

- **Cordon and Search Operations:** Securing an area and systematically searching it for threats.
- **Room Intervention Drills:** Tactical operations in built-up and enclosed environments.
- **Special Heliborne Operations:** Use of helicopters for rapid insertion and movement of troops.
- **Cyber Security Training:** Building capabilities against cyber-related operational threats.
- **Drone Operations:** Employment of unmanned aerial systems for tactical purposes.
- **Counter-Drone Systems:** Detection and response to hostile unmanned aerial systems.
- Training scenarios are designed around **semi-urban and mountainous terrain**, reflecting the operational environments relevant to both armies.

UN-Mandated Operations

- A major theme of Nomadic Elephant is conducting **counter-insurgency operations under a United Nations mandate**.
- This involves developing common procedures and interoperability for situations where troops may operate in multinational or UN-authorized security environments.
- The exercise therefore combines **field-level tactical training with**

coordination and joint operational planning.

Additional Info

- **Participants:** Indian Army and Mongolian Armed Forces.
- **Exercise Type:** Bilateral, annual and platoon-level.
- **Host Pattern:** Conducted alternately in India and Mongolia.
- **2026 Venue:** Foreign Training Node, Pithoragarh, Uttarakhand.
- **Personnel:** 45 from each country.
- **Core Theme:** Counter-insurgency operations in **semi-urban and mountainous terrain** under a UN mandate.
- **Previous Edition:** Ulaanbaatar, Mongolia (2025).

MoD Signs ₹811 Crore Contract for 160 SAT-SAAW Glide Bombs for IAF

What's the News?

- The **Ministry of Defence (MoD)** has signed a **₹810.79 crore contract** with **Bharat Dynamics Limited (BDL)** for procurement of **160 Satellite Smart Anti-Airfield Weapons (SAT-SAAW)** and associated equipment for the **Indian Air Force (IAF)**.
- The procurement is under the **Buy (Indian-Indigenously Designed, Developed and Manufactured/IDDM)** category.
- The weapon has been **indigenously designed and developed by DRDO** and will contain about **60% indigenous content**.
- Deliveries are scheduled across **FY 2027-28 and FY 2028-29**.

What is SAT-SAAW?

- **SAT-SAAW (Satellite Smart Anti-Airfield Weapon)** is an **air-to-ground precision-guided glide bomb** intended primarily for attacking airfield infrastructure from a stand-off distance.
- It can be launched from aircraft such as:
 - **Su-30MKI**
 - **Jaguar**
 - **Hawk**
- Potential targets include **runways, taxi tracks, bunkers, radars and other ground installations**.
- Its stand-off capability enables the launch aircraft to release the weapon without having to fly directly over the target area.

Specifications

- **Weight:** about **125 kg**
- **Length:** about **1.85 metres**

- **Range:** approximately **90–100 km**, depending on release conditions.
- **Accuracy:**
 - Less than **7 metres** with inertial/satellite navigation.
 - The broader SAAW family can achieve less than **3 metres** accuracy in a seeker-equipped configuration.
- As a **glide weapon**, it uses aerodynamic lift after release rather than functioning as a conventional powered cruise missile.

Indigenous Content

The contracted system will have **60% indigenous content**, with localisation of important subsystems including:

- **Inertial Measurement Unit (IMU)** – provides motion and navigation information.
- **Long Impact Delay Fuse** – allows detonation after penetration of the target structure.
- **Twin Store Carrier** – enables carriage of multiple weapons on an aircraft station.

Development of SAAW

- SAAW was developed by **DRDO's Research Centre Imarat (RCI), Hyderabad**, in coordination with other DRDO laboratories and with support from the IAF.
- An early successful flight test was conducted in **2016**.
- Subsequent trials demonstrated launches from aircraft such as the **Jaguar and Hawk**.
- DRDO also successfully tested both **satellite-navigation** and **electro-optical seeker** configurations.
- The electro-optical version incorporated an indigenous **Imaging Infra-Red (IIR) seeker** for enhanced precision.

Additional Info

- **Bharat Dynamics Limited (BDL):**
 - A Defence Public Sector Undertaking under the **Ministry of Defence**.
 - Manufactures missile and guided-weapon systems.
 - Listed by the Department of Defence Production as the manufacturer of SAAW.
- **Research Centre Imarat (RCI):**
 - A major **DRDO laboratory located in Hyderabad**.
 - Works on avionics, navigation, control and related technologies for missile and guided-weapon systems.

- **Buy (Indian-IDDM):**
 - Refers to **Indian-Indigenously Designed, Developed and Manufactured** equipment.
 - It gives emphasis to domestically designed and manufactured defence systems and higher indigenous content.
- **Stand-off Weapon:**
 - A weapon capable of being released from a significant distance from its target, allowing the launch platform to remain farther from the target's immediate defensive zone.

KAZIND-2026: India-Kazakhstan Joint Military Exercise Begins in Kazakhstan

What's the News?

- The **9th edition of Exercise KAZIND**, the India-Kazakhstan Joint Military Exercise, is being conducted at **Oskemen, Kazakhstan**.
- India has deployed a **60-member Armed Forces contingent**, drawn mainly from a battalion of the **Garhwal Rifles**, along with personnel from other arms and services and the **Indian Air Force**.
- Kazakhstan is fielding a contingent of **matching strength**, primarily from its **Land Forces**.
- The exercise aims to improve **interoperability** and joint capability for **counter-terrorism operations in a sub-conventional environment under a United Nations mandate**.

Exercise KAZIND

- **Type:** Bilateral joint military exercise between **India and Kazakhstan**.
- **Current edition:** 9th.
- **Venue:** Oskemen, Kazakhstan.
- **Primary focus:** Joint counter-terrorism operations in **semi-urban and mountainous terrain**.
- It facilitates exchange of operational experience, common tactical procedures and coordinated planning between the armed forces of the two countries.

Training Components

The exercise includes:

- Joint responses to **terrorist actions**.
- **Raids**, search-and-destroy and cordon-and-search operations.
- Securing **helipads and landing sites**.
- **Special Heliborne Operations**.
- **Air mobility** operations.
- Integrated employment of **Unmanned Aerial Systems (UAS)** and **Counter-UAS systems**.

- Establishment of a **Joint Command Post** and an **Intelligence and Surveillance Centre**.
- A final validation exercise involving a simulated terrorist threat.

Evolution of KAZIND

- India-Kazakhstan joint military training began in **2016** as **Exercise Prabal Dostyk**, meaning *Robust Friendship*.
- After the second edition, the exercise was upgraded to the **company level** and renamed **Exercise KAZIND**.
- It has developed into an annual bilateral military engagement aimed at increasing interoperability and sharing best practices in counter-terrorism operations.
- The **8th edition** was held at the **Surya Foreign Training Node, Auli, Uttarakhand**, with 120 Indian personnel participating.

Additional Info

- **Kazakhstan**
 - Region: **Central Asia**
 - Capital: **Astana**
 - It is a member of the **Shanghai Cooperation Organisation (SCO)**.
 - India and Kazakhstan cooperate in areas including defence, energy, connectivity and multilateral forums.
- **Garhwal Rifles**
 - An infantry regiment of the **Indian Army**.
 - Personnel from a Garhwal Rifles battalion form the principal Indian Army component in KAZIND-2026.

Tarang Shakti 2026: IAF Hosts Seven Foreign Air Forces at Jodhpur

What's the News?

- The **Indian Air Force (IAF)** has commenced the operational phase of **Exercise Tarang Shakti 2026** at **Air Force Station Jodhpur, Rajasthan**.
- The multilateral air exercise is being conducted under the theme **"Power in Partnership"**.
- **Seven Friendly Foreign Countries (FFCs)** – **Australia, USA, UAE, France, Germany, Sri Lanka and Bangladesh** – are participating, while several other countries are attending as observers.
- It is the **second edition** of Tarang Shakti, following the inaugural exercise in 2024.

Exercise Tarang Shakti 2026

- **Organiser:** Indian Air Force
- **Venue:** Air Force Station Jodhpur, Rajasthan
- **Nature:** Multilateral air exercise
- **Theme:** *Power in Partnership*
- **Objectives:**
 - Enhance **interoperability** among participating air forces.
 - Conduct advanced joint air operations and exchange operational expertise.
 - Improve **aerospace safety**, mission planning and understanding of different operational procedures.
 - Strengthen professional interaction among aircrew, planners and support personnel.

Aircraft Participating

The exercise brings together a diverse combination of fighter, transport and aerial-refuelling aircraft, including:

- **F-35 Lightning II** – fifth-generation stealth fighter.
- **Rafale** and **F-16** fighter aircraft.
- **A400M, C-130 and C-130J** transport aircraft.
- **MRTT and KC-30A** aerial-refuelling aircraft.
- Indian platforms include aircraft such as **Su-30MKI, Rafale and Tejas**.

A notable feature is the operational participation of **US F-35 stealth fighters**, enabling exposure to fifth-generation air-combat capabilities.

Training Areas

- Large-force air operations involving aircraft with different technological and operational backgrounds.
- **Offensive and defensive counter-air operations.**
- **Beyond Visual Range (BVR)** air combat.
- Air-to-air refuelling and tactical airlift operations.
- Joint mission planning and coordinated employment of combat and support aircraft.
- Exchange of operational procedures and combat experience among partner air forces.

Beyond Flying Operations

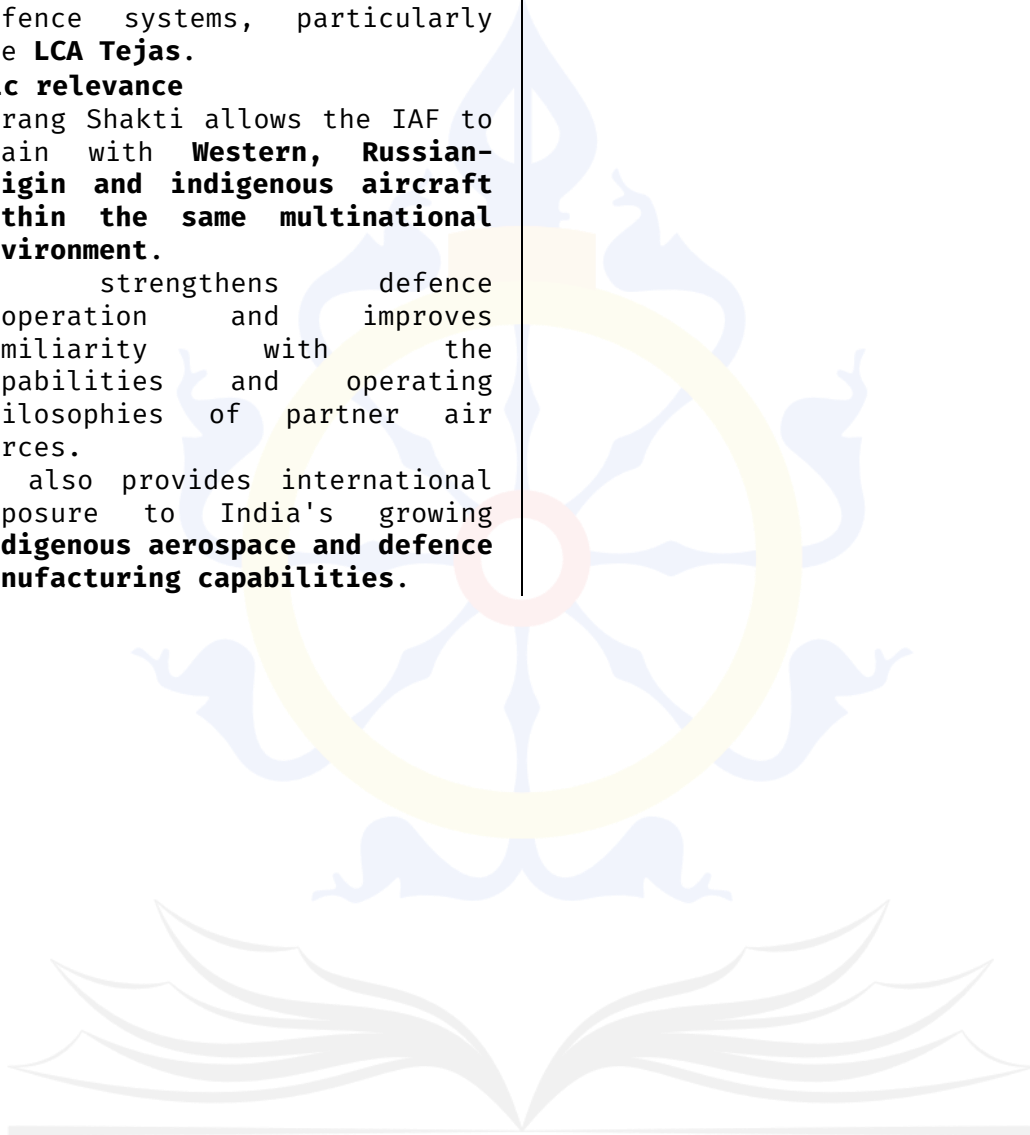
Tarang Shakti also includes:

- Professional seminars and interaction among participating air forces.
- Visits to India's **aerospace and defence industry ecosystem**.
- **Sekhon Marathon**, heritage tours and yoga sessions.

- Engagement with India's indigenous aerospace capabilities and defence manufacturing sector.

Additional Info

- **Tarang Shakti 2024**
 - It was the **first-ever multinational air exercise hosted by India.**
 - It focused on interoperability and operational coordination among Friendly Foreign Countries.
 - The exercise also provided a platform to showcase indigenous defence systems, particularly the **LCA Tejas.**
- **Strategic relevance**
 - Tarang Shakti allows the IAF to train with **Western, Russian-origin and indigenous aircraft within the same multinational environment.**
 - It strengthens defence cooperation and improves familiarity with the capabilities and operating philosophies of partner air forces.
 - It also provides international exposure to India's growing **indigenous aerospace and defence manufacturing capabilities.**



International Relations

India Unveils 'RAKSHA' 10-Year Defence Diplomacy Roadmap

What's the News?

- Defence Minister **Rajnath Singh** unveiled '**RAKSHA**', a comprehensive framework outlining India's **defence diplomacy strategy for the next 10 years**.
- The roadmap seeks to align India's **national security objectives with proactive international cooperation** and deepen defence engagement with friendly countries.
- It focuses on four major pillars: **Strategic Partnerships, Capacity Building, Indigenous Exports and Maritime Security**.
- The framework aims to strengthen India's position as a reliable defence partner, defence manufacturing hub and security provider, particularly in the **Indian Ocean Region (IOR)**.

RAKSHA Framework

RAKSHA provides an actionable framework for integrating **defence cooperation with India's broader foreign-policy and strategic objectives** over the coming decade.

Four Key Pillars

1. Strategic Partnerships

- Deepen **bilateral and multilateral security cooperation** with partner countries.
- Strengthen long-term military and strategic relationships.

1. Capacity Building

- Expand:
 - Joint military exercises
 - Training programmes
 - Professional exchanges
 - Sharing of military best practices
- Builds interoperability and institutional links between India and friendly armed forces.

1. Indigenous Defence Exports

- Promote **Make-in-India defence platforms** in overseas markets.
- Position India as a **reliable global defence manufacturing and supply hub**.
- Complements the broader **Aatmanirbhar Bharat** objective of strengthening indigenous defence production.

1. Maritime Security

- Strengthen India's role as a **Net Security Provider** and **First**

Responder in the Indian Ocean Region.

- Supports maritime stability, disaster response and security of critical sea lanes.

Why is RAKSHA Significant?

- Institutionalises Defence Diplomacy:** Provides a long-term framework instead of relying only on individual exercises, agreements or defence visits.
- Foreign Policy Tool:** Defence diplomacy is increasingly being used to advance India's wider strategic and diplomatic interests.
- Defence Industrial Outreach:** Links security partnerships with exports of Indian-made military equipment.
- Indian Ocean Focus:** Reinforces India's strategic role in safeguarding a region containing major global maritime trade routes.
- Rules-Based Order:** The roadmap envisages India as an anchor of **peace, stability and a rules-based international order**.

India's Defence Manufacturing Push

RAKSHA's indigenous-exports pillar comes amid a sharp expansion of India's defence industrial base.

- Defence production in FY2025-26: ₹1.78 lakh crore**
 - Growth over FY2024-25: **15.6%**
 - Increase over FY2020-21: about **110%**
- Defence exports in FY2025-26: Record ₹38,424 crore**
 - FY2024-25: ₹23,622 crore
 - Annual increase: **62.66%**
- Share in defence exports:
 - DPSUs:** 54.84%
 - Private sector:** 45.16%

The export-oriented component of RAKSHA therefore connects **defence diplomacy with India's emergence as a defence manufacturing and export hub**.

Additional Info

- Defence Diplomacy**
 - Use of military and defence-related engagements to support a country's foreign and security policies.
 - Major instruments include:
 - Joint military exercises
 - Training and military education
 - Defence agreements and dialogues

- Military-to-military exchanges
- Port visits
- Defence exports and industrial cooperation
- Humanitarian Assistance and Disaster Relief (HADR)
- **Net Security Provider**
 - Refers to a country capable of contributing to security and stability beyond its immediate territory.
 - In India's context, it is particularly associated with the **Indian Ocean Region** through maritime surveillance, capacity building, anti-piracy cooperation and HADR.
- **First Responder**
 - Reflects India's ability to provide rapid assistance to neighbouring and Indian Ocean countries during:
 - Natural disasters
 - Humanitarian emergencies
 - Evacuations
 - Maritime crises
- **Indian Ocean Region (IOR)**
 - Strategically important because major global energy and commercial shipping routes pass through it.
 - India's central geographical position gives it significant maritime-security responsibilities and strategic leverage.

India-China Hold First Corps Commander-Level Talks in Arunachal Pradesh

What's the News?

- India and China held their **first Corps Commander-level military talks in Arunachal Pradesh**, creating a senior military dialogue channel for the **eastern sector of the Line of Actual Control (LAC)**.
- The meeting was held at the **Wacha-Damai Border Meeting Point** in the **Kibithu sector** on the Indian side of the LAC.
- The Indian delegation was led by **Lt Gen Girish Kalia**, Commander of the Army's **III Corps (Spear Corps)**.
- The two sides reviewed the situation along the LAC and focused on **maintaining peace and tranquillity** amid reports of recent tensions in the **Taksing area of Upper Subansiri district**.

Why is the Meeting Significant?

- Earlier Corps Commander-level negotiations were conducted primarily at the **Chushul-Moldo Border Meeting Point in eastern Ladakh**, particularly to manage the military standoff that began in 2020.
- The Arunachal meeting extends this senior military mechanism to the **eastern sector**, enabling local issues to be addressed directly by commanders responsible for the region.
- India and China have differing perceptions of the LAC at several locations, which can result in patrol confrontations and military face-offs.
- **23 rounds of Corps Commander-level talks** had earlier been held at Chushul-Moldo to address the eastern Ladakh standoff.

India-China Border Dialogue Mechanisms

- **Special Representatives (SR) Mechanism**
 - Established in **2003** to address the broader India-China boundary question.
 - India's SR: **National Security Adviser Ajit Doval**.
 - China's SR: **Foreign Minister Wang Yi**.
 - The latest SR talks produced an **eight-point consensus** on improving border management.
- **Working Mechanism for Consultation and Coordination (WMCC)**
 - A diplomatic mechanism for consultation and coordination on India-China border affairs.
 - Established in **2012**.
 - Deals with border management and maintenance of peace rather than negotiating the final boundary settlement.
- **Military-level mechanisms**
 - Corps Commander-level meetings.
 - Border Personnel Meetings (BPMs).
 - Local commander meetings.
 - Military hotlines.

Recent Border Management Measures

- India and China agreed to:
 - Establish **two additional meeting points** for military discussions.
 - Create **two additional military hotline channels** in the Eastern and Middle sectors.
 - Address ground-level situations promptly through military and diplomatic mechanisms.

- Improve understanding of the LAC in appropriate areas for better border management.

Additional Info

- **III Corps (Spear Corps)**
 - Headquarters: **Rangapahar, near Dimapur, Nagaland.**
 - Responsible for important operational areas along the LAC in Arunachal Pradesh.
- **IV Corps**
 - Headquarters: **Tezpur, Assam.**
 - Along with III Corps, it oversees sectors of the LAC in Arunachal Pradesh.
- **Wacha-Damai Border Meeting Point**
 - Located in the **Kibithu sector of Arunachal Pradesh.**
 - Wacha is regarded as India's **easternmost Border Personnel Meeting point** with China.
- **Line of Actual Control (LAC)**
 - The de facto military boundary between India and China; it is **not a mutually agreed international boundary.**
 - Differences in perception of its alignment remain a major source of friction.
- **2020–24 Eastern Ladakh Standoff**
 - Bilateral ties deteriorated sharply after the 2020 military confrontation, including the **Galwan Valley clash.**
 - Subsequent diplomatic and military negotiations resulted in disengagement at several friction points.
 - India and China reached patrolling arrangements for **Depsang Plains and Demchok** in 2024, facilitating further disengagement and an improvement in bilateral engagement.

India Joins Global 6G Leadership and Security Initiative

What's the News?

- India has joined the **US-led "Call to Action for 6G Leadership and Security"**, taking the participating group to **26 governments.**
- The initiative seeks cooperation in shaping future **6G networks** around security, interoperability, resilience, competitiveness and innovation.
- India's participation was announced following discussions between **Union Minister of State for Commerce and**

Industry Jitin Prasada and **US Commerce Secretary Howard Lutnick** on the sidelines of the **G20 Innovation Ministerial.**

- The two countries also discussed cooperation in **semiconductors, Artificial Intelligence (AI) and data centres**, including potential US investment in **India Semiconductor Mission 2.0 (ISM 2.0).**

Call to Action for 6G Leadership and Security

- It is an international policy framework led by the **US Department of Commerce's National Telecommunications and Information Administration (NTIA).**
- India was not among the original 25 governments; its inclusion expanded participation to **26 governments.**
- Major participating countries include the **US, UK, Japan, South Korea, Australia, Canada, France, Germany, Finland and Sweden.**
- Participating governments have committed to strengthen cooperation on 6G over the **next 12 months and beyond.**

Focus Areas

- **Network Security:** Building secure next-generation telecom infrastructure.
- **Interoperability:** Ensuring networks and technologies developed in different countries can work together.
- **Resilience:** Improving resistance to cyberattacks, disruptions and supply-chain risks.
- **Trusted AI:** Promoting reliable AI systems for the development and operation of 6G infrastructure.
- **Competitiveness & Innovation:** Encouraging diversified technology ecosystems and innovation in advanced wireless communications.

What is 6G?

- **6G** is the proposed sixth generation of mobile communication technology, succeeding **5G.**
- It is expected to provide:
 - Significantly higher data speeds.
 - Ultra-low latency.
 - Greater machine-to-machine connectivity.
 - More extensive integration of AI into communication networks.
- International work is currently focused on research, standards, spectrum requirements and technological architecture before commercial deployment.

Bharat 6G Mission & Bharat 6G Alliance

- India is simultaneously pursuing its domestic 6G strategy through the **Bharat 6G Mission** and **Bharat 6G Alliance**.
- The broader objective is to position India as a global supplier of:
 - **Intellectual Property (IP)**,
 - Telecom products and technologies, and
 - Affordable next-generation communication solutions.
- The **Bharat 6G Alliance** targets deployment of 6G technologies in India by **2030**.
- Formal international technical specifications for 6G are expected to begin taking shape from **2027**.

Additional Info

- **Nature of the initiative**
 - It is presently an **early-stage policy coordination framework**, rather than a commercial 6G deployment programme.
 - India's entry does **not** presently involve a **specific funding commitment, spectrum allocation, commercial project or India-specific deployment timeline**.
- **G20 Innovation Ministerial**
 - Hosted by the **US Department of Commerce** and the **White House Office of Science and Technology Policy (OSTP)**.
 - The Indian delegation included officials from:
 - Ministry of Electronics and Information Technology (**MeitY**),
 - Department of Science and Technology (**DST**),
 - Department for Promotion of Industry and Internal Trade (**DPIIT**), and
 - Embassy of India in the US.
 - The ministerial statement highlighted the potential of emerging technologies to improve **productivity, economic prosperity and opportunities**.

India to Host Expanded 11-Nation BRICS Summit

What's the News?

- India is set to host the **18th BRICS Leaders' Summit** at **Bharat Mandapam, New Delhi**, under its **2026 BRICS Chairship**.
- The summit will bring together leaders of the expanded **11-member BRICS**, along

with **Partner Countries** and **Outreach Invitees**.

- India's chairship is guided by the theme **"Building for Resilience, Innovation, Cooperation and Sustainability"**, reflecting a people-centric **"Humanity First"** approach.
- Key discussions are expected to cover **global governance reforms, trade, resilient supply chains, cross-border payments, Artificial Intelligence (AI), energy security, climate resilience** and **development finance**.

Expanded BRICS

BRICS currently has **11 full members**:

- Brazil
- Russia
- India
- China
- South Africa
- Egypt
- Ethiopia
- Iran
- United Arab Emirates
- Saudi Arabia
- Indonesia

The grouping expanded significantly beyond the original five members, increasing its representation across **Asia, Africa, West Asia and Latin America**. BRICS countries collectively account for approximately:

- **49.5% of the global population**
- **Around 40% of global GDP**

India's BRICS Chairship 2026

- India assumed the BRICS Chairship for the **fourth time**, having previously chaired the grouping in:
 - **2012**
 - **2016**
 - **2021**
 - **2026**
- More than **350 BRICS meetings and high-level engagements** have been organised across **over 25 Indian cities** during the current chairship.
- BRICS cooperation operates through three broad pillars:
 - **Political and Security**
 - **Economic and Financial**
 - **Cultural and People-to-People Cooperation**

Major Priorities

- **Resilience**
 - Resilient supply chains
 - Energy and food security
 - Climate resilience
- **Innovation**
 - Artificial Intelligence
 - Digital technologies
 - Technology-led development

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- **Cooperation**

- Cross-border payment systems
- Greater use of national currencies in trade
- MSME cooperation
- Trade and investment facilitation

- **Sustainability**

- Sustainable development
- Climate action
- Development finance
- Energy transition

BRICS Partner Countries

BRICS also has a separate **Partner Country** category, distinct from full membership.

The **10 Partner Countries** are:

- Belarus
- Bolivia
- Cuba
- Kazakhstan
- Malaysia
- Nigeria
- Thailand
- Uganda
- Uzbekistan
- Vietnam

Partner countries can participate in selected BRICS meetings and summits but **do not have the same status as full members.**

Global Governance Reform

A major focus of BRICS is reform of international institutions to provide greater representation to **emerging economies and developing countries.**

Priority areas include reforms in:

- **United Nations and UN Security Council**
- **International Monetary Fund (IMF)**
- **World Bank**
- Other multilateral financial and political institutions

India views BRICS as an important platform for amplifying the concerns and development priorities of the **Global South.**

Additional Info

- **Evolution of BRICS**

- Cooperation among **Brazil, Russia, India and China (BRIC)** formally began in **2006.**
- The first BRIC Leaders' Summit was held in **2009.**
- **South Africa** subsequently joined, converting BRIC into **BRICS.**
- The grouping later expanded to include countries from Africa, West Asia and Southeast Asia.

- **New Development Bank (NDB)**

- Established by BRICS countries in **2014.**

- Headquarters: **Shanghai, China.**
- Provides financing for **infrastructure and sustainable development projects** in emerging economies and developing countries.

- **Decision-making**

- BRICS operates primarily on the principle of **consensus** rather than a formal voting arrangement.
- The enlarged membership therefore requires greater diplomatic coordination among countries with diverse geopolitical and economic interests.

UK Recognises India's Carbon Credit Trading Scheme under CBAM

What's the News?

- The **United Kingdom (UK)** has recognised India's **Carbon Credit Trading Scheme (CCTS)** as a **qualifying carbon pricing scheme** under its **Carbon Border Adjustment Mechanism (CBAM).**
- This allows UK importers of eligible Indian products to claim **carbon price relief** for the effective carbon price already borne in India under CCTS.
- The move can reduce the effective UK CBAM liability on Indian exports and helps prevent **double carbon taxation.**
- The recognition followed technical engagement between India and the UK on the design and implementation of India's carbon market.

How Will Recognition Benefit India?

Under UK CBAM, an importer can receive relief when emissions embedded in imported products have already faced an eligible carbon price in the country of origin.

Thus: **Carbon price payable under UK CBAM - Eligible carbon price already paid in India = Effective CBAM liability**

- Relief will depend on the **actual effective carbon price borne** on the embedded emissions.
- It is **not an automatic exemption** from UK CBAM.
- Importers must meet prescribed **evidence and independent verification requirements.**
- The measure can improve the competitiveness of carbon-intensive Indian exports to the UK by avoiding duplication of carbon costs.

UK Carbon Border Adjustment Mechanism (CBAM)

- CBAM is a **border carbon-pricing mechanism** designed to ensure that

carbon-intensive imports face a carbon cost comparable to that borne by UK producers.

- It is intended to address **carbon leakage**—the relocation of production to countries with less stringent carbon constraints.
- The UK CBAM will become operational from **2027**.

Sectors Covered

It initially covers specified goods from five sectors:

- **Aluminium**
- **Cement**
- **Fertiliser**
- **Hydrogen**
- **Iron and Steel**

Businesses importing covered goods worth **£50,000 or more over a 12-month period** may come within the registration framework.

India's Carbon Credit Trading Scheme (CCTS)

- CCTS provides the framework for developing the **Indian Carbon Market (ICM)**.
- It derives its statutory basis from the **Energy Conservation Act, 2001**, as amended by the **Energy Conservation (Amendment) Act, 2022**.
- The scheme seeks to reduce, remove or avoid **Greenhouse Gas (GHG) emissions** by assigning a market value to emission reductions.
- **One Carbon Credit Certificate (CCC)** represents **one tonne of carbon dioxide equivalent (tCO₂e)**.

Two Mechanisms under CCTS

- **Compliance Mechanism**
 - Applies to designated energy-intensive industries.
 - Government-prescribed **GHG Emission Intensity (GEI)** targets must be achieved.
 - Entities performing better than their targets can receive Carbon Credit Certificates.
 - Entities failing to meet targets must purchase/surrender the required certificates.
- **Offset Mechanism**
 - Voluntary and project-based.
 - Non-obligated entities can register projects that **reduce, remove or avoid GHG emissions** and earn Carbon Credit Certificates.

Institutional Framework of Indian Carbon Market

- **Bureau of Energy Efficiency (BEE)** → Administrator of CCTS.

- **Grid Controller of India (Grid-India)** → Registry for the Indian Carbon Market.
- **National Steering Committee for Indian Carbon Market (NSCICM)** → Oversees the functioning and development of the market.
 - Chairperson: **Secretary, Ministry of Power**
 - Co-Chairperson: **Secretary, Ministry of Environment, Forest and Climate Change**
- **Accredited Carbon Verification Agencies (ACVAs)** → Undertake validation and verification of emissions-related claims.

Additional Info

- **International Recognition**
 - The UK currently recognises **16 overseas carbon pricing schemes** as qualifying schemes.
 - These include India's CCTS as well as the:
 - EU Emissions Trading System
 - China National ETS
 - Korea ETS
 - Japan GX-ETS
 - Australia Safeguard Mechanism, among others.
- **India-UK Cooperation**
 - Cooperation on carbon-market design and implementation is expected to continue through the **UK-India Energy Memorandum of Understanding** and the **Partnership for Market Implementation**.

India and Japan Endorse 2027-31 Roadmap for Forest Cooperation

What's the News?

- India and Japan held the **7th Meeting of the Joint Working Group (JWG) on Cooperation in the Field of Forests** in Bengaluru, Karnataka.
- The Indian delegation was led by **Ramesh Kumar Pandey, Additional Director General (Forests), Ministry of Environment, Forest and Climate Change (MoEFCC)**, while Japan was represented by **Shimizu Kotaro, Deputy Director General, Forestry Agency, Ministry of Agriculture, Forestry and Fisheries**.
- Both sides endorsed a **Roadmap for 2027-2031** to deepen cooperation in forests, biodiversity conservation, research and capacity building.

India-Japan Forest Cooperation

- Bilateral forestry cooperation operates under a **Memorandum of Cooperation (MoC) signed in 2015**.
- The Joint Working Group provides an institutional mechanism for technical exchanges, collaborative research and capacity building.
- The latest meeting focused on three major areas:
 - **Trees Outside Forests (TOF)**
 - **Forest Genetics**
 - **Forest Stock**

Trees Outside Forests

- Trees Outside Forests refers to tree resources occurring **outside legally classified forest areas**, including agricultural lands, homesteads, field boundaries and other non-forest landscapes.
- India and Japan exchanged experiences on:
 - Assessment of tree resources outside forests.
 - Sustainable management of such resources.
 - Genetic improvement of tree species.
- Such tree resources can contribute to timber and non-timber supply, carbon sequestration, livelihood support and reduction of pressure on natural forests.

Forest Genetics

- Cooperation in forest genetics covered:
 - **Conservation of forest genetic resources.**
 - **Tree breeding.**
 - Development of **improved planting material.**
 - **Germplasm conservation.**
- Forest genetic-resource conservation helps retain genetic diversity required for resilience to diseases, pests and changing climatic conditions.

Forest Stock

- Under **Forest Stock**, the two countries discussed the use of technology and integrated datasets for forest-resource management.
- Areas of cooperation include:
 - **Forest inventory.**
 - **Forest stock assessment.**
 - **Geospatial technologies.**
 - **Advanced forest monitoring systems.**

2027-2031 Roadmap

- The new roadmap under the 2015 MoC seeks to strengthen cooperation in:

- Sustainable forest management and conservation.
- Biodiversity conservation.
- Forestry research.
- Institutional and technical capacity building.
- The meeting concluded with the signing of the **Minutes of the 7th Joint Working Group meeting.**

Additional Info

- **Institute of Wood Science and Technology (IWST)**
 - Located in **Bengaluru**.
 - The two delegations visited the institute and interacted with officials of the **Karnataka Forest Department.**
- **Field-level cooperation**
 - The bilateral programme included visits to **sandalwood agroforestry farms, a sandalwood depot and a processing unit in Mysuru.**
 - A visit to **Nagarhole Tiger Reserve** was also included to facilitate exchange of experiences on wildlife conservation.
 - The visits focused particularly on **private-farm sandalwood cultivation and wildlife-management practices.**

India Expands BrahMos Partnerships Across Southeast Asia

What's the News?

- India is expanding **BrahMos supersonic cruise missile partnerships with Southeast Asian countries**, giving rise to the strategic concept termed the **"BrahMos Belt."**
- The term refers to an emerging network of BrahMos-equipped coastal states around the **South China Sea and adjoining maritime region**; it is **not an officially declared military alliance or formal Indian doctrine.**
- The **Philippines** became the first foreign customer of BrahMos, while India has subsequently concluded agreements with **Vietnam and Indonesia.**
- The expanding network strengthens coastal defence capabilities of partner countries while supporting India's **defence exports, Act East engagement and Indo-Pacific strategic presence.**

BrahMos Belt

- The "BrahMos Belt" envisages separate Southeast Asian countries operating shore-based BrahMos systems that collectively create a stronger **maritime deterrence architecture** around important regional waters.
- Countries associated with the emerging network include:
 - Philippines:** First foreign customer; signed a **\$375-million contract** for shore-based anti-ship missile systems.
 - Vietnam:** India has officially confirmed an agreement for the supply of BrahMos missiles.
 - Indonesia:** Entered an agreement with India to procure BrahMos; subsequent defence agreements include supply of BrahMos systems.
 - Thailand and Malaysia:** Have been associated with interest or evaluation, but no confirmed acquisition comparable to the above countries has been announced.

BrahMos Missile

- BrahMos** is a **supersonic cruise missile** jointly developed by India and Russia through **BrahMos Aerospace**.
- It derives its name from India's **Brahmaputra River** and Russia's **Moskva River**.
- Major characteristics include:
 - Land-attack and anti-ship capability.**
 - "Fire-and-forget"** operation.
 - High-speed, precision-strike capability.
 - Deployment from **land, ships, aircraft and submarine platforms.**
 - Conventional warhead capability of up to **200 kg**.
- BrahMos Aerospace is a joint India-Russia defence venture involving India's **DRDO** and Russia's missile-development establishment.

Additional Info

- Philippines BrahMos Deal**
 - The Philippines signed the first international BrahMos export contract for a **shore-based anti-ship missile system**.
 - The contract was valued at around **\$375 million**.
 - The system strengthens the country's coastal defence capability amid maritime disputes in the South China Sea.

India-Vietnam Defence Cooperation

- India's Defence Secretary confirmed that a **BrahMos supply agreement with Vietnam** has been signed.
- India had earlier strengthened Vietnam's maritime capability by transferring the indigenous missile corvette **INS Kirpan**.

India-Indonesia Defence Cooperation

- Indonesia formally announced an agreement to procure the **BrahMos missile system**.
- The broader defence partnership also includes cooperation involving **Astra air-to-air missiles, military technology and maritime security**.

TRISHNA: India-France Joint Earth Observation Mission

What's the News?

- ISRO** and France's **CNES (Centre National d'Études Spatiales)** are jointly developing **TRISHNA**, an advanced Earth-observation satellite for high-resolution monitoring of land and coastal surface temperatures.
- TRISHNA** stands for **Thermal infraRed Imaging Satellite for High-resolution Natural resource Assessment**.
- The mission will combine **thermal-infrared and optical observations** to study water stress, agriculture, urban heat, glaciers, coastal waters and climate-related processes.
- The mission is currently **under development** and is targeted for launch aboard India's **PSLV in 2027**. CNES lists delivery of its thermal-infrared instrument to India during 2026.

TRISHNA Mission

Feature	Details
Partners	ISRO, India & CNES, France
Mission Type	Earth Observation
Planned Launch	2027
Launch Vehicle	PSLV
Orbit	Sun-Synchronous Orbit (SSO)
Altitude	761 km
Mission Life	5 years
Equatorial Revisit	About 3 days
Product Resolution	About 60 metres

The satellite is designed to combine **high spatial resolution with frequent revisit**, allowing environmental changes to be

tracked at relatively fine scales several times a week.

Payloads

TRISHNA carries two major observation systems:

- **Thermal Infrared (TIR) Payload – CNES**
 - Developed under the French contribution.
 - Contains **4 long-wave thermal-infrared bands**.
 - Measures:
 - Land and water surface temperature
 - Surface emissivity
 - Thermal variations
- **VNIR-SWIR Payload – ISRO**
 - **VNIR:** Visible and Near Infrared
 - **SWIR:** Short-Wave Infrared
 - Contains **7 spectral bands**.
 - Measures surface reflectance and generates information on:
 - Vegetation
 - Biophysical characteristics
 - Radiation balance
 - Land-surface conditions.

Major Objectives

- **Water Stress:** Assess water stress in crops and natural vegetation.
- **Evapotranspiration:** Estimate water lost through evaporation from soil and transpiration from plants.
- **Agriculture:** Support irrigation planning and efficient water use.
- **Urban Heat Islands:** Map unusually high temperatures in built-up urban areas.
- **Cryosphere:** Monitor glaciers, snowmelt and related hydrological processes.
- **Coastal & Inland Waters:** Study water temperature, quality and dynamics.
- **Geological Applications:** Identify thermal anomalies associated with volcanic and geothermal activity.
- **Climate Studies:** Improve understanding of Earth's surface energy and water budgets.

Why Thermal Infrared Observation Matters?

- Objects on Earth's surface emit thermal radiation according to their temperature.
- **Thermal infrared sensors** can measure this emitted radiation and estimate land or water surface temperatures.
- When thermal data are combined with vegetation and surface-reflectance information, scientists can estimate the **surface energy balance** and **evapotranspiration**.
- Such information is particularly useful for:

- Drought assessment
- Irrigation management
- Crop-water requirement estimation
- Heat-wave and urban-heat studies
- Glacier monitoring

Sun-Synchronous Orbit

- TRISHNA will operate in a **Sun-Synchronous Orbit (SSO)** at about **761 km altitude**.
- In an SSO, a satellite generally passes over a given location at nearly the **same local solar time**.
- This provides comparable illumination and observation conditions, making SSO particularly useful for **Earth-observation and environmental-monitoring satellites**.
- TRISHNA's planned local equatorial crossing time is around **12:30 PM**.

India-France Space Cooperation

- India and France have one of India's oldest international space partnerships.
- **ISRO** is responsible for:
 - Satellite platform
 - VNIR-SWIR instrument
 - Overall satellite integration
 - Indian launch through PSLV
- **CNES** is responsible for the **TIR instrument**, developed with French industry.
- Mission data processing will be undertaken through facilities in **India and France**.

Other Major India-France Space Cooperation

- **Megha-Tropiques:** Study of tropical atmosphere and climate.
- **SARAL:** Satellite with ARGOS and ALTIKA for oceanographic studies.
- **TRISHNA:** High-resolution thermal Earth observation.
- Cooperation also covers areas such as **maritime-domain awareness, climate monitoring and space situational activities**.

Additional Info

- **CNES**
 - Full name: **Centre National d'Études Spatiales**
 - National space agency of **France**.
 - Headquarters: **Paris**.
- **PSLV**
 - Full form: **Polar Satellite Launch Vehicle**.
 - Developed by **ISRO**.
 - Widely used to place Earth-observation satellites into **polar and Sun-synchronous orbits**.

• Current Status

- ISRO's 2025-26 Annual Report states that TRISHNA satellite realisation is progressing, with the **Preliminary Design Review (PDR)** completed for satellite-bus elements and the **VNIR/SWIR payloads**.
- Earlier material referred to a 2026 launch, but the **current CNES mission schedule lists launch in 2027**.

BRICS Adopts New Delhi Declaration 2026

What's the News?

- BRICS leaders **unanimously adopted the New Delhi Declaration 2026** during the **18th BRICS Summit** at Bharat Mandapam, New Delhi.
- The declaration contains **140 points** covering global governance, peace and security, terrorism, trade, finance, energy, technology, sustainable development and people-to-people cooperation.
- India chaired BRICS in 2026 under the theme **"Building for Resilience, Innovation, Cooperation and Sustainability."**
- Prime Minister **Narendra Modi** stressed reform of global institutions and proposed mechanisms to improve continuity and implementation of BRICS decisions.

New Delhi Declaration

Global Governance and UN Reform

- BRICS called for comprehensive reform of the **United Nations**, including the **UN Security Council (UNSC)**, to make it more representative, democratic, effective and responsive.
- It sought greater representation of developing countries from **Africa, Asia and Latin America**, strengthening the voice of the **Global South**.
- **China and Russia**, both permanent members of the UNSC, reiterated support for the aspirations of **India and Brazil to play a greater role in the UN, including the Security Council**.
- The declaration also recognised Africa's aspirations reflected in the **Ezulwini Consensus and Sirte Declaration**.

Terrorism and Pahalgam Attack

- BRICS condemned terrorism in **all forms and manifestations**, irrespective of motivation or perpetrators.

- It specifically condemned the **Pahalgam terrorist attack in Jammu and Kashmir**, in which **26 people were killed**.
- Members called for action against:
 - Cross-border movement of terrorists.
 - Terror financing.
 - Terrorist safe havens.
- BRICS reiterated **zero tolerance for terrorism** and rejected double standards in counter-terrorism.

Trade and WTO Reform

- BRICS expressed concern over the rise of **unilateral tariffs and non-tariff measures** that distort trade and disrupt global supply chains.
- It reaffirmed support for an **open, inclusive, non-discriminatory and rules-based multilateral trading system centred on the WTO**.
- Members called for restoration of a **fully functioning two-tier WTO dispute-settlement mechanism**, including appointment of members to the Appellate Body.
- BRICS also opposed unilateral coercive economic measures contrary to international law.

Cross-Border Payments and Local Currencies

- The **BRICS Payment Task Force (BPTF)** will continue exploring efficient cross-border payment mechanisms.
- Members recognised work towards:
 - Interoperability of payment and financial-messaging systems.
 - Faster and lower-cost cross-border payments.
 - Greater use of **BRICS members' local currencies** for trade settlements and investments.
- The declaration clarified that such arrangements should respect national priorities rather than follow a single common model.

New Development Bank

- BRICS reaffirmed the importance of the **New Development Bank (NDB)** in financing infrastructure and sustainable development in emerging and developing economies.
- It supported greater:
 - Local-currency financing.
 - Resource mobilisation.
 - Diversification of funding sources.
 - Expansion of NDB membership.
- The declaration welcomed the **BRICS-NDB Knowledge Portal**, launched under India's chairship to share development

experiences, policy innovations and lessons from NDB-financed projects.

Peace, West Asia and Nuclear Risks

- BRICS reiterated that international disputes should be resolved through **dialogue, consultation and diplomacy**.
- It expressed concern over escalating tensions in **West Asia/Middle East**, calling for restraint, protection of civilians and maintenance of global trade, supply chains and energy flows.
- Members also highlighted increasing risks associated with **nuclear conflict**.
- The declaration emphasised protection of **seafarers and commercial shipping routes** during geopolitical crises.

India's Institutional Proposals

- **BRICS Continuity and Implementation Mechanism**
 - Proposed by Prime Minister Modi to ensure initiatives continue despite the annually rotating BRICS chairship.
 - Follow-up would be supported through the **BRICS Troika**, improving institutional continuity and implementation of summit decisions.
- **Seafarers Emergency Support Network**
 - Proposed to link maritime authorities and diplomatic missions of participating countries.
 - Intended to provide faster assistance to seafarers during emergencies and geopolitical disruptions.

Technology and Sustainable Development

- BRICS recognised **Artificial Intelligence (AI)** as an important driver of economic growth and sustainable development.
- Members supported safe, secure, inclusive and reliable AI and implementation of the **BRICS Leaders' Statement on Global Governance of Artificial Intelligence**.
- The declaration acknowledged India's **AI Impact Summit 2026**.
- It also supported cooperation on smart grids, energy storage, disaster-risk reduction, climate-resilient infrastructure and digital public infrastructure.

Additional Info

- **BRICS**
 - Originally emerged as **BRIC** – **Brazil, Russia, India and China**.

- South Africa's entry led to the name **BRICS**.
- Cooperation operates mainly through three pillars:
 - Political and security cooperation.
 - Economic and financial cooperation.
 - Cultural and people-to-people cooperation.
- **New Development Bank**
 - Established by BRICS countries to mobilise resources for infrastructure and sustainable-development projects.
 - **Headquarters:** Shanghai, China.
 - It is commonly referred to as the **BRICS Bank**.
- **India's BRICS Chairship 2026**
 - Theme: **Building for Resilience, Innovation, Cooperation and Sustainability**.
 - The New Delhi Declaration marked the culmination of India's efforts to deepen BRICS cooperation while increasing representation of the Global South in international institutions.
 - **China will hold the BRICS Chairship in 2027** and host the 19th BRICS Summit.

India and Russia Target \$100 Billion Bilateral Trade by 2030

What's the News?

- India and Russia are working to raise **annual bilateral trade to \$100 billion by 2030**, from around **\$60 billion** currently.
- Union Commerce and Industry Minister **Piyush Goyal** called for rebalancing the heavily import-dominated trade relationship by expanding Indian exports, particularly in non-energy sectors.
- The two countries are also targeting **\$50 billion in two-way investments by 2030**.
- India and Russia are fast-tracking negotiations for a new **Bilateral Investment Treaty (BIT)** and strengthening local-currency settlement mechanisms.
- India is also pursuing a **Free Trade Agreement (FTA)** with the **Eurasian Economic Union (EAEU)** to improve market access and expand trade.

\$100 Billion Trade Target

- Bilateral trade currently stands at around **\$60 billion**.
- Reaching the \$100 billion target requires an additional **\$40 billion** in trade over the next four years.
- This would require **sustained double-digit annual growth**.
- India is seeking to shift the relationship from predominantly energy-based trade towards broader industrial, manufacturing and technology cooperation.

Trade Imbalance

- India's imports from Russia are around **\$55 billion** out of approximately \$60 billion in bilateral trade.
- **Crude oil accounts for more than 80%** of India's imports from Russia.
- India is therefore seeking greater access for its products to make bilateral trade more balanced.

Export Diversification

India identified several sectors with significant potential for expanding exports to Russia:

- Pharmaceuticals.
- Engineering goods.
- Chemicals.
- Textiles.
- Auto components and automobiles.
- Tractors.
- Food and agricultural products.
- Marine products.

Recent export trends highlighted include:

- Meat-product exports increased from about **\$36 million to \$97 million**, a rise of nearly **170%**.
- Fish and aquatic-product exports increased by nearly **30%**.
- Edible-vegetable exports rose by around **40%**.
- Coffee, tea and spice exports increased by about **13%**.
- Milling-industry exports nearly doubled.

These sectors also provide export opportunities for **MSMEs and agricultural producers**.

Bilateral Investment Treaty

- India and Russia are fast-tracking negotiations for a new **Bilateral Investment Treaty (BIT)**.
- The treaty is intended to provide greater **legal certainty and protection to investors** from both countries.
- It is expected to support the bilateral target of **\$50 billion in two-way investments by 2030**.

Priority Investment Projects

- The **India-Russia Priority Investment Projects Mechanism** is tracking **40 live projects**.
- Major sectors include:
 - Advanced manufacturing.
 - Energy.
 - Mining.
 - Railways.
 - Emerging technologies.
- India is seeking greater opportunities for Indian investment in Russia in:
 - Pharmaceuticals.
 - Information technology.
 - Artificial intelligence.
 - Engineering.
 - Services.
 - Railways.

India-EAEU Free Trade Agreement

- India and the **Eurasian Economic Union (EAEU)** are conducting formal negotiations for an FTA.
- The agreement is expected to:
 - Reduce trade barriers.
 - Improve market access.
 - Facilitate Indian exports.
 - Create new opportunities for MSMEs.
 - Support diversification of India-Russia trade beyond energy.

Eurasian Economic Union

The EAEU has **five members**:

- Russia.
- Armenia.
- Belarus.
- Kazakhstan.
- Kyrgyzstan.

Local-Currency Payments

- India and Russia are strengthening **national and local-currency settlement mechanisms** for bilateral trade.
- The objective is to reduce transaction difficulties and dependence on conventional international payment channels.
- Payment-system constraints have emerged as an important practical barrier to expansion of bilateral commerce.
- Greater use of local currencies can facilitate smoother settlement between Indian and Russian businesses.

Trade Connectivity

India and Russia are seeking improved physical connectivity through major transport corridors.

International North-South Transport Corridor

- The **International North-South Transport Corridor (INSTC)** is a

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multimodal transport network connecting India with Russia and Eurasia through maritime, rail and road routes.

- It is intended to improve freight connectivity and reduce logistics bottlenecks between India and markets in Eurasia.

Chennai-Vladivostok Maritime Corridor

- The proposed maritime corridor connects **Chennai on India's eastern coast with Vladivostok in Russia's Far East.**
- It is intended to improve direct maritime connectivity and support trade in energy, minerals, manufacturing and other goods.

Industrial and Technology Cooperation

- India and Russia are seeking to expand their relationship from conventional trade towards **joint manufacturing, industrial investment and technology partnerships.**
- Areas being explored include:
 - Railways.
 - Steel value chains.
 - Critical minerals.
 - Advanced manufacturing.
 - Civil nuclear energy.
 - Pharmaceuticals.
 - Information technology.
 - Artificial intelligence.
 - Engineering and auto components.
- Russian companies have also been encouraged to **manufacture in India**, including through India's industrial corridors and manufacturing infrastructure.

Additional Info

- **India-Russia Economic Cooperation**
 - India and Russia maintain a long-standing **Special and Privileged Strategic Partnership.**
 - Economic cooperation increasingly focuses on diversification beyond hydrocarbons and defence towards manufacturing, technology, logistics, investment and services.
- **Bilateral Investment Treaty**
 - A BIT is an agreement between two countries that establishes rules and protections for investments made by investors of one country in the other.
 - It generally addresses issues such as investor protection, treatment of investments and dispute-resolution mechanisms.
- **INNOPROM**

- INNOPROM is an international industrial exhibition originating in Russia.
- **INNOPROM India 2026** brought together Indian and Russian government and industry representatives to promote manufacturing, investment and technology cooperation.

India-US Partner to Secure Undersea Cable Networks under TRUST Initiative

What's the News?

- India and the United States have expanded cooperation to strengthen the **security, resilience and diversification of global undersea cable networks** under the **US-India TRUST Initiative.**
- Government and industry experts from both countries participated in an **Undersea Cables Workshop** focused on protecting critical subsea communication infrastructure.
- The partnership seeks to promote trusted technology providers, diversified cable routes and multiple landing stations while strengthening **India's position as a global digital connectivity hub.**
- Undersea cables carry **more than 95% of global digital traffic**, making their security important for internet connectivity, financial transactions, cloud computing and Artificial Intelligence (AI).

TRUST Initiative

- **TRUST: Transforming the Relationship Utilising Strategic Technologies.**
- It was launched by India and the US during Prime Minister **Narendra Modi's visit to Washington in 2025.**
- It promotes collaboration among:
 - Governments.
 - Private sector.
 - Academia and research institutions.
- Major areas of cooperation include:
 - Artificial Intelligence.
 - Semiconductors.
 - Quantum technologies.
 - Biotechnology.
 - Energy.
 - Space.
 - Defence and strategic technologies.
- The framework encourages the use of **verified and trusted technology**

vendors and protection of sensitive technologies.

Undersea Cable Networks

- Undersea or submarine cables are **fibre-optic cables laid along the seabed** to transmit large volumes of digital data between countries and continents.
- They support:
 - International internet connectivity.
 - Telecommunications.
 - Banking and financial messaging.
 - Cloud computing.
 - Data centres.
 - AI infrastructure.
- They carry **over 95% of global digital traffic**, making them critical infrastructure for the global digital economy.

Major Risks

Undersea cable systems face vulnerabilities from:

- Physical sabotage.
- Cyberattacks.
- Data interception.
- Accidental cable damage.
- Dependence on limited suppliers.
- Excessive concentration of cable routes.
- Failure or disruption at major cable landing stations.

India-US Cable Cooperation

The partnership focuses on:

- Use of **trusted technology providers** for critical cable infrastructure.
- Development of **multiple and diversified cable routes**.
- Establishment of more **cable landing stations** to reduce single points of failure.
- Greater cooperation between governments and industry for:
 - Construction.
 - Maintenance.
 - Protection.
 - Repair of submarine cables.
- Increasing network redundancy so disruption of one cable or transit point does not significantly affect connectivity.

India as a Subsea Cable Hub

India is considered strategically important for global subsea connectivity because of:

- Its location between major markets in **Asia, Europe and the Indian Ocean region**.
- Rapid expansion of India's digital economy.
- Rising demand for cloud services and data centres.

- Growing AI and computing requirements.
- Increasing requirement for secure international data connectivity.

Development of resilient submarine cable infrastructure could strengthen India's role as a **digital and data-connectivity hub in the Indo-Pacific**.

AI Infrastructure under TRUST

- AI infrastructure is another major component of the TRUST Initiative.
- India and the US are working with private industry on a roadmap for accelerating **large-scale AI infrastructure in India**.
- Areas include:
 - Financing AI infrastructure.
 - Power availability.
 - Data-centre development.
 - Digital connectivity.
 - Access to computing resources and processors.
 - Development of AI models and applications.
- Cooperation also seeks to protect sensitive technologies while reducing unnecessary regulatory barriers.

Additional Info

• Cable Landing Station

- A facility where an undersea cable reaches land and connects with domestic telecommunications networks.
- Having multiple landing stations improves resilience by reducing dependence on a single connection point.

• Network Redundancy

- Refers to maintaining alternative routes or systems capable of carrying traffic when the primary network fails.
- For undersea cables, greater route diversity reduces the impact of cable cuts, natural disasters or deliberate attacks.

• Pax Silica

- India is also participating in the **US-led Pax Silica initiative**.
- It focuses on creating trusted technology ecosystems and resilient supply chains in areas such as:
 - Artificial Intelligence.
 - Semiconductors.
 - Quantum technologies.
- It complements the wider India-US focus on securing critical and emerging technology supply chains.

Modi-Xi Talks Focus on Border Peace, Trade and India-China Relations

What's the News?

Prime Minister **Narendra Modi** and Chinese President **Xi Jinping** held bilateral talks on the sidelines of the **18th BRICS Summit in New Delhi**, focusing on the boundary question, trade and economic concerns, people-to-people exchanges and broader bilateral relations. It was their **first bilateral meeting in India in seven years**. Both leaders reiterated that India and China should take a **strategic and long-term perspective** of their relationship and that differences should not become disputes. Importantly, the meeting did **not announce a final settlement of the boundary dispute**; the two sides instead committed to continuing negotiations towards a **fair, reasonable and mutually acceptable resolution**.

Border Peace and Boundary Question

- India reiterated that **peace and tranquillity in border areas are an essential basis** for continued development of bilateral relations.
- Both sides agreed on the need to observe existing agreements and understandings concerning the border.
- The leaders committed to pursuing a political settlement of the boundary question considering the overall bilateral relationship and long-term interests of both countries.
- Prime Minister Modi identified **"three mutuels"** as guiding principles:
 - Mutual respect**
 - Mutual sensitivity**
 - Mutual interest**
- The Chinese readout described India and China as **"partners rather than rivals"**, reflecting Beijing's stated approach to the relationship.

Trade and Economic Relations

The two leaders discussed the **structural trade imbalance, supply-chain concerns and market-access issues**. They called for meaningful and predictable market access while strengthening business linkages between the two economies.

They also supported greater **cultural exchanges, mobility and people-to-people contacts** and agreed to expand areas of cooperation on regional and global issues.

India-China Border Mechanisms

The latest leaders' meeting follows continued diplomatic and military negotiations over the Line of Actual Control (LAC).

- Special Representatives Mechanism**

- Established in **2003** to pursue a political framework for resolving the boundary question.
- India's Special Representative is the **National Security Adviser**.
- China's Special Representative is currently **Wang Yi**.

- 2005 Agreement**

- India and China concluded the **Agreement on Political Parameters and Guiding Principles for the Settlement of the India-China Boundary Question**.
- It provides principles for pursuing a fair, reasonable and mutually acceptable boundary settlement.

- Working Mechanism for Consultation and Coordination (WMCC)**

- Created in **2012** for consultation and coordination on India-China border affairs.
- It functions alongside military commander-level mechanisms.

Recent Border Developments

The **25th round of Special Representatives' talks** between NSA **Ajit Doval** and Wang Yi produced an eight-point set of outcomes covering boundary negotiations and border management.

Key measures included:

- Advancing discussions on an **"early and substantial harvest" of boundary delimitation** in appropriate areas.
- Establishing **two additional military meeting points**.
- Creating **two additional border military hotlines** in the **Eastern and Middle Sectors**.
- Continuing diplomatic and military mechanisms to prevent misunderstanding and miscalculation along the LAC.
- Continuing cooperation concerning **trans-border rivers, pilgrimage and border trade**.
- Holding the **26th Special Representatives' talks in India in 2027**.

Additional Info

- Line of Actual Control (LAC):** De facto line separating Indian- and Chinese-controlled territories; it is **not a mutually demarcated international boundary**.
- Broadly divided into:
 - Western Sector:** Ladakh
 - Middle Sector:** Himachal Pradesh and Uttarakhand
 - Eastern Sector:** Sikkim and Arunachal Pradesh

- Following the military standoff that began in **2020**, the two sides reached a patrolling arrangement concerning **Depsang and Demchok in 2024**, followed by disengagement.
- **BRICS 2026**: India hosted the **18th BRICS Summit in New Delhi** and held the grouping's chairship for the year.

US Russia Sanctions Bill Could Expose Major Russian Energy Buyers to Up to 100% Tariffs

What's the News?

A proposed amendment to the US **Lindsey O. Graham Sanctioning Russia and Iran Act of 2026** sought to explicitly name **India and nine other countries** as potentially subject to tariffs of up to **100%** for purchasing Russian-origin energy or facilitating sanctions evasion. The amendment was introduced by Democratic Congressman **Steny Hoyer**, with Marcy Kaptur.

However, in the latest legislative development, the **US House Rules Committee rejected, by 3-7, the motion to allow Hoyer's country-naming amendment to be considered on the House floor.** Thus, India is **not explicitly named in the version currently moving through the House**, although it could still fall within the broader criteria covering major buyers of Russian energy. The bill has **not yet become law.**

What Does the Bill Propose?

The legislation seeks to strengthen US economic pressure on Russia over the Russia-Ukraine war through sanctions on Russian entities, energy revenues and sanctions-evasion networks.

Its **Section 113** provides that, if enacted, the US President would be required to impose an additional tariff of **up to 100% ad valorem on all goods imported into the US** from certain countries linked to Russian energy purchases or oil-sanctions evasion.

A country may come within the provision if it:

- continues making new purchases of **Russian-origin crude oil or natural gas** after the Act takes effect and is among the **five largest importers by volume** during the relevant 12-month period; or
- is among the **five leading countries facilitating Russian oil-sanctions evasion.**

The US Trade Representative would reassess the major Russian energy-importing countries at **180-day intervals.**

India Amendment

Hoyer's proposed amendment sought to explicitly identify ten countries as initially eligible for tariffs of up to 100%:

1. China
2. India
3. Türkiye
4. Azerbaijan
5. Hungary
6. Slovak Republic
7. United Arab Emirates
8. Singapore
9. Kazakhstan
10. Kyrgyz Republic

The Senate-passed text itself **does not name India or these countries individually.** Instead, it uses objective categories such as the five largest importers of Russian-origin crude oil or natural gas.

Latest Status

- The **US Senate passed the legislation by 86-11.**
- Steny Hoyer's proposal to explicitly name India and nine other countries was submitted in the House.
- The House Rules Committee subsequently voted **3-7 against making that amendment eligible for floor consideration.**
- A separate amendment by Democrat **Gregory Meeks**, which sought to remove the secondary-tariff provision in Section 113 altogether, was also rejected **3-7.**
- The House approved the procedural rule for considering the Senate amendments by **214-211.**
- A final House vote on concurrence in the Senate amendments remains necessary before the measure can proceed for presidential action.

Why is India Relevant?

India substantially increased imports of discounted **Russian crude oil after 2022**, making Russia one of India's major crude suppliers. Consequently, even without India being expressly named, India could potentially fall within Section 113 if it satisfies the legislation's **top-five importer criteria** when the required determination is made.

Importantly, the proposal does **not mean that a 100% US tariff on India is currently in force.** It is a legislative proposal, and the tariff rate under Section 113 could be set anywhere **above zero and up to 100%**, subject to the statutory process.

Secondary Sanctions and Secondary Tariffs

Primary sanctions directly restrict dealings with the targeted country, entity or individual.

Secondary sanctions target third-country persons or entities that continue specified transactions with the primary sanctioned party.

In this bill, the proposed **secondary tariff** mechanism goes further by permitting additional US import duties on goods from countries that meet the Russian-energy or sanctions-evasion criteria. The tariff would be **additional to other applicable US duties**.

Other Major Provisions

- **Russian imports:** The bill authorises tariffs of up to **500%** on goods imported directly from Russia.
- **Russian energy and finance:** It provides for sanctions relating to Russia's energy revenues, financial institutions and persons supporting the Russian government.
- **Shadow fleet:** The legislation targets networks and vessels used to circumvent restrictions on Russian oil exports.
- **Rosatom:** It provides for measures relating to officials and senior figures associated with Russia's state nuclear corporation.
- **Presidential waiver:** The President may waive sanctions or duties after certifying to Congress that doing so is in the **national interest of the United States**.
- **Iran:** The wider legislation also contains measures concerning restrictions on Iran's energy and weapons-related financing.

Additional Info

- **Ad valorem tariff**
 - A customs duty calculated as a percentage of the value of the imported product.
 - Thus, "up to 100% ad valorem" means the tariff could reach an amount equal to the assessed value of the imported goods.
- **US legislative process**
 - A bill normally requires approval of **both the House of Representatives and Senate in identical form**.
 - It then goes to the **President for signature or veto**.
 - Therefore, passage by the Senate or advancement through a House procedural vote does **not itself make the measure law**.

House Rules Committee

- Determines many of the procedural conditions under which legislation is debated in the House.
- It may decide which proposed amendments are made "in order" for floor consideration.
- In this case, the committee did **not make Hoyer's India-naming amendment in order**.

US Lists India Among Major Drug Transit or Illicit Drug-Producing Countries for FY 2027

What's the News?

- The **United States** has included **India among 23 "major drug transit or major illicit drug producing countries"** for **fiscal year 2027** under its annual Presidential Determination on international narcotics control.
- **China and Pakistan** are also on the list.
- India's inclusion **does not mean that the Indian government has been found complicit in drug trafficking or deficient in counternarcotics efforts**. Countries may be listed because geographic, commercial and economic factors facilitate the production or transit of illicit drugs or precursor chemicals.
- India was also part of the corresponding **FY 2026 list**, so its inclusion is not new.

US "Major's List"

The determination covers **23 countries**:

- Afghanistan
- The Bahamas
- Belize
- Bolivia
- Burma (Myanmar)
- China
- Colombia
- Costa Rica
- Dominican Republic
- Ecuador
- El Salvador
- Guatemala
- Haiti
- Honduras
- **India**
- Jamaica
- Laos
- Mexico
- Nicaragua
- Pakistan
- Panama

- Peru
- Venezuela

The list is prepared under **Section 706(1) of the Foreign Relations Authorization Act, Fiscal Year 2003**, using definitions contained in the **Foreign Assistance Act of 1961**.

What Does the Designation Mean?

A country may be classified as a major drug-transit country if it is a **significant direct source of illicit controlled substances affecting the United States or a territory through which such substances are transported**.

A "major illicit drug producing country" can include a country where:

- **1,000 hectares or more** of illicit opium poppy are cultivated or harvested;
- **1,000 hectares or more** of illicit coca are cultivated or harvested;
- **5,000 hectares or more** of illicit cannabis are cultivated or harvested, subject to statutory conditions; or
- it is a significant source of certain illicit synthetic drugs, opioids or precursor chemicals affecting the United States.

Thus, the combined designation "**major drug transit or major illicit drug producing country**" does not specify that every listed country satisfies the same criterion.

India and Counternarcotics Cooperation

- The U.S. determination acknowledged the Indian government's efforts to tackle **illicit opium poppy cultivation** and strengthen **supply-chain integrity**.
- It also stated an intention to continue bilateral cooperation through the **United States-India Drug Policy Framework**.
- India was **not** placed in the separate category of countries determined to have "failed demonstrably" in meeting counternarcotics obligations.

"Failed Demonstrably" Countries

Four countries were separately identified as having "**failed demonstrably**" during the preceding 12 months to make substantial efforts to meet international counternarcotics obligations:

- **Afghanistan**
- **Bolivia**
- **Burma (Myanmar)**
- **Colombia**

This is legally distinct from simply appearing on the 23-country list. Under U.S. law, countries receiving the "failed demonstrably" designation can face restrictions on certain U.S. assistance

unless statutory conditions are met, including a determination that continued assistance is vital to U.S. national interests.

India's Opium Control System

- India is among the few countries where **opium poppy is legally cultivated** for medical and scientific purposes and is the **only country legally producing opium gum**.
- The **Central Bureau of Narcotics (CBN)**:
 - licenses farmers for legal opium poppy cultivation;
 - supervises and controls cultivation;
 - procures the entire opium output of licensed cultivators.
- Legal cultivation is presently concentrated in notified areas of **Madhya Pradesh, Rajasthan and Uttar Pradesh**.

Additional Info

- **Narcotics Control Bureau (NCB)**
 - Functions under the **Ministry of Home Affairs**.
 - It is the Central nodal authority for coordination on drug-related issues and enforcement against illicit drug trafficking.
- **Central Bureau of Narcotics (CBN)**
 - Functions under the **Department of Revenue, Ministry of Finance**.
 - Primarily associated with regulation of licit opium cultivation and control of specified narcotic drugs and precursor chemicals.
- **NDPS Act, 1985**
 - The **Narcotic Drugs and Psychotropic Substances Act, 1985** is India's principal legislation governing narcotic drugs and psychotropic substances.
 - It regulates cultivation, production, manufacture, possession, sale, purchase, transport and use of such substances, subject to authorised medical and scientific purposes.
- **Major distinction**
 - **Being on the U.S. Major's List ≠ being declared non-cooperative.**
 - India is on the broader 23-country list but **not among the four countries designated as having "failed demonstrably."**

India Protests After Pakistan Navy Vessel Collides with Indian Warship in Arabian Sea

What's the News?

- India lodged a **strong diplomatic protest with Pakistan** after a Pakistan Navy vessel collided with an Indian Navy frontline warship in **international waters of the North Arabian Sea**.
- India summoned **Pakistan's Chargé d'Affaires in New Delhi** and also directed its Chargé d'Affaires in Islamabad to raise the matter with Pakistan's Foreign Ministry.
- The Pakistani vessel involved was **PNS Hunain**, an offshore patrol vessel, while the Indian warship was on a routine surveillance deployment.
- India said the incident violated **Article 10 of the 1991 India-Pakistan Agreement on Advance Notice on Military Exercises, Manoeuvres and Troop Movements**, which requires naval vessels of the two countries to maintain a minimum separation of **three nautical miles** in international waters.

What Happened?

- The collision occurred in the **North Arabian Sea**, around **120 nautical miles from the Gulf of Oman**.
- According to the Indian side, **PNS Hunain approached the Indian warship at high speed and manoeuvred dangerously close**, resulting in contact between the vessels.
- The Indian warship reportedly suffered **no significant structural damage or loss of operational capability** and continued its mission.
- PNS Hunain sustained damage and subsequently returned towards port.

India-Pakistan Claims

The two governments gave differing accounts of the incident.

- **India's position**
 - Pakistan's naval vessel engaged in "unacceptable and unprofessional" manoeuvring.
 - India said the Pakistani vessel breached the **three-nautical-mile safety requirement** under the 1991 bilateral agreement.
 - New Delhi called for military units to exercise due care and comply with existing bilateral arrangements.
- **Pakistan's position**

- Pakistan subsequently summoned India's Chargé d'Affaires and lodged its own protest.
- Islamabad claimed the Indian vessel conducted aggressive manoeuvres near **PNS Hunain** while the Pakistan Navy was conducting its **SEASPARK-26** exercise.
- Pakistan also invoked international law and the same 1991 bilateral agreement while disputing India's account.

1991 India-Pakistan Agreement

The **Agreement on Advance Notice on Military Exercises, Manoeuvres and Troop Movements** is an important bilateral **confidence-building measure (CBM)** between India and Pakistan.

- Signed in **1991** and brought into force in **1992**.
- Its objective is to prevent military exercises and troop movements from being misinterpreted as preparations for hostile action.
- It covers activities of the **Army, Navy and Air Force**.
- Countries must provide advance information regarding specified major military exercises and movements.

Article 10

Article 10 deals specifically with naval safety in international waters.

- Naval ships and submarines belonging to India and Pakistan must **not come within three nautical miles of one another** while operating in international waters.
- **3 nautical miles ≈ 5.56 km.**
- The provision is intended to prevent **accidental collisions, misunderstandings and unintended military escalation**.

PNS Hunain

- **PNS Hunain** is an **offshore patrol vessel (OPV)** of the Pakistan Navy.
- It entered Pakistan Navy service in **2024**.
- The vessel is equipped for missions including:
 - maritime surveillance;
 - patrol and security operations;
 - anti-surface operations;
 - search and rescue;
 - protection of maritime interests.
- It was reportedly participating in the Pakistan Navy's **SEASPARK-26 exercise** when the collision occurred.

North Arabian Sea

- The **Arabian Sea** forms the northwestern part of the Indian Ocean.

- It is bordered broadly by:
 - India to the east;
 - Pakistan and Iran to the north;
 - the Arabian Peninsula to the west.
- It connects with the **Gulf of Oman**, which leads to the **Strait of Hormuz** and **Persian Gulf**.
- The region is strategically significant because major **energy and commercial shipping routes** connecting the Persian Gulf with the Indian Ocean pass through it.

Exclusive Economic Zone and International Waters

- Under the **UN Convention on the Law of the Sea (UNCLOS)**, a coastal state's **Exclusive Economic Zone (EEZ)** may extend up to **200 nautical miles** from its baselines.
- The coastal state has sovereign rights over exploration and exploitation of natural resources in its EEZ.
- An EEZ is **not equivalent to territorial waters**; other states retain important navigation and overflight freedoms, subject to the provisions of UNCLOS.
- A country's **territorial sea** generally extends up to **12 nautical miles** from its baseline.

Additional Info

- **Chargé d'Affaires**
 - A diplomat who heads or temporarily manages a diplomatic mission when an ambassador/high commissioner is absent or where relations are maintained below ambassadorial level.
 - India and Pakistan currently conduct their diplomatic relationship through their respective **Chargés d'Affaires** rather than High Commissioners.
- **Confidence-Building Measures (CBMs)**
 - Arrangements designed to reduce misunderstanding, mistrust and the risk of unintended military escalation.
 - India and Pakistan have adopted several military CBMs relating to advance notification of exercises, airspace violations and other security issues.
- **Earlier Naval Collision**
 - A similar incident occurred in **2011**, when the Pakistan Navy vessel **PNS Babur** and Indian Navy ship **INS Godavari** came into contact in the **Gulf of Aden**.

- India and Pakistan subsequently exchanged allegations over the manoeuvring of the vessels.

ISRO-ESA Extend and Broaden Space Cooperation Until 2032

What's the News?

- The **Indian Space Research Organisation (ISRO)** and the **European Space Agency (ESA)** have extended their long-standing **Cooperative Agreement** until **January 2032**.
- The agreement was renewed through an **exchange of letters** signed by **ISRO Chairman V. Narayanan** and **ESA Director General Josef Aschbacher** on the sidelines of the **International Space Summit in Paris**.
- The renewed framework expands cooperation into **space weather, human and robotic exploration, and sustainability of outer-space activities**, while continuing collaboration in Earth observation, satellite navigation, space science and mission operations.

ISRO-ESA Cooperative Agreement

- The formal **Cooperative Agreement** came **into force in January 2002** and provides the institutional framework for collaboration between ISRO and ESA.
- The two agencies have cooperated for more than two decades in:
 - **Earth observation**
 - **Satellite navigation**
 - **Space science**
 - **Mission operations and tracking support**
- The latest renewal extends the agreement for **another five years**, up to 2032.

Expanded Areas of Cooperation

The renewed agreement adds or strengthens cooperation in:

- **Space Weather:** Study of conditions caused mainly by solar activity that can affect satellites, communication networks, navigation systems and terrestrial power grids.
- **Human Exploration:** Cooperation linked to crewed space missions, astronaut-related capabilities and future exploration programmes.
- **Robotic Exploration:** Use of uncrewed spacecraft, probes and robotic systems for lunar, planetary and deep-space exploration.
- **Space Sustainability:** Promoting the safe and sustainable use of outer space

amid increasing numbers of satellites and missions.

Recent ISRO-ESA Cooperation

- **Human Space Exploration:** The agencies signed a **Joint Statement of Intent on human exploration in 2025**.
- **Earth Observation:** A separate agreement in **2026** provided for joint **calibration, validation and scientific studies**, including sharing of technology, data and infrastructure.
- Recent cooperation has also involved missions such as **Aditya-L1**, **ESA's Proba-3** and the upcoming **Chandrayaan-5** programme.
- ESA and ISRO also provide support in areas such as **spacecraft tracking, scientific collaboration and expert mission reviews**.

Additional Info

- **ISRO**
 - Established: **1969**
 - Functions under the **Department of Space, Government of India**.
 - Responsible for India's space research, satellite, launch-vehicle and planetary exploration programmes.
- **European Space Agency (ESA)**
 - Established: **1975**
 - An **intergovernmental organisation** coordinating European space research, technology and exploration programmes.
- **India-Europe Space Cooperation**
 - Cooperation between ISRO and ESA traces back to **1978**, initially focusing on **Earth observation and remote sensing**.
 - Early cooperation covered areas such as **data sharing, ground stations, spacecraft tracking and scientific validation**.
 - The 2002 agreement subsequently created a broader formal framework for joint space activities.

India Participates in East Asia Summit Economic Ministers' Meeting

What's the News?

- India participated in the **14th East Asia Summit Economic Ministers' Meeting (EAS-EMM)** and the **23rd ASEAN-India Economic Ministers Consultation** in **Manila, Philippines**.

- The Indian delegation was led by **Nitin Kumar Yadav, Additional Secretary, Department of Commerce**.
- Representatives from all **11 ASEAN member states** participated along with EAS partners – **India, Australia, China, Japan, New Zealand, Republic of Korea, Russia and the United States**.
- Major discussions covered the regional economic outlook, energy security, industrial clusters and the ongoing review of the **ASEAN-India Trade in Goods Agreement (AITIGA)**.

East Asia Summit Economic Ministers' Meeting

- The meeting provides a platform to discuss **regional and global economic developments, trade and investment**.
- The ASEAN Secretariat presented the regional and global economic outlook for **2027**, including expected implications for trade and investment flows.
- The **Economic Research Institute for ASEAN and East Asia (ERIA)** presented a study on the next phase of EAS economic growth.
- It advocated an integrated approach linking:
 - Energy security and infrastructure.
 - Industrial clusters.
 - Digital and industrial demand.
 - Trade and investment policies.

ASEAN-India Economic Ministers Consultation

- Discussions primarily focused on strengthening **India-ASEAN trade relations** and reviewing **AITIGA**.
- India emphasised that the revised agreement should be:
 - More balanced and mutually beneficial.
 - Easier for businesses to use.
 - More effective in facilitating trade.
 - Capable of addressing existing **trade asymmetries**.
- India-ASEAN bilateral trade reached **USD 128.38 billion in 2025-26**.
- ASEAN accounted for **10.55% of India's total global trade** during the period.

ASEAN-India Trade in Goods Agreement (AITIGA)

- **AITIGA** governs merchandise trade between India and ASEAN.
- It was signed in **2009** and entered into force in **2010**.
- It provides for tariff liberalisation and improved market access for goods traded between the two sides.

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- The ongoing review seeks to modernise the agreement and address concerns regarding its utilisation and trade imbalance.

Additional Info

- **East Asia Summit (EAS):**
 - A **leaders-led Indo-Pacific forum**, established in **2005**.
 - India is a **founding participant**.
 - It deals with strategic, political and economic issues affecting the wider region.
- **ASEAN:**
 - **Association of Southeast Asian Nations**.
 - Founded in **1967 through the Bangkok Declaration**.
 - Timor-Leste became its **11th member** after its formal admission in 2025.
 - Members: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam.
- **India-ASEAN Relations:**
 - India became a **Sectoral Dialogue Partner in 1992** and a **full Dialogue Partner in 1995**.
 - ASEAN-India relations were elevated to the **Summit level in 2002** and to a **Strategic Partnership in 2012**.
 - The relationship was upgraded to a **Comprehensive Strategic Partnership in 2022**.
- **ERIA:**
 - **Economic Research Institute for ASEAN and East Asia**.
 - A regional research organisation supporting economic integration and policy research in East Asia.

India Signs UN Convention Against Cybercrime

What's the News?

- **External Affairs Minister S. Jaishankar** signed the **United Nations Convention against Cybercrime** on behalf of India on the sidelines of the **81st UN General Assembly (UNGA)** in New York.
- The Convention is the **first comprehensive global UN treaty on cybercrime**, aimed at strengthening international cooperation against offences involving information and communication technologies and improving cross-border sharing of electronic evidence.

- India became a signatory while the Convention remains **open for signature until the end of 2026**.

UN Convention against Cybercrime

- Formally titled the **United Nations Convention against Cybercrime; Strengthening International Cooperation for Combating Certain Crimes Committed by Means of Information and Communications Technology Systems and for the Sharing of Evidence in Electronic Form of Serious Crimes**.
- Adopted by the **UN General Assembly through Resolution 79/243 in 2024**.
- It is also commonly referred to as the **Hanoi Convention**, after its opening-for-signature ceremony in Hanoi, Vietnam.
- **UN Office on Drugs and Crime (UNODC)** serves as the secretariat for the Convention's Conference of States Parties.

Provisions

The Convention creates a common international framework covering:

- **Cybercrime offences**
 - Illegal access to ICT systems
 - Illegal interception of electronic data
 - Data and system interference
 - Misuse of devices
 - ICT-related forgery
 - ICT-related theft and fraud
 - Online child sexual abuse or exploitation material
 - Non-consensual dissemination of intimate images
- **Electronic Evidence**
 - Provides procedures for obtaining and preserving **electronic evidence** relevant to cybercrime and other serious crimes.
 - Particularly important where offenders, victims, servers or digital evidence are located in different jurisdictions.
- **International Cooperation**
 - Provides mechanisms for **mutual legal assistance, extradition and cross-border investigations**.
 - Requires States Parties to establish a **24x7 contact point** for urgent assistance relating to cyber investigations and electronic evidence.

Human Rights Safeguards

- **Article 6** requires implementation of the Convention to be consistent with

States' obligations under **international human rights law**.

- It states that the Convention cannot be interpreted as permitting suppression of fundamental freedoms such as:
 - Freedom of expression
 - Freedom of opinion
 - Freedom of conscience and religion
 - Peaceful assembly and association.

Signature vs Ratification

- **Signing** a treaty indicates a State's intention to consider becoming legally bound by it.
- India has **signed**, but the Convention has **not yet entered into force globally**.
- It will enter into force **90 days after the 40th instrument of ratification, acceptance, approval or accession is deposited**.
- At present, the UN Treaty Collection records **95 signatories and 3 parties**; India is listed as a signatory.

Relevance for India

- Cybercrime frequently involves **cross-border digital infrastructure, financial transactions and electronic evidence**, making international cooperation important for investigation and prosecution.
- The Convention can provide an additional multilateral framework for obtaining electronic evidence and coordinating investigations across jurisdictions.
- India is **not a party to the Council of Europe's Budapest Convention on Cybercrime**, making the UN Convention particularly significant as a global cybercrime framework in which India directly participated.

Additional Info

- **Information Technology Act, 2000**
 - India's principal legislation dealing specifically with electronic records and several categories of cyber offences.
 - Important provisions include:
 - **Section 66C:** Identity theft
 - **Section 66D:** Cheating by personation using computer resources
 - **Section 67:** Publishing/transmitting obscene electronic material

- **Section 67B:** Electronic material depicting children in sexually explicit acts
- **Section 67C:** Preservation and retention of information by intermediaries.

Indian Cyber Crime Coordination Centre (I4C)

- Functions under the **Ministry of Home Affairs** as India's nodal mechanism for coordinated action against cybercrime.
- Became an **attached office of MHA in 2024**.
- Major components include:
 - National Cybercrime Reporting Portal
 - National Cybercrime Threat Analytics Unit
 - National Cybercrime Training Centre
 - National Digital Investigation Support Centre
 - Cybercrime research and innovation mechanisms.
- **Helpline 1930** facilitates reporting of financial cyber frauds.

India Reserves Third-Party Rights in Russia-EU CBAM Dispute at WTO

What's the News?

- **India has reserved its third-party rights** in a World Trade Organization (WTO) dispute filed by **Russia against the European Union (EU)** over the EU's **Carbon Border Adjustment Mechanism (CBAM)**.
- The **WTO Dispute Settlement Body (DSB)** has agreed to establish a panel to examine the dispute, registered as **DS639: European Union and its Member States – Carbon Border Adjustment Mechanism**.
- India is among **18 WTO members** that reserved third-party rights, along with countries such as China, Japan, Brazil, Canada, Saudi Arabia, South Korea, the UK and the US.
- India's participation allows it to **follow the proceedings and make submissions on WTO legal issues**, without becoming either the complainant or respondent in the dispute.

What is EU's CBAM?

- **Carbon Border Adjustment Mechanism (CBAM)** is the EU's carbon-pricing

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system for certain carbon-intensive goods imported into the European Union.

- It seeks to place a carbon cost on imported goods broadly corresponding to the carbon price faced by EU producers under the **EU Emissions Trading System (EU ETS)**.
- Its stated objective is to prevent **carbon leakage** – relocation of carbon-intensive production to countries with less stringent climate policies.
- CBAM currently covers six sectors:
 - **Iron and steel**
 - **Aluminium**
 - **Cement**
 - **Fertilisers**
 - **Electricity**
 - **Hydrogen.**
- After a transitional reporting phase, the **definitive CBAM regime began in 2026**. Importers above the applicable threshold must meet CBAM compliance requirements and purchase certificates reflecting embedded carbon emissions.

Russia-EU WTO Dispute

- Russia initiated WTO consultations over the CBAM measures and an **alleged export subsidy linked to the EU ETS**.
- Russia contends that elements of CBAM create discriminatory or restrictive trade conditions and has cited provisions of:
 - **GATT 1994**
 - **Agreement on Import Licensing Procedures**
 - **Agreement on Subsidies and Countervailing Measures (SCM Agreement)**.
- Russia has alleged violations including those concerning:
 - **Most-Favoured-Nation treatment – GATT Article I**
 - **Tariff commitments – GATT Article II**
 - **National Treatment – GATT Article III**
 - **Restrictions on trade – GATT Article XI.**
- The **EU disputes Russia's claims** and maintains that CBAM and the EU ETS are compatible with WTO rules. The WTO panel will examine the legal claims; establishment of a panel itself does not determine whether either side's arguments are valid.

Why is India Participating?

- Indian exporters of products such as **iron, steel and aluminium** are directly exposed to CBAM compliance and carbon-cost requirements in the EU market.

- Third-party participation gives India access to the dispute proceedings and an opportunity to present its interpretation of relevant WTO provisions.
- The eventual panel findings could clarify how **climate-related border measures interact with WTO obligations**, an issue relevant to India and other developing-country exporters.
- Reserving third-party rights **does not mean India has joined Russia as a complainant or formally endorsed Russia's claims**.

Third-Party Rights at WTO

- Under the WTO dispute-settlement framework, a member having a **substantial interest** in a matter before a panel may participate as a third party.
- A third party can generally:
 - Make written and oral submissions to the panel.
 - Present its interpretation of WTO provisions involved in the dispute.
 - Receive specified submissions made during the proceedings.
- It remains distinct from the **complainant** and **respondent** and does not itself become a principal party to the dispute.

CBAM Certificates

- The price of CBAM certificates is linked to the price of allowances under the **EU ETS**.
- For 2026, the European Commission calculates the certificate price on a **quarterly basis** using the weighted average auction price of EU ETS allowances.
- Published prices were:
 - **Q1 2026:** €75.36 per certificate
 - **Q2 2026:** €75.28 per certificate.
- A carbon price already effectively paid in the country of origin can be taken into account under the CBAM framework, subject to applicable EU rules.

Additional Info

- **WTO**
 - Established: **1995**
 - Headquarters: **Geneva, Switzerland**
 - Deals with international rules governing trade among member economies.
- **Dispute Settlement Body**
 - Comprises representatives of all WTO members.

- Establishes dispute-settlement panels and formally handles panel and appellate/arbitration outcomes under WTO procedures.
- The Russia-EU CBAM dispute is designated **DS639**.
- **EU Emissions Trading System**
 - A **cap-and-trade system** for greenhouse-gas emissions.
 - Covered installations must surrender allowances corresponding to their emissions.
 - CBAM is designed by the EU to progressively extend a comparable carbon-price signal to covered imports.
- **Carbon Leakage**
 - Refers to the risk that emission-intensive production shifts from a jurisdiction with stringent carbon constraints to one with weaker constraints, potentially reducing the environmental effectiveness of domestic climate policy.

11th BIMSTEC Counter-Terrorism Meeting Held in New Delhi

What's the News?

- India hosted the **11th Meeting of the BIMSTEC Joint Working Group on Counter Terrorism and Transnational Crime (JWG-CTTC)** in New Delhi.
- Delegations from all **seven BIMSTEC member states** participated.
- The meeting was chaired by **Dr Suhel Ajaz Khan, Additional Secretary (Counter Terrorism), Ministry of External Affairs**.
- Members discussed **traditional, emerging and non-traditional security threats** and measures to strengthen regional cooperation against terrorism and transnational crime.

JWG-CTTC

- The **Joint Working Group on Counter Terrorism and Transnational Crime (JWG-CTTC)** is BIMSTEC's principal mechanism for cooperation against terrorism and cross-border organised crime.
- It coordinates cooperation at both **policy and operational levels**.
- Counter-Terrorism and Transnational Crime became a BIMSTEC priority area in **2005**.
- The JWG supervises specialised sub-groups dealing with different

dimensions of terrorism and organised crime.

Five Areas Reviewed

The meeting examined reports from five specialised sub-groups:

1. Human Trafficking

- Cooperation against trafficking networks and protection of victims.

1. Illicit Drugs & Precursors

- Prevention of trafficking in **narcotic drugs, psychotropic substances and precursor chemicals**.

1. Anti-Money Laundering & Terror Financing

- Cooperation to combat **money laundering and financing of terrorism**.

1. Legal & Law Enforcement Issues

- Strengthening cooperation among law-enforcement agencies and developing common legal instruments.

1. Counter-Radicalisation & Terrorism

- Cooperation against radicalisation and terrorist activities.

- BIMSTEC's institutional framework actually contains **six CTTC sub-groups**, the additional one being the **Sub-Group on Intelligence Sharing**; reports from five sub-groups were specifically discussed at the 11th meeting.

BIMSTEC

- **Full form:** Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation.
- **Established:** 1997 through the **Bangkok Declaration**.
- **Members (7):**
 - Bangladesh
 - Bhutan
 - India
 - Myanmar
 - Nepal
 - Sri Lanka
 - Thailand
- **Secretariat:** Dhaka, Bangladesh.
- BIMSTEC connects countries of **South Asia and Southeast Asia** around the Bay of Bengal.

Seven Cooperation Sectors

Lead Country	Sector
Bangladesh	Trade, Investment & Development
Bhutan	Environment & Climate Change
India	Security
Myanmar	Agriculture & Food Security

Nepal	People-to-People Contact
Sri Lanka	Science, Technology & Innovation
Thailand	Connectivity

India's **Security Sector** covers three principal sub-sectors: **Counter-Terrorism and Transnational Crime, Disaster Management and Energy.**

BIMSTEC Security Framework

- **India is the lead country for BIMSTEC's Security Sector**, giving it a coordinating role in regional CTTC cooperation.
- The **BIMSTEC Convention on Cooperation in Combating International Terrorism, Transnational Organised Crime and Illicit Drug Trafficking**:
 - Signed in **2009**.
 - Entered into force in **2021** after ratification by all members.
 - Provides for cooperation in prevention, investigation, prosecution and suppression of terrorism, organised crime and illicit drug trafficking.
- The **BIMSTEC Convention on Mutual Legal Assistance in Criminal Matters** was signed at the **5th BIMSTEC Summit in 2022** to facilitate cooperation in criminal investigations and related proceedings.

Additional Info

- **BIMSTEC Charter**
 - Signed at the **5th BIMSTEC Summit in Colombo in 2022**.
 - Entered into force on **20 May 2024**.
 - Gave BIMSTEC a formal **legal personality** and strengthened its institutional framework.
- **Recent Security Cooperation**
 - The **5th Meeting of BIMSTEC National Security Chiefs** was also hosted by India in New Delhi in 2026.
 - It addressed terrorism, organised crime and security challenges involving the **cyber, maritime and energy domains**, along with disaster management and emerging threats.

International Events

Ramon Magsaysay Awards 2026 Honour Three Asian Leaders

What's the News?

- The **Ramon Magsaysay Award Foundation (RMAF)** has announced the **68th batch of Ramon Magsaysay Award laureates**.
- The 2026 awardees are:
 - **Tommy Koh – Singapore**
 - **Runa Khan – Bangladesh**
 - **Bo Kyi – Myanmar**
- They have been recognised for contributions spanning **international diplomacy and law, humanitarian development, and human rights**.

2026 Awardees

Tommy Koh – Singapore

- A distinguished **diplomat, international lawyer and academic**.
- Recognised for decades of work promoting **peaceful dispute resolution, international cooperation and rule-based global governance**.
- Played a major role in negotiations leading to the **United Nations Convention on the Law of the Sea (UNCLOS)**.
- Served as **President of the Third UN Conference on the Law of the Sea**, which adopted UNCLOS.
- Also chaired the **1992 UN Conference on Environment and Development (Earth Summit)** preparatory process and contributed extensively to diplomacy and institution-building.

Runa Khan – Bangladesh

- Founder of the humanitarian organisation **Friendship**.
- Recognised for developing an integrated model to serve people in Bangladesh's remote **riverine chars, coastal areas and other climate-vulnerable communities**.
- Friendship began with a **hospital ship** and expanded into:
 - Healthcare.
 - Education.
 - Climate adaptation.
 - Livelihood support.
 - Social inclusion and legal assistance.
- Its approach focuses on populations often beyond the reach of conventional public and development services.

Bo Kyi – Myanmar

- A former political prisoner and human-rights advocate.

- Imprisoned twice following Myanmar's pro-democracy movement, spending a total of **seven years in detention**.
- Co-founded the **Assistance Association for Political Prisoners (AAPP)** in **2000**.
- AAPP:
 - Documents political arrests and human-rights violations.
 - Supports political prisoners and their families.
 - Conducts advocacy on political imprisonment and accountability.
- He was honoured for his sustained work for **truth, justice, human dignity and political prisoners' rights**.

Ramon Magsaysay Award

- Regarded as **Asia's premier prize and highest honour** for transformative leadership and public service.
- Established in **1957** by the trustees of the **Rockefeller Brothers Fund**, with the concurrence of the Philippine government.
- Named after **Ramon Magsaysay**, the **7th President of the Philippines**, who died in a plane crash in 1957.
- The **first awards were presented in 1958**.
- It recognises individuals and organisations working in Asia who demonstrate **integrity, courage and selfless service** in addressing major human-development challenges.
- As of 2026, the award has recognised **359 laureates – 331 individuals and 28 organisations – from 24 countries and territories**.

Additional Info

- **Award Categories**
 - Until **2008**, awards were given across six fields:
 - Government Service.
 - Public Service.
 - Community Leadership.
 - Journalism, Literature and Creative Communication Arts.
 - Peace and International Understanding.
 - Emergent Leadership.
 - From **2009**, the Foundation largely shifted away from fixed categories, allowing recognition across interconnected areas of public service and human development.
- **UNCLOS**

- The **United Nations Convention on the Law of the Sea** establishes the legal framework governing oceans and maritime activities.
- It deals with matters such as **territorial seas, Exclusive Economic Zones (EEZs), continental shelves, navigation and marine-resource rights.**
- Tommy Koh's role in the UNCLOS negotiations is among his major contributions recognised by the award.
- **RMAF**
 - **RMAF:** Ramon Magsaysay Award Foundation.
 - The laureates are selected by its **Board of Trustees.**
 - Awardees receive a **certificate and medallion bearing Ramon Magsaysay's profile.**

Lahore Named SCO Tourism and Cultural Capital for 2026–27

What's the News?

- The **Shanghai Cooperation Organisation (SCO)** has designated **Lahore, Pakistan,** as its **Tourism and Cultural Capital for 2026–27.**
- The designation was announced at the **26th meeting of the SCO Council of Heads of State** in **Bishkek, Kyrgyzstan.**
- Pakistan has also assumed the **SCO chairmanship for 2026–27,** succeeding Kyrgyzstan.
- The initiative seeks to promote **tourism, cultural exchanges and people-to-people contacts** among SCO member states.

SCO Tourism and Cultural Capital

- The title has been **rotated annually among SCO member states since 2022.**
- It highlights the cultural heritage and tourism potential of a selected city, particularly from the country assuming the SCO's rotating chairmanship.
- The decision to designate Lahore was initially taken at a meeting of **heads of tourism administrations of SCO member states** in Bishkek.
- Previous title holders:
 - **Varanasi, India:** 2022–23.
 - **Almaty, Kazakhstan:** 2023–24.
 - **Qingdao, China:** 2024–25.
 - **Cholpon-Ata, Kyrgyzstan:** 2025–26.
 - **Lahore, Pakistan:** 2026–27.

Pakistan's SCO Chairmanship

- Pakistan assumed the chairmanship for the **2026–27 term** following the

conclusion of Kyrgyzstan's chairmanship.

- Its chairmanship theme is **“Turning Vision into Action: Connectivity, Innovation and Shared Prosperity.”**
- Lahore is expected to host cultural and tourism-related programmes involving SCO member states during the term.

Additional Info

- **Shanghai Cooperation Organisation (SCO)**
 - Established in **2001.**
 - Headquarters: **Beijing, China.**
 - Current membership: **10 countries:**
 - Belarus
 - China
 - India
 - Iran
 - Kazakhstan
 - Kyrgyzstan
 - Pakistan
 - Russia
 - Tajikistan
 - Uzbekistan
 - **India and Pakistan became full members in 2017.**
 - **Iran** subsequently became a full member, while **Belarus joined in 2024.**
 - Official languages: **Russian and Chinese.**
- **Lahore**
 - Capital of **Punjab province, Pakistan.**
 - An important centre of **Mughal-era architecture, literature, art and cultural heritage.**
 - **Lahore Fort and Shalamar Gardens** together constitute a **UNESCO World Heritage Site,** inscribed in **1981.**
 - The sites represent major examples of Mughal architecture and garden design developed particularly during the reigns of **Akbar and Shah Jahan.**

Türkiye Joins Artemis Accords as 71st Signatory

What's the News?

- **Türkiye** has become the **71st country** to sign the **Artemis Accords,** a US-led international framework for peaceful, transparent and responsible civil space exploration.
- The accords were signed on Türkiye's behalf by **Mehmet Fatih Kacır, Minister of Industry and Technology,** at NASA Headquarters in Washington.

- Türkiye joins the framework as it expands its own space programme, including human-spaceflight experience and plans for a lunar mission.

Artemis Accords

- Established in **2020** by **NASA, the US Department of State and seven other initial signatory countries**.
- They constitute a set of **non-binding principles** governing cooperation in civil exploration and use of the **Moon, Mars and other celestial bodies**.
- The eight founding signatories were:
 - Australia
 - Canada
 - Italy
 - Japan
 - Luxembourg
 - United Arab Emirates
 - United Kingdom
 - United States
- The accords reinforce obligations and principles contained in existing international space-law instruments, particularly the **Outer Space Treaty, 1967**.

Principles

- **Peaceful purposes:** Space activities should be undertaken exclusively for peaceful purposes.
- **Transparency:** Countries should openly share information about their space policies and exploration plans.
- **Interoperability:** Promotion of compatible systems and common technical standards.
- **Emergency assistance:** Assistance to astronauts and personnel in distress.
- **Registration:** Registration of objects launched into outer space.
- **Scientific data:** Open sharing of scientific results.
- **Space heritage:** Protection of historically significant sites and artefacts, including lunar heritage sites.
- **Space resources:** Extraction and utilisation of space resources in accordance with the Outer Space Treaty.
- **Deconfliction:** Coordination, including temporary "safety zones", to prevent harmful interference between activities.
- **Orbital debris:** Commitment to responsible debris mitigation and spacecraft disposal.

Türkiye's Space Programme

- The **Turkish Space Agency (TUA)** coordinates the country's national space activities.

- **Alper Gezeravcı** became the first Turkish citizen to travel to space, participating in **Axiom Mission 3** to the International Space Station.
- Türkiye is developing **AYAP-1**, its first lunar mission, involving an uncrewed spacecraft and indigenous **hybrid-propulsion technology**.
- Joining the Artemis Accords expands Türkiye's institutional engagement with countries pursuing lunar exploration and international cooperation in space.

Additional Info

- **India and Artemis Accords**
 - India became the **27th signatory** to the Artemis Accords in **2023**.
 - The agreement was signed on India's behalf by its then Ambassador to the US, **Taranjit Singh Sandhu**.
 - India's participation forms part of expanding **India-US civil space cooperation**.
- **Outer Space Treaty, 1967**
 - Forms the basic legal framework of international space law.
 - Provides that outer space shall be used for **peaceful purposes and for the benefit of all countries**.
 - Prohibits national appropriation of outer space, including the Moon and other celestial bodies, through claims of sovereignty.
 - The Artemis Accords seek to operationalise several Outer Space Treaty principles for modern civil space exploration.
- **Artemis Programme**
 - NASA-led programme aimed at sustained human exploration of the **Moon** and using lunar experience and technologies to prepare for future human exploration of **Mars**.
 - The **Artemis Accords** are the international cooperation framework associated with responsible civil space exploration; they are distinct from individual Artemis missions.

Argentina Escalates Falklands Dispute with the UK

What's the News?

Argentina has intensified its long-running sovereignty claim over the **Falkland Islands (Islas Malvinas)**, controlled by the United Kingdom. President **Javier Milei** announced tougher

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measures against companies involved in offshore oil and gas activities around the islands and backed plans to strengthen Argentina's military presence in the South Atlantic. The move has been reinforced by comments from U.S. President **Donald Trump** suggesting that Washington could reconsider its longstanding position on the dispute.

Why Has the Dispute Escalated?

The immediate trigger is the planned **Sea Lion offshore oil project** in the North Falkland Basin.

- The project is associated with:
 - **Navitas Petroleum** – Israeli company.
 - **Rockhopper Exploration** – UK-listed company.
- The field is estimated to contain around **1.7 billion barrels of oil**.
- First oil production is expected around **2028**.
- Argentina considers offshore resource extraction around the islands to be an unlawful exploitation of territory and maritime areas it claims.
- Milei has moved to impose or strengthen sanctions against companies involved in such activities.

Argentina's New Measures

Milei's government has adopted a more assertive approach combining **economic, legal and defence measures**:

- Tougher sanctions against companies involved in hydrocarbon activities around the Falklands.
- Proposed legislation to potentially extend penalties to **shareholders, directors and suppliers** connected with such projects.
- Plans for an **integrated naval base in Tierra del Fuego**, Argentina's southernmost province.
- Diplomatic efforts to reinforce Argentina's claim to sovereignty over the islands.

UK Position

The UK has rejected Argentina's renewed sovereignty claim and reaffirmed its commitment to the Falkland Islands.

- The UK emphasises the **right of the islanders to self-determination**.
- In a **2013 referendum**, approximately **99.8%** of participating Falkland Islanders voted to remain a British Overseas Territory.
- The UK maintains that its sovereignty over the islands is not open to negotiation under Argentina's terms.

Falklands War

- The sovereignty dispute dates back to the **19th century**.
- Argentina invaded the islands in **1982**, leading to the **Falklands War** with the UK.
- British forces recaptured the islands after a conflict lasting about **10 weeks**.
- The war resulted in **more than 900 deaths** on both sides.
- Argentina continues to call the islands **Islas Malvinas**.

The dispute remains politically sensitive in Argentina and is closely associated with national sovereignty and territorial integrity.

Falkland Islands

- **Location:** South Atlantic Ocean, roughly 300 miles east of southern Argentina.
- **Political status:** British Overseas Territory.
- **Argentine name:** Islas Malvinas.
- **Strategic importance:**
 - South Atlantic maritime routes.
 - Fisheries.
 - Potential offshore hydrocarbon resources.
 - Proximity to the southern Atlantic and Antarctic region.
 - Military and geopolitical significance.

U.S. Factor

The dispute has acquired additional geopolitical significance because of **Donald Trump's comments regarding the traditional U.S. position**.

- The United States has historically maintained a relatively cautious position on the sovereignty dispute.
- Trump has indicated that Washington could **review its position**, which Milei has interpreted as favourable to Argentina.
- Any significant change in U.S. policy could affect the diplomatic balance between Argentina and the UK.
- However, this does **not** amount to a formal U.S. recognition of Argentine sovereignty over the Falklands.

International Law & Self-Determination

The Falklands dispute illustrates a recurring tension in international relations between:

- **Territorial integrity / competing sovereignty claims**, and
- **Self-determination of the population residing in a disputed territory**.

Additional Info

- **Falkland Islands**
 - British Overseas Territory in the South Atlantic.
 - Capital: **Stanley**.
 - Argentina refers to them as **Islas Malvinas**.
- **Tierra del Fuego**
 - Argentina's southernmost province.
 - Geographically important because of its access to the **South Atlantic and approaches to the Drake Passage**.
 - Proposed naval infrastructure there would strengthen Argentina's southern maritime presence.
- **Sea Lion Field**
 - Located in the **North Falkland Basin**.
 - Estimated resource: **~1.7 billion barrels of oil**.
 - Operators: Navitas Petroleum and Rockhopper Exploration.
 - Expected production: **2028**.

UN Backs Equal Earth Map to Show Africa's True Size

What's the News?

The **United Nations General Assembly (UNGA)** has approved an African-led resolution promoting world maps that represent the **relative size of continents more accurately**. The resolution, led by **Togo** and supported by the **African Union (AU)**, received **164 votes in favour**, **6 abstentions** and **1 vote against**, with the **United States** being the sole opponent.

The initiative encourages wider use of the **Equal Earth projection**, particularly in education, public communication and digital mapping, instead of relying predominantly on the **Mercator projection**.

Equal Earth Projection

- **Equal Earth** is an **equal-area map projection** introduced in **2018**.
- It represents the relative areas of continents more faithfully than Mercator.
- It is particularly relevant to Africa because conventional Mercator maps substantially exaggerate the apparent size of regions at high latitudes while understating the relative visual size of equatorial regions.
- The projection was developed by cartographers **Tom Patterson, Bojan Šavrič and Bernhard Jenny**.

Mercator Projection: Why the Debate?

The **Mercator projection** was developed by Flemish cartographer **Gerardus Mercator in 1569**.

- It is a **cylindrical, conformal projection**.
- It preserves **local angles and directions**, making it particularly useful for **marine navigation**.
- However, it significantly distorts **area**, especially towards the poles.
- Consequently:
 - Greenland appears much larger than its actual relative size.
 - Europe and North America appear disproportionately large.
 - Africa appears relatively smaller than its actual area.
- **Africa is about 14 times larger than Greenland**, although their apparent sizes can look much closer on a Mercator map.

UN Resolution & Voting

Particular	Details
Resolution initiative	African-led
Lead country	Togo
Supported by	African Union
Votes in favour	164
Abstentions	6
Against	1 – United States
Preferred projection	Equal Earth
Nature	Non-binding

The resolution does **not legally ban the Mercator projection**. Instead, it encourages governments, educational institutions and mapping organisations to use projections that represent land areas more accurately.

Why Is Africa's Map Size Important?

The issue goes beyond cartographic technique and has acquired a **decolonisation and representation dimension**.

- African countries argue that repeated use of distorted maps can influence perceptions of the continent's geographical scale and global significance.
- Togo has described the initiative in terms of **"cognitive justice."**
- The initiative seeks greater use of accurate representations in:
 - School geography textbooks
 - Atlases
 - Public information
 - Digital mapping platforms
 - Educational materials

Togo has indicated plans to update its geography teaching materials and promote wider international adoption.

Map Projections

A **map projection** is a mathematical method of representing the curved surface of Earth on a flat surface. Because a sphere cannot be flattened without distortion, every projection sacrifices at least one property.

Major projection types:

- **Conformal projection**
 - Preserves local angles and shapes.
 - Example: **Mercator**.
- **Equal-area projection**
 - Preserves relative area.
 - Example: **Equal Earth**.
- **Equidistant projection**
 - Preserves certain distances.
- **Azimuthal projection**
 - Preserves directions from a particular central point.

Mercator vs Equal Earth

Feature	Mercator	Equal Earth
Developed	1569	2018
Type	Cylindrical, conformal	Equal-area
Main strength	Direction/local angles	Relative area
Area distortion	High, especially towards poles	Much lower
Major use	Navigation	Thematic/educational mapping
Africa's relative size	Visually understated	More accurately represented

Additional Info

- **United Nations General Assembly**
 - Principal deliberative, policymaking and representative organ of the UN.
 - **193 Member States**.
- **African Union**
 - Continental organisation of African states.
 - Headquarters: **Addis Ababa, Ethiopia**.
- **Togo**
 - West African country.
 - Capital: **Lomé**.
- **Important distinction**
 - A map showing *true area* does not necessarily preserve *shape, direction or distance*.

- There is **no single flat world map that simultaneously preserves area, shape, distance and direction perfectly**.

• Mercator remains useful

- Its area distortion does not make it an inherently “wrong” map; its preservation of angles and directions makes it highly useful for navigation.
- The UN initiative primarily concerns **appropriate representation and use**, rather than eliminating Mercator altogether.

Ig Nobel Prizes 2026 Honour Unusual Scientific Research

What's the News?

- The **36th Ig Nobel Prize ceremony** was held in **Zurich, Switzerland**, marking the **first time the ceremony was hosted outside the United States**.
- **Ten prizes** were awarded for unconventional research across fields such as Chemistry, Medicine, Biology, Physics, Economics and Technology.
- The Ig Nobel Prizes recognise achievements that **“first make people laugh, then make them think”**, highlighting unusual research that can still raise meaningful scientific questions.
- The 2026 ceremony had **“fungi” as its theme**.

2026 Ig Nobel Prize Winners

- **Biomechanics Prize – Matilda Brindle, Catherine Talbot and Stuart West**
 - Developed a more precise scientific definition of **kissing** by comparing oral contact behaviour in ants, birds, polar bears and humans.
- **Economics Prize – Paul Piff, Daniel Stancato, Stéphane Côté, Rodolfo Mendoza-Denton and Dacher Keltner**
 - Studied the relationship between **higher social class and unethical behaviour**.
- **Chemistry Prize – Sanchari Banerjee and team**
 - Found that milk proteins from the viviparous cockroach *Diploptera punctata* contain about **three times as much energy as cow-milk proteins**.
- **Medicine Prize – Tokuji Unno (posthumously)**
 - Honoured for an aerodynamic study on **how to blow the nose**.

- **Biology Prize – João Miguel Alves-Nunes and team**
 - Studied what conditions make **venomous snakes more likely to bite humans**.
- **Physics Prize – Randy Hurd, Zhao Pan, Tadd Truscott and Kaveeshan Thurairajah**
 - Conducted theoretical and experimental research to design a **splash-free urinal**.
- **Technology Prize – Justin Puma and team**
 - Developed “**necroprinting**”, using mosquito proboscises as ultra-fine **3D-printing nozzles**.
- **Olfaction Prize – Ilona Croy, Tomasz Frackowiak, Thomas Hummel and Agnieszka Sorokowska**
 - Studied how parents perceive their children’s body odour, finding more favourable perceptions of **babies than teenagers**.
- **Peace Prize – Jaimie Arona Krems and team**
 - Studied why people may value friends who behave badly toward **people they themselves dislike**.
- **Soil Science Prize – Franz Bender, Marcel van der Heijden, Atlant Bieri and Pia Viviani**
 - Buried **1,000 identical pairs of cotton underpants in more than 25 countries** to examine soil biological activity through decomposition.

Indian Connection

- The **Chemistry Prize** involved researchers associated with **India, France, Japan and the United States**.
- The winning team included **Sanchari Banerjee, Nitish Sathyanarayanan, Jandhyam Srikanth and Subramanian Ramaswamy**, along with international collaborators.
- Their research examined protein crystals produced by the **Pacific beetle cockroach (*Diploptera punctata*)**, a viviparous cockroach that nourishes developing offspring internally.
- The study found that these milk-protein crystals pack roughly **three times as much energy as cow-milk proteins**.

Ig Nobel Prize?

- The awards were **started in 1991**.
- They are organised by the science-humour magazine **Annals of Improbable Research**.
- **Ten prizes are awarded annually**.
- Their purpose is to recognise unusual and imaginative achievements that

stimulate interest in **science, medicine and technology**.

- The ceremony was founded by **Marc Abrahams**.
- Before 2026, the ceremonies had been held in the **United States**, including venues associated with MIT, Harvard University and Boston University.

Seoul Hosts 27th World Knowledge Forum on AI and Co-Intelligence

What’s the News?

- **Seoul, South Korea**, is hosting the **27th World Knowledge Forum (WKF)** at **Jangchung Arena and The Shilla Seoul**.
- The forum brings together political leaders, scientists, technology experts, academics and business executives to discuss the impact of **Artificial Intelligence (AI)** on economies, governance, geopolitics and society.
- The theme is “**The Promethean Moment: Architecting the Co-Intelligence Order**.”
- Former UK Prime Minister **David Cameron** delivered the opening special address, while **Cho Jeong-sik, Speaker of South Korea’s National Assembly**, highlighted the need to ensure that AI enhances human potential rather than replacing it.

Theme: The Promethean Moment

- The theme draws from **Prometheus in Greek mythology**, who gave fire to humanity.
- AI is compared to the “**fire of the 21st century**” because it can transform civilisation while creating significant risks if poorly governed.
- The forum examines how humans and AI can develop a **Co-Intelligence Order**, in which:
 - Humans use AI to enhance reasoning and capabilities.
 - AI operates within ethical and social norms established by humans.
 - Technological advancement remains aligned with **human dignity and coexistence**.

Five Knowledge Pillars

Discussions at the forum are structured around five major pillars:

- **Power** – AI’s implications for geopolitics, national security and global influence.
- **Capital** – Transformation of industries, investment and economic systems.

- **Intelligence** – Human-AI collaboration, innovation and emerging technologies.
- **Planet** – Application of technology to environmental and sustainability challenges.
- **Humanity** – Employment, inequality, ethics, dignity and social consequences of AI.

Issues Discussed

- **AI and Employment**
 - Rapid AI adoption may cause job displacement and widen economic inequality.
 - Policymakers emphasised using AI to **augment human capabilities** rather than merely replacing workers.
- **AI Diffusion**
 - **Chang Dae-whan**, Chairman of Maekyung Media Group, argued that the strategic advantage from AI will depend not merely on invention but on its **widespread adoption across society**.
 - He advocated an **“AI Native Korea”**, where AI becomes widely accessible and routinely used by citizens.
- **Geopolitics and Economic Security**
 - David Cameron highlighted the linkage between **national security and economic security**.
 - Discussions addressed geopolitical instability, political polarisation, economic disruption and the need for resilient international partnerships.
- **Emerging Technologies**
 - Sessions also cover areas such as **quantum computing, cybersecurity, personal AI and augmented-reality technologies**.

World Knowledge Forum

- The **World Knowledge Forum** is a major international knowledge-sharing platform based in **South Korea**.
- It was established in **2000**, following the Asian Financial Crisis, with the objective of promoting a **knowledge-driven economy** and reducing global knowledge gaps.
- The inaugural forum was held under the theme **“Shaping the New Millennium with Knowledge.”**
- Since its inception, approximately:
 - **6,303 global speakers** and
 - **69,509 participants**
 have participated in the forum.
- Previous speakers have included **Bill Gates, George W. Bush, Nicolas Sarkozy,**

Paul Krugman, Michael Porter and former World Bank President Jim Yong Kim.

Additional Info

- **Co-Intelligence**
 - Refers to a framework of **human-AI collaboration**, rather than competition between human and machine intelligence.
 - Humans retain normative and ethical control while AI expands analytical and productive capabilities.
- **AI Governance**
 - Major policy concerns associated with rapid AI adoption include:
 - Employment disruption
 - Algorithmic bias
 - Privacy and data protection
 - Cybersecurity
 - Concentration of technological power
 - National-security risks
 - Accountability for automated decisions

US Declares Largest Recorded Multistate Cyclosporiasis Outbreak Over

What's the News?

- US health authorities declared the country's **largest recorded multistate cyclosporiasis outbreak** over after a major decline in new infections.
- The outbreak was linked to **processed iceberg lettuce sourced from central Mexico by Taylor Farms de Mexico**.
- It resulted in **12,883 cases across 21 states, 570 hospitalisations and 2 deaths**.
- The affected lettuce was recalled and is no longer available in stores or restaurants.
- The **US Food and Drug Administration (FDA)** continues to investigate how the parasite entered the food supply and is focusing on measures to prevent similar outbreaks.

Cyclosporiasis

- Cyclosporiasis is an **intestinal infection** caused by the microscopic unicellular parasite **Cyclospora cayetanensis**.
- The parasite infects the **small intestine**.
- Humans are the **only known hosts** of *Cyclospora cayetanensis*.
- Infection occurs mainly by consuming **food or water contaminated with human faecal matter containing the parasite**.

Transmission

- Fresh produce is an important vehicle for foodborne transmission.
- Previous outbreaks have been associated with products such as:
 - Lettuce.
 - Basil and cilantro.
 - Berries.
 - Other fresh fruits and vegetables.
- **Direct person-to-person transmission is unlikely.**
 - Oocysts passed in the faeces of an infected person are initially non-infectious.
 - They generally require about **1–2 weeks in the environment** to mature and become infectious.

Symptoms and Treatment

- Symptoms generally begin around **one week after infection**, although the incubation period can range from about **2 days to more than 2 weeks**.
- The most characteristic symptom is **frequent watery diarrhoea**.

Other symptoms include:

- Loss of appetite.
- Weight loss.
- Abdominal cramps.
- Bloating and increased gas.
- Nausea.
- Fatigue.
- Low-grade fever.
- Vomiting and body aches in some cases.
- Without treatment, symptoms can persist for **weeks or longer** and may disappear temporarily before recurring.
- The standard treatment is the antibiotic combination **trimethoprim-sulfamethoxazole (TMP-SMX)**.
- Maintaining adequate hydration is particularly important in patients experiencing severe diarrhoea.

Scale of the US Outbreak

- **12,883 cases** were specifically linked to the contaminated iceberg-lettuce outbreak.
- **570 people were hospitalised**.
- **2 deaths** were reported.
- Cases linked to the outbreak occurred across **21 US states**.
- At its peak, the outbreak recorded **more than 1,000 infections in a single day**.
- By August, infections linked to the outbreak had declined to **fewer than two per day on average**.
- Overall, the US reported **19,595 laboratory-confirmed cyclosporiasis cases** during the wider 2026 season,

including cases unrelated to this particular lettuce outbreak.

- Before 2026, the largest recorded US cyclosporiasis season was in **2019**, when roughly **4,700 illnesses** were documented.

Source of the Outbreak

- Epidemiological and traceback investigations identified **iceberg lettuce from Taylor Farms de Mexico in central Mexico** as the source.
- The company recalled its affected iceberg lettuce from the US market.
- US authorities conducted:
 - On-site inspections.
 - Sampling at lettuce-growing farms.
 - Inspection and sampling at processing facilities in Mexico.
- Although the outbreak has ended, investigation into the **original route of contamination** is continuing.

Prevention

Measures to reduce the risk of Cyclospora infection include:

- Washing hands before and after handling food.
- Thoroughly rinsing fresh fruits and vegetables under running water.
- Removing damaged or bruised portions of produce.
- Maintaining hygienic agricultural-water practices.
- Ensuring worker hygiene during cultivation and processing.
- Proper sanitation of buildings and food-processing equipment.
- Strengthening supplier verification for imported produce.

Washing fresh produce can **reduce but may not completely eliminate Cyclospora**, while adequate cooking can destroy the parasite.

Additional Info

- **Centers for Disease Control and Prevention (CDC)**
 - United States' principal national public-health agency.
 - Responsible for disease surveillance, outbreak investigation and public-health guidance.
- **Food and Drug Administration (FDA)**
 - US federal regulatory agency responsible for areas including food safety, medicines, medical devices and related products.
 - During foodborne outbreaks, it can conduct inspections, traceback investigations and coordinate product recalls.

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- **Oocyst**
 - A resistant stage in the life cycle of certain parasites.
 - *Cyclospora* oocysts must mature outside the human body before becoming infectious, explaining why immediate person-to-person transmission is uncommon.

US, Denmark and Greenland Move Towards Long-Term Arctic Security Deal

What's the News?

- US President **Donald Trump** announced that the **United States, Denmark and Greenland** had reached an agreement to strengthen US security access in Greenland.
- Trump described the arrangement as giving the US “**permanent control over security**” in Greenland. However, Denmark and Greenland characterised it more narrowly as an agreement to strengthen **Arctic and North Atlantic security while preserving the sovereignty and territorial integrity of the Kingdom of Denmark and Greenlanders' right to self-determination**.
- At the time of reporting, the agreement had **not yet entered into force**. The three governments expected to sign it during the **UN General Assembly**, after which the required national parliamentary procedures would have to be completed.
- The arrangement is expected to enable an **expanded US military presence and long-term access** to Greenland without transferring sovereignty over the territory to the United States.

What Could the Agreement Provide?

- US officials said the arrangement would ensure American rights relating to:
 - **Military access and basing**
 - **Overflight**
 - Expansion of the US military footprint
 - Protection of Greenland and the North American strategic area.
- Trump also stated that US adversaries would not be allowed to establish **military bases or sensitive investments** in Greenland without approval. The detailed final agreement, however, had not yet been publicly released, and Danish and Greenlandic statements did not confirm all elements of Trump's description.

- Danish Prime Minister **Mette Frederiksen** stated that the agreement would recognise the **sovereignty and territorial integrity of the Kingdom of Denmark**.
- Greenland's Prime Minister and Chairman of Naalakkersuisut **Jens-Frederik Nielsen** said the arrangement would strengthen security while recognising Greenland's interests and role in international cooperation.

Why is Greenland Strategically Important?

- Greenland is an **autonomous territory within the Kingdom of Denmark** and the **world's largest island**, covering more than **2.1 million sq. km**.
- Its location between the **Arctic Ocean and North Atlantic** makes it strategically important for:
 - North American defence
 - Arctic surveillance
 - Missile early warning
 - Space operations
 - Trans-Atlantic and Arctic military routes.
- Greenland hosts the US **Pituffik Space Base**, formerly known as **Thule Air Base**, which supports missile-warning and space-surveillance capabilities.
- Greenland is also important because of its **mineral resources** and the increasing geopolitical importance of the Arctic.

Existing US-Greenland Defence Framework

- The US military presence in Greenland is not new.
- Under the **1951 Defence of Greenland Agreement** between the United States and Denmark, Washington received extensive rights to establish and operate defence facilities in Greenland.
- The agreement was subsequently supplemented to give Greenlandic authorities a greater role as Greenland acquired extensive self-government.
- The new arrangement is therefore expected to **build on the existing defence framework rather than create US sovereignty over Greenland**.

Greenland's Political Status

- Greenland is a **self-governing autonomous territory within the Kingdom of Denmark**.
- It obtained expanded self-government under the **2009 Self-Government Act**.
- Greenland is **not part of the European Union**, although it is associated with the EU as an **Overseas Country and Territory (OCT)**.

- Denmark is a **NATO member**, making Greenland strategically relevant to NATO's defence of the Arctic and North Atlantic. Denmark and other European governments have maintained that decisions concerning Greenland's political status rest with Denmark and Greenland.

Additional Info

- **Pituffik Space Base**
 - Located in north-western Greenland.
 - Previously called **Thule Air Base**.
 - Supports **missile warning, missile defence and space-surveillance operations**.
 - It is the northernmost US military installation of its kind and forms part of North American and NATO Arctic security architecture.
- **Arctic Geopolitics**
 - The Arctic has acquired greater strategic significance because of **military competition, emerging maritime access, energy and mineral resources, and climate-induced environmental changes**.
 - The Greenland arrangement is therefore significant for broader **US-NATO security cooperation in the Arctic and North Atlantic**.

UN Adopts First Declaration on Sea-Level Rise

What's the News?

- The **United Nations General Assembly (UNGA)** has adopted its **first Political Declaration on Sea-Level Rise**, addressing the growing risks faced by **Small Island Developing States (SIDS)** and low-lying coastal countries.
- The declaration addresses the **continuity of statehood, stability of maritime zones, protection of affected populations, climate adaptation, early-warning systems and international financial support**.
- It recognises sea-level rise as a **developmental, economic, humanitarian and security challenge**, not merely an environmental issue.

Statehood & Maritime Rights

- A country threatened by climate-induced sea-level rise **does not automatically lose its statehood** merely because its land territory

becomes partly or completely submerged.

- This is particularly important for low-lying island countries such as **Tuvalu, Kiribati and the Marshall Islands**.
- The declaration also supports the **stability of maritime zones already established in accordance with international law**, despite physical changes to coastlines caused by rising seas.
- Such protection is significant because maritime zones determine sovereign rights over **fisheries, seabed resources and other marine resources**.

Commitments

- Strengthen **multi-hazard early-warning systems** and climate-information services.
- Integrate sea-level-rise projections and risk assessments into **development and infrastructure planning**.
- Increase **financial, technical and policy support** for developing countries, particularly SIDS and Least Developed Countries.
- Protect and restore natural coastal buffers such as:
 - **Mangroves**
 - **Seagrass meadows**
 - **Kelp forests**
- Strengthen resilient infrastructure, including **ports, transport networks, water systems, energy facilities and health infrastructure**.
- Improve data collection through **satellites, tide gauges, ocean observations and climate monitoring systems**.

Sea-Level Rise

- **Sea-level rise** is the long-term increase in the average level of the world's oceans.
- Major causes include:
 - **Thermal expansion** of seawater as oceans warm.
 - Melting of **mountain glaciers**.
 - Loss of ice from the **Greenland and Antarctic ice sheets**.
- Global mean sea-level rise has accelerated from about **2.1 mm per year during 1993–2002** to around **4.7 mm per year during 2015–2024**.
- Around **770 million people** live less than **5 metres above the high-tide line**, highlighting the scale of global exposure.

UNCLOS & Maritime Zones

- **United Nations Convention on the Law of the Sea (UNCLOS)** provides the principal international legal

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framework governing oceans and maritime rights.

- Major maritime zones include:
 - **Territorial Sea:** Up to **12 nautical miles** from the baseline.
 - **Contiguous Zone:** Up to **24 nautical miles**.
 - **Exclusive Economic Zone (EEZ):** Up to **200 nautical miles**.
- Sea-level rise can physically shift coastlines and conventional baselines, creating questions about the continued extent of maritime entitlements.
- The declaration strengthens political support for preserving established maritime zones despite such physical changes.

Additional Info

- **Small Island Developing States (SIDS)**
 - Group of island countries facing particular economic, environmental and climate vulnerabilities.
 - Sea-level rise threatens their **territory, freshwater, infrastructure, livelihoods, culture and sovereignty**.
- **AOSIS**
 - **Alliance of Small Island States.**
 - An intergovernmental coalition representing small island and low-lying coastal developing states in international climate negotiations.
 - It has consistently advocated the **continuity of statehood and preservation of maritime zones** despite climate-induced sea-level rise.
- **India**
 - Sea-level rise is relevant to India because of its extensive coastline, densely populated coastal cities, islands and major delta systems.
 - Important adaptation measures include **coastal-zone management, mangrove conservation, resilient infrastructure, early-warning systems and disaster-risk reduction**.

US Orders Federal Use of 'Super Intelligence' and Unveils Voluntary AI Safety Accord

What's the News?

- US President **Donald Trump** signed an executive order directing federal executive agencies to use **"Super Intelligence (SI)"** instead of

"Artificial Intelligence (AI)" in official correspondence, websites, reports, policy documents and other **non-statutory material**.

- Separately, leaders of **six major technology companies** signed a voluntary **White House Accord on Super Intelligence**, formally titled the **Joint Commitment on Frontier Responsibilities**.
- The accord establishes a four-layer framework covering **internal safety controls, dedicated oversight teams, external audits and board-level supervision** of frontier AI systems.
- The executive order and the industry accord are **separate instruments**: the terminology order applies to the executive branch, while the corporate safety accord is **voluntary and not legally binding**.

Executive Order on "Super Intelligence"

- Federal executive departments and agencies have been directed, to the extent permitted by law, to replace **AI/Artificial Intelligence** with **SI/Super Intelligence** in:
 - Official correspondence
 - Public communications
 - Government websites
 - Reports
 - Policy documents
 - Other non-statutory documents
- Previously issued **regulations, contracts, grants, presidential actions and historical documents** need not be altered.
- The **Assistant to the President for Science and Technology (APST)** must propose legislative language for a federal definition of "Super Intelligence" and recommend whether existing statutory references to AI should be modified.

What Does "Super Intelligence" Mean Here?

- For implementation of the executive order, **"Super Intelligence" presently covers the same technologies and systems included in the existing statutory US definition of artificial intelligence**.
- Therefore, the order primarily changes **federal terminology** rather than immediately establishing a new legal category of technology.
- This usage differs from the conventional technical concept of **artificial superintelligence (ASI)**, which generally refers to a

hypothetical system whose intellectual capabilities broadly surpass those of humans.

- A new federal statutory definition would require further presidential action consistent with law or legislation by **Congress**.

White House Accord on Super Intelligence

Six major AI companies joined the **Joint Commitment on Frontier Responsibilities**:

- **Google** – Sundar Pichai
- **Meta** – Mark Zuckerberg
- **Nvidia** – Jensen Huang
- **Anthropic** – Dario Amodei
- **OpenAI** – Greg Brockman
- **xAI** – Elon Musk.

Four-Layer Safety Framework

1. Internal Controls

- Companies are to monitor model capabilities and alignment during training and deployment.
- Areas include **cybersecurity, biosecurity and chemical threats**.
- Controls should also address unintended hacking or access to technical systems.

1. Internal Oversight Team

- Dedicated teams are to verify that monitoring and safety controls operate as intended.
- Identified shortcomings are expected to be addressed.

1. Independent External Assessment

- Companies are to engage independent auditors or evaluators to assess their safeguards.

1. Board-Level Oversight

- An independent committee of the company's board is to receive reports from safety teams and auditors and oversee remediation of identified problems.

Nature of the Accord

- The commitment is **voluntary rather than statutory regulation**.
- It contains **no direct legal penalties or government enforcement mechanism** for failure to follow the commitments.
- Companies are expected to work with external evaluators and periodically cooperate on **common safety standards and best practices**.
- The accord acknowledges that some measures could potentially be incorporated into **future legislation or formal regulation**.

Additional Info

• Frontier AI

- Refers broadly to highly capable general-purpose AI models at or near the leading edge of existing technological capabilities.
- Policy concerns commonly include **cybersecurity misuse, biological or chemical risks, model autonomy, system reliability and alignment**.

• Executive Order

- A directive issued by the **President of the United States** to manage operations of the federal executive branch.
- It cannot override legislation enacted by **Congress** and must operate within constitutional and statutory authority.
- In this case, the order explicitly states that implementation must remain **consistent with applicable law**.

• AI Governance

- Major regulatory approaches globally include:
 - **Binding legislation and risk-based regulation**
 - Government technical standards
 - Independent safety testing
 - Corporate self-regulation
 - Voluntary industry commitments
- The new US accord primarily adopts the **voluntary industry-commitment approach**, while leaving open the possibility of future formal rules.

Miscellaneous

India Wins Record Eighth Women's Asia Cup Title

What's the News?

The Indian women's cricket team, led by Harmanpreet Kaur, defeated Sri Lanka by 72 runs in the final of the Women's T20 Asia Cup 2026 at the Dubai International Cricket Stadium, UAE, to win a record-extending eighth Women's Asia Cup title. India also completed the tournament unbeaten.

The victory reclaimed the title from Sri Lanka, which had defeated India in the 2024 final.

Final Match

- **India:** 183/5 in 20 overs
 - **Sri Lanka:** 111 all out in 19.4 overs
 - **Result:** India won by 72 runs
 - **Shafali Verma:** 68 runs off 39 balls
 - **Smriti Mandhana:** 59 runs off 39 balls
 - **Shree Charani:** 4 wickets
 - **Deepthi Sharma:** 3 wickets
 - **Player of the Match:** Shafali Verma
- Shafali Verma and Smriti Mandhana added 129 runs for the opening wicket, providing the foundation for India's total. Shafali reached her half-century in 24 balls, the fastest fifty in Women's Asia Cup history.

India's Eighth Title

India has won 8 of the 10 editions of the Women's Asia Cup:

Team	Titles	Winning Editions
India	8	2004, 2005-06, 2006, 2008, 2012, 2016, 2022, 2026
Bangladesh	1	2018
Sri Lanka	1	2024

India's eight championships comprise four ODI-format titles and four T20I-format titles. India has also reached the final in all 10 editions of the tournament.

Shafali Verma's Performance

Shafali Verma finished the tournament as its leading run-scorer, making:

- 236 runs in 5 innings
- 3 half-centuries
- Strike rate: 171.01
- 2 wickets

Her 68 in the final followed by India's victory capped a strong all-round tournament.

Women's Asia Cup

- The Women's Asia Cup is the continental cricket championship for women's national teams in Asia.

- It is organised by the Asian Cricket Council (ACC).
- **First edition:** 2004
- The tournament was initially played in the ODI format.
- It switched to the T20I format in 2012.
- The 2026 edition was played in the United Arab Emirates.

Additional Info

- **Asian Cricket Council (ACC)**
 - Regional governing body responsible for promoting and developing cricket in Asia.
 - Organises competitions including the Men's Asia Cup, Women's Asia Cup and age-group Asian tournaments.
- **Previous two editions**
 - **2022:** India defeated Sri Lanka to win the title.
 - **2024:** Sri Lanka defeated India by 8 wickets for its first Women's Asia Cup title.
 - **2026:** India defeated Sri Lanka by 72 runs to regain the championship.

India Wins Silver at 46th Chess Olympiad in Samarkand

What's the News?

- India won the Silver Medal in the Open section of the 46th FIDE Chess Olympiad held in Samarkand, Uzbekistan.
- Host Uzbekistan won Gold, while Germany secured Bronze.
- India also won Bronze in the Women's section, where China won Gold and Kazakhstan Silver.
- With strong combined performances in both sections, India retained the Nona Gaprindashvili Cup for the third consecutive Chess Olympiad.

India's Performance

- **Open Section**
 - India: Silver – 18 match points
 - Uzbekistan: Gold – 20 match points
 - Germany: Bronze – 18 match points
 - India and Germany finished level on match points, with India securing second place through the applicable tie-break criteria.
 - India drew 2-2 with Hungary in the final round.
 - Arjun Erigaisi defeated Peter Leko, while World Champion D Gukesh lost to Gleb Dudin.

- **Women's Section**

- India: **Bronze – 17 match points**
- China: **Gold – 20 match points**
- Kazakhstan: **Silver – 18 match points**
- India secured Bronze following a **2–2 draw with Georgia** in the final round.

Indian Teams

- **Open Team**

- Arjun Erigaisi
- R Praggnanandhaa
- Nihal Sarin
- D Gukesh
- Vidit Gujrathi

- **Women's Team**

- Koneru Humpy
- Divya Deshmukh
- R Vaishali
- Vantika Agrawal
- Savitha Shri B

India entered the Open section as the **defending champion** and the Women's section as both the **defending champion and top seed**.

46th Chess Olympiad

- **Host:** Samarkand, Uzbekistan
- **Organiser:** International Chess Federation (**FIDE**)
- **Format:** 11-round **Swiss system**
- **Participation:** Record **400 teams** across Open and Women's sections.
- More than **1,500 players** participated.
- Each country can register **five players**; four play in each match and one acts as reserve.
- A match win gives **2 match points**, a draw **1**, and a loss **0**.
- The Open champion receives the historic **Hamilton-Russell Cup**.

Nona Gaprindashvili Cup

- Awarded to the country with the **best combined performance in the Open and Women's sections** of the Chess Olympiad.
- Introduced by FIDE in **1997**.
- Named after **Nona Gaprindashvili of Georgia**, the first woman to be awarded the **Grandmaster (GM)** title.
- India has now won the trophy in **three consecutive editions**:
 - **Chennai 2022**
 - **Budapest 2024**
 - **Samarkand 2026**

Additional Info

- **Individual Indian Medals**

- **D Gukesh:** Silver medal for his performance on Board 4 in the Open section.
- **Savitha Shri B:** Gold medal on the reserve/fifth board in the Women's section.

- **Chess Olympiad**

- The first official Chess Olympiad was held in **London in 1927**.
- It is conducted **biennially** by FIDE.
- It consists of separate **Open and Women's team competitions**.
- The next Chess Olympiad will be hosted by the **United Arab Emirates in 2028**.

