

Monthly Current Affairs

May 2026



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Centre Notifies Citizenship (Amendment) Rules, 2026

What's the News?

The Union Ministry of Home Affairs (MHA) has notified the **Citizenship (Amendment) Rules, 2026**, amending the Citizenship Rules, 2009. The overhaul introduces a fully digital Overseas Citizen of India (OCI) framework—**e-OCI**—mandates online applications, bans dual passports for minors, integrates biometric-based fast-track immigration, and streamlines grievance redressal. The move modernises diaspora identity management and reinforces that **India does not permit dual citizenship**.

Provisions of the Citizenship (Amendment) Rules, 2026

- **Ban on Dual Passports for Minors:** A new proviso to **Rule 3** states that a minor child **cannot at any time hold the passport of any other country while also holding an Indian passport**. This closes a previous loophole where parents could only declare the child did not hold another passport at birth.
- **Introduction of e-OCI:** OCI status can now be issued in electronic format (Form XXIX) in addition to or instead of physical cards, creating a paperless identity option.
- **Mandatory Online Applications:** All processes—registration (Form XXVIII), renunciation (Form XXXI), and cancellation—must be filed electronically via the designated portal (ociservices.gov.in).
- **Digital Renunciation & Surrender:** Renunciation requires mandatory surrender of physical cards to the nearest Indian Mission, Post, or Foreigners Regional Registration Officer; e-OCI registrations can be cancelled digitally in government records.
- **Biometric Integration for Fast-Track Immigration:** Applicants must consent to share biometric data for automatic enrollment in the **Fast Track Immigration Programme** (e-gates at airports), reducing wait times.
- **Streamlined Appellate Mechanism:** Rejection of OCI or citizenship applications can now be challenged before an authority **one rank higher** than the original decision-maker, with a guaranteed **right to be heard**.
- **Centralised Digital Registry:** Records are maintained digitally in **Form XXX**, enabling real-time tracking and deemed cancellation of invalid cards. The requirement to submit documents “in duplicate” has been removed.

About the Overseas Citizen of India (OCI) Scheme

- **Legal Basis:** Introduced through the **Citizenship (Amendment) Act, 2005**, amending the **Citizenship Act, 1955**. The **Person of Indian Origin (PIO) card scheme** was merged into OCI in **2015**.
- **Eligibility:**
 - Persons who were citizens of India on or after **26 January 1950**, or were eligible to become citizens on that date.
 - **Excluded:** Persons who are or have been citizens of **Pakistan, Bangladesh**, or any other country specified by the Central Government.

Benefits:

- Lifelong, multi-purpose, multi-entry visa to visit India.
- Exemption from police reporting for any length of stay.
- Parity with NRIs in financial, economic, and educational fields (except acquisition of agricultural or plantation properties).
- **Not** an entitlement: OCI status is a privilege, liable to cancellation for violations of Indian law.

Constitutional & Legal Limitations:

- OCI does **not** confer **political rights** (voting, contesting elections) or eligibility for constitutional posts.
- **Article 9** of the Constitution: A person voluntarily acquiring citizenship of a foreign state ceases to be a citizen of India. OCI is a quasi-citizenship, **not dual nationality**.

Election results 2026: Assembly bypoll and state trends

What's the News?

The Election Commission of India has declared the results of the 2026 assembly by-elections held across five states, along with the broader state assembly election trends. The BJP secured four of the seven bypoll seats, while the Congress won two in Karnataka. In the general state assembly elections, the BJP retained Assam, the DMK alliance held Tamil Nadu, the TMC remained dominant in West Bengal, the UDF retained Kerala, and the NDA won Puducherry. A bypoll in Goa's Ponda constituency was cancelled following a Bombay High Court order citing violation of the Representation of the People Act, 1951.

Assembly Bypoll Results 2026

- **Total Seats:** 7 assembly constituencies across 5 states.
- **Party-wise Tally:**
 - **BJP:** 4 seats (Gujarat's Umreth, Nagaland's Koridang, Tripura's Dharmanagar, Maharashtra's Rahuri).
 - **Congress:** 2 seats (Karnataka's Bagalkot and Davanagere South).
 - **NCP:** 1 seat (Maharashtra's Baramati; Sunetra Pawar leading after Ajit Pawar's death).
- **Voter Turnout:** Gujarat and Maharashtra voted on April 23; Karnataka, Nagaland, and Tripura on April 9.
- **Cancelled Poll:** Ponda (Goa) bypoll was cancelled after the Bombay HC ruled it violated the Representation of the People Act, 1951, as the new MLA would have served less than a year before the assembly term ends on March 14, 2027.

State Assembly Election Trends 2026

State	Seats	Majority Mark	Leading Party/Alliance	Seats Won/Leading
West Bengal	294	148	BJP	206

Tamil Nadu	234	118	DMK+	73
Assam	126	64	BJP+	102
Kerala	140	71	LDF	35
Puducherry	30	16	NDA	18

Note: Figures are trends at the time of result declaration; final tallies may vary.

Additional Info

- **Election Commission of India (ECI):**
 - Constitutional body under **Article 324**.
 - Responsible for superintendence, direction, and control of elections.
- **Representation of the People Act, 1951:**
 - Governs conduct of elections and qualifications/disqualifications of members.
 - Section 151A mandates that a bypoll must be held within six months of a vacancy, but the seat's remaining term should be at least one year.
- **Electoral Terms:**
 - **Bye-election:** Election held to fill a vacancy caused by death, resignation, or disqualification of a sitting member.
 - **General Election:** Regular election held to constitute a new legislative assembly or Lok Sabha.
- **Relevant Constitutional Provisions:**
 - **Article 324:** Superintendence, direction, and control of elections vested in the ECI.
 - **Article 325:** No person to be ineligible for inclusion in electoral roll on grounds of religion, race, caste, or sex.
 - **Article 326:** Elections to the House of the People and Legislative Assemblies to be on the basis of adult suffrage.

Cabinet Approves Increase in Supreme Court Judge Strength from 37

What's the News?

The Union Cabinet has cleared **The Supreme Court (Number of Judges) Amendment Bill, 2026**, to increase the sanctioned strength of Supreme Court judges from 33 to 37, excluding the Chief Justice of India (CJI). With the CJI, the total strength will rise from 34 to **38**. This decision, prompted by a request from Chief Justice Surya Kant, aims to address a backlog of over 92,000 pending cases by enabling the formation of more constitutional and division benches.

Provisions of the Amendment

- **Current Sanctioned Strength:**
 - Excluding CJI: **33 judges**
 - Including CJI: **34 judges**
- **Proposed Increase:**
 - Excluding CJI: **37 judges** (addition of 4)
 - Including CJI: **38 judges**
- **Legislative Vehicle:** The expansion will be enacted through **The Supreme Court (Number of Judges) Amendment Bill, 2026**, amending the 1956 Act.

- **Pending Caseload:** The immediate trigger is the backlog of over **92,000 cases** in the apex court.
- **Salary & Expenses:** All expenditure related to the new positions will be charged to the **Consolidated Fund of India**.

Rationale Behind the Expansion

- **CJI's Request:** Chief Justice Surya Kant formally proposed a "calibrated approach," seeking an immediate addition of four judges to assess the impact before any further increase.
- **Operational Efficiency:** The additional judges will allow the court to simultaneously constitute more **Constitution Benches** (5 or more judges) and **Division Benches** (2 or 3 judges), directly expediting the hearing and disposal of cases.
- **Reducing Pendency:** This marks the first expansion since 2019 and is a direct administrative response to escalating litigation, which has outpaced the court's disposal rate.

Constitutional and Legislative Framework

- **Article 124(1)** of the Indian Constitution establishes the Supreme Court and empowers Parliament to determine the number of judges (other than the CJI) by law.
- **The Supreme Court (Number of Judges) Act, 1956**, as amended from time to time, fixes this number. The last amendment in 2019 had increased the strength to 33.
- **Appointments Process:** New judges will be appointed through the **Collegium system**, headed by the CJI. With this increase, approximately 10 vacancies will arise, allowing the current CJI to shape a significant portion of the court's composition during his tenure.

Additional Info

- **Historical Evolution of Judge Strength:**
 - The sanctioned strength has been progressively increased to manage the growing workload.
 - Initial (1950): CJI + maximum 7 judges.
 - 1956: Increased to 10 (excluding CJI).
 - 1960: Increased to 13.
 - 1977: Increased to 17.
 - 1986: Increased to 25.
 - 2008: Increased to 30.
 - 2019: Increased to 33 (the last revision).
- **Consolidated Fund of India:**
 - As per **Article 266**, all revenues, loans, and other receipts of the government flow into this fund.
 - Salaries, pensions, and administrative expenses of the Supreme Court are charged on this fund, meaning they do not require parliamentary approval for withdrawal and ensure judicial financial independence.

India's Data Governance Crisis

What's the News?

- A recent analysis has brought into sharp focus the **crisis of data governance and data standardisation** in India, highlighting how fragmented and non-standardised government databases are

causing policy inefficiencies, significant fiscal leakages, and poor interoperability across ministries.

- The findings underscore that despite generating massive volumes of data, the lack of a common "grammar" for data is forcing Parliamentarians to ask basic questions (e.g., how many schools have functional toilets) because standardised, machine-readable public data is unavailable.
- The discourse has renewed attention on the proposed **India Data Management Office (IDMO)** under the **National Data Governance Framework Policy (NDGFP)** as the potential keystone for reform.

The Data Governance Crisis: Anatomy of the Problem

- **Lack of Interoperability:** Ministries and departments operate in data silos with no shared standards for common indicators. A **NITI Aayog** vision document noted that even basic attributes like time periods and regional definitions are inconsistent across departments.
- **Duplication and Ghost Beneficiaries:** Welfare databases often list the same individual multiple times due to a lack of unified schemas. This leads to fiscal leakages that inflate government spending by **4%–7% annually**.
- **Conflicting Official Estimates:** In the health sector, childhood tuberculosis cases are recorded separately in the **Health Management Information System (HMIS)**, disease surveillance networks, and immunisation registries, often resulting in the same patient being counted multiple times.
- **Outdated Methodologies and Global Rankings:** India's performance in international indices suffers due to missing or outdated data. In the **Global Innovation Index 2024**, India had missing data for two indicators and outdated figures for eight others, with several relying on data over a year old.
- **Accountability Gaps:** A large share of questions asked during the **17th Lok Sabha (2019–24)** sought basic administrative facts that should ideally exist in the public domain in a standardised, accessible format, reflecting weak public data infrastructure and transparency.

Impact and Economic Costs

- The **Organisation for Economic Co-operation and Development (OECD)** estimates that improving public-sector data availability and sharing could add **1.5% to India's GDP**, which rises to **2.5%** if private-sector data is included.
- Fiscal clean-up exercises have demonstrated the scale of potential savings:
 - Deleting **17.1 million** ineligible names from the **Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)** scheme was expected to save **₹90 billion** in FY2024.
 - Removing **35 million** bogus LPG connections could save **₹210 billion** over two years.
 - Eliminating **16 million** fake ration cards may save around **₹100 billion** annually.
- Beyond direct fiscal costs, poor data governance leads to uncertain decision-making, with policymakers often

disregarding conflicting data in favour of anecdote or political expediency, and stifles innovation as startups and researchers lose out when high-quality public data is unavailable.

Government Initiatives

- **National Data Governance Framework Policy (NDGFP):** A draft policy released by the **Ministry of Electronics and Information Technology (MeitY)** aimed at transforming the data ecosystem, ensuring non-personal data is accessible for research and innovation while safeguarding privacy.
- **India Data Management Office (IDMO):** Proposed as the central body under the NDGFP to develop and enforce common rules, standards, guidelines, and protocols for data across all Ministries and States. It would be set up under the **Digital India Corporation** and is expected to resolve inter-ministerial methodological disputes and audit compliance.
- **National Data and Analytics Platform (NDAP):** A **NITI Aayog** initiative to make government datasets user-friendly, interoperable, and easy to analyse.
- **Data Governance Quality Index (DGQI):** A tool developed by NITI Aayog to assess the data readiness and governance quality of various administrative Ministries and Departments.
- **Digital Personal Data Protection (DPDP) Act, 2023:** Provides the legal framework empowering citizens over their personal data, complementing the NDGFP's focus on non-personal data.

Global Best Practices

- **Estonia's X-Road:** A decentralised, interoperable data-sharing layer that connects public and private sector databases, enabling seamless and secure digital governance.
- **Singapore's Smart Nation Initiative:** Integrates data systems across urban planning, health, and transport to improve public service delivery and governance.
- **United Kingdom's Open Data Framework:** Promotes standardised, machine-readable, and publicly accessible government datasets to enhance transparency and innovation.
- **European Union's Data Governance Framework:** Harmonises data-sharing standards and rules across member states to ensure consistency and comparability.

Additional Info

- **Data Standardisation in Governance:** Refers to the process of collecting, storing, processing, and presenting information in a uniform format across institutions, ensuring common definitions, classification systems, and reporting methodologies.
- **Related Constitutional/Policy Context:**
 - **Data Governance:** A subject that cuts across the **Union List, State List, and Concurrent List**, with IT and personal data protection under the Union List while public health and agriculture (key data domains) are in the State List.
 - **Right to Information (RTI) Act, 2005:** Provides a legal basis for proactive disclosure of government data, though its effectiveness is

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undermined when data is not standardised or machine-readable.

- **National Data Sharing and Accessibility Policy (NDSAP), 2012:** The earlier policy framework for open government data, now being subsumed under the NDGFP.
- **Key Stakeholders & Organisations:**
 - **Ministry of Electronics and Information Technology (MeitY):** Nodal ministry for the NDGFP and IDMO.
 - **NITI Aayog:** Drives the NDAP and DGQI.
 - **Ministry of Statistics and Programme Implementation (MoSPI):** Responsible for statistical standards, conducting large-scale surveys, and coordinating between statistical agencies.
 - **Digital India Corporation (DIC):** The proposed hosting body for the IDMO.
- **Data Generation vs. Usability:** India generates massive volumes of data—with over **1.4 billion** mobile subscribers and the world's largest biometric ID system (Aadhaar)—but ranks low in global data usability indices due to the lack of standardisation and interoperability.

e-KYC Made Mandatory for Ration Purchase

What's the News?

- The Department of Civil Supplies, Puducherry, has made **e-KYC registration mandatory** for **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY)** beneficiaries to receive food subsidies through the newly launched **Central Bank Digital Currency (CBDC)** pilot project in the Union Territory. This replaces the earlier **Direct Benefit Transfer (DBT)-Cash** model.
- Beneficiaries who fail to complete the e-KYC will become ineligible to receive the digital currency (₹) for purchasing subsidised foodgrains.
- The move aligns with the **Targeted Public Distribution System (Control) Amendment Order, 2025**, which mandates a nationwide e-KYC renewal for all ration card holders every five years.

CBDC-Based Food Subsidy Pilot: A Paradigm Shift in PDS

- **Launch and Location:** The pilot was inaugurated in **Puducherry** on **February 26, 2026**, by Union Minister **Pralhad Joshi**. It follows a similar pilot launched earlier in **Ahmedabad, Gujarat**.
- **Mechanism:** The **Reserve Bank of India (RBI)** generates programmable digital coupons (₹) that are credited directly into a beneficiary's **CBDC wallet**, bypassing conventional bank accounts.
 - The digital currency is **purpose-bound**, meaning it can be redeemed **only for foodgrains** at designated **Fair Price Shops (FPS)** or authorised merchant outlets.
 - The e-wallet is valid for **three months** from the date of issuance.
- **Key Drivers:**

- **Leakage Prevention:** The system is designed to address challenges related to **biometric authentication failures** and **e-POS operational issues** while ensuring secure, traceable, and real-time transactions.
- **Entitlement Clarity:** It operationalises the vision of **"Every grain, Every rupee, Every entitlement"** reaching the rightful beneficiary.

The Mandatory e-KYC Usage Requirement

- **Process:** PMGKAY beneficiaries in Puducherry who have not completed e-KYC must visit the nearest **Common Service Centre (CSC)** with their **Aadhaar and ration cards**. The e-KYC is completed **free of cost**.
- **Eligibility Gate:** Only beneficiaries who have completed e-KYC will be eligible to receive the digital currency. Special camps are being organised in each constituency to facilitate the process.
- **Automatic Disqualification:** Incomplete e-KYC blocks the flow of the digital subsidy, making it a critical compliance requirement for continued food security access.

Nationwide Context: TPDS (Control) Amendment Order, 2025

- **Legal Backing:** The Union Ministry of Consumer Affairs, Food and Public Distribution notified the **TPDS (Control) Amendment Order, 2025**, which came into force on **July 22, 2025**.
- **Key Provisions:**
 - **Mandatory e-KYC for all eligible ration card households every five years** to keep records current.
 - Ration cards unused for **six months** will be **temporarily disabled**, with a field-level verification conducted within three months to determine eligibility.
 - Restricts issuance of separate ration cards to individuals **below 18 years of age** and requires Aadhaar capture for children below five years.
 - Introduces a **First-In-First-Out (FIFO)** method for new ration card issuance and mandates states to publish real-time waiting lists.

Additional Info

- **Terms & Definitions:**
 - **Central Bank Digital Currency (CBDC):** A digital form of sovereign currency issued by a central bank. In India, the digital currency is termed **₹** or the **Digital Rupee** and is distinct from private cryptocurrencies.
 - **Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY):** A food security scheme providing free foodgrains to eligible beneficiaries under the **National Food Security Act (NFSA)**. It was initially launched as a pandemic relief measure and later integrated with the regular NFSA provisions.
 - **Fair Price Shops (FPS):** Licensed retail outlets under the PDS that distribute subsidised foodgrains and essential commodities to ration card holders.

- **Common Service Centres (CSCs):** Physical access points that deliver digital public services at the village and local level, forming a key pillar of the **Digital India** programme.
- **Related Policy Framework:**
 - **One Nation One Ration Card (ONORC):** Enables nationwide portability of ration cards, allowing beneficiaries to lift their entitled foodgrains from any FPS in the country. The CBDC pilot builds on these existing digital PDS reforms.
 - **Direct Benefit Transfer (DBT):** A governance mechanism to transfer subsidies directly into beneficiaries' accounts to eliminate leakages and middlemen.
 - **National Food Security Act (NFSA), 2013:** Provides the legal entitlement for subsidised foodgrains to a specified percentage of the population.

CJI Surya Kant Launches 'One Case One Data' Initiative and AI Chatbot 'Su Sahay'

What's the News?

The Chief Justice of India (CJI), Justice **Surya Kant**, launched a landmark digital judicial reform initiative called "**One Case One Data**" alongside an AI-powered assistance chatbot named "**Su Sahay**". The announcement, made in open court, marks a significant step towards creating a unified, transparent, and technology-driven judicial ecosystem in India by integrating case data across all court levels, from taluka courts to the Supreme Court.

The 'One Case One Data' Initiative?

- **Nature:** A comprehensive digital infrastructure project by the **Supreme Court of India**.
- **Core Objective:** To eliminate data fragmentation and create a "single source of truth" for every case by integrating judicial information across all tiers of the Indian judiciary into one unified system.
- **How it Works:**
 - **Unique Digital Identity:** Each case will be assigned a single, unique digital ID. All related records, from filing to final disposal, will be linked to this ID in one continuous digital file.
 - **Multi-Level Integration:** It embeds and synchronizes data from the Supreme Court, all 25 High Courts, and district and taluka courts across the country.
 - **Seamless Tracking:** As a case moves through appeals or transfers, the system will update existing records in real-time, eliminating the need to recreate case files and providing a complete, accessible digital trail for judges, lawyers, and litigants.

The 'Su Sahay' AI Chatbot?

- **Nature:** An **Artificial Intelligence (AI)**-powered assistance chatbot integrated directly into the Supreme Court of India's official website.

- **Development:** Created by the **National Informatics Centre (NIC)** in collaboration with the Supreme Court Registry.
- **Purpose:** To democratize access to justice by acting as a 24/7 digital helpdesk.
- **Functionality:** It provides a user-friendly, conversational interface for litigants and citizens to get step-by-step guidance on filing procedures, check case statuses, and understand court protocols, reducing reliance on physical visits or phone inquiries.

Additional Info

- **Foundational Digital Infrastructure:**
 - **e-Courts Mission Mode Project:** This initiative is a component of the larger e-Courts project. Its **Phase III (2023-2027)**, with an outlay of **₹7,210 crore**, aims to create a fully digital, paperless, and inclusive judicial system.
 - **National Judicial Data Grid (NJDG):** Launched under the e-Courts project, the NJDG serves as a national repository of case data (institution, disposal, pendency) for all courts. The 'One Case One Data' initiative will deepen and streamline the data that populates the NJDG.
- **Related Initiative for Criminal Justice:**
 - **Inter-operable Criminal Justice System (ICJS):** A separate but synergistic initiative of the **e-Committee, Supreme Court of India**, and the **Ministry of Home Affairs**. It enables seamless data transfer among the pillars of the criminal justice system—courts (e-Courts), police (CCTNS), jails (e-Prisons), forensics (e-Forensic), and prosecution (e-Prosecution)—on a single platform, based on the principle of 'one data one entry'.
- **Constitutional Context:** This initiative strengthens the fundamental right to access justice, flowing from **Article 21** (Right to Life and Personal Liberty) and **Article 39A** (Equal Justice and Free Legal Aid) of the Constitution.

CJI Surya Kant Constitutes High-Powered Judicial Infrastructure Advisory Committee Headed by Justice Aravind Kumar

What's the News?

The Chief Justice of India (CJI), Justice **Surya Kant**, has constituted a high-powered '**Judicial Infrastructure Advisory Committee**' to prepare a comprehensive blueprint for overhauling the physical and digital infrastructure of courts across India. The panel, chaired by Supreme Court Justice **Aravind Kumar**, is tasked with identifying systemic constraints and securing substantial government funding to modernize the judiciary. The committee will submit its report to the CJI, who will then coordinate with the Union and State Governments for implementation.

Judicial Infrastructure Advisory Committee: Mandate & Composition

- **Purpose:** To address chronic infrastructural deficiencies across all levels of the judiciary and ensure a **unified infrastructural ecosystem on a pan-India basis**. This includes preparing a roadmap for the 21st-century transformation of courts into modern, tech-enabled, and litigant-friendly spaces.
- **Chairperson:** Justice Aravind Kumar, Judge of the Supreme Court of India.
- **Membership:**
 - **Judicial Members:** Justices Debangsu Basak (Calcutta High Court), Ashwani Kumar Mishra (Punjab and Haryana High Court), and Somasekhar Sundaresan (Bombay High Court).
 - **Administrative Members:** The Director General of the Central Public Works Department (CPWD) and the Secretary General of the Supreme Court.
- **Reporting Structure:** The committee will submit its final report to the **Chief Justice of India**. Upon consideration, the CJI will take up the matter for financial backing and execution with the **Government of India and respective State Governments**.

Seven-Point Focus & Proposed Investment

The committee will concentrate on **seven key areas** to transform the judicial infrastructure:

- **Identifying Systemic Constraints:** Pinpointing bottlenecks in court processes and infrastructure that lead to inefficiencies and delays.
- **Improving Facilities:** Upgrading amenities for lawyers, litigants, and court staff to create a more functional and accessible environment.
- **Technology Integration:** Implementing **cutting-edge technology** to accelerate case disposal and improve judicial efficiency.
- **E-Courts Expansion:** Strengthening the **e-Courts initiative** to bridge the digital divide through robust virtual and hybrid hearing infrastructure.
- **Modern Court Complexes:** Designing and overseeing the construction of **new court buildings** that are accessible, sustainable, and technologically advanced.
- **Financial Roadmap:** The panel is expected to propose a massive investment plan, estimated at **₹40,000–₹50,000 crore**, representing one of the largest single-project investments in India's judicial infrastructure history.
- **Economic Coordination:** The findings and specific funding requirements will be submitted to the **Prime Minister's Economic Advisory Council (PM-EAC)** for necessary financial approvals and integration into national economic planning.

Additional Info

- **Indian Judiciary's Infrastructure Challenge:**
 - **Case Backlog:** India faces a colossal case backlog, with over **5 crore cases** pending across various levels of the judiciary, a

significant portion of which are in district courts.

- **Infrastructure Deficits:** Many court complexes across the country suffer from inadequate courtrooms, lack of basic facilities (like waiting areas, washrooms, and record rooms), and limited technological infrastructure, hampering both judicial efficiency and the dignity of litigants.
- **Related Initiatives:**
 - **e-Courts Mission Mode Project:** A flagship initiative of the Government of India to digitize court processes, enable online case filing and management, and facilitate virtual hearings. The third phase (e-Courts III) aims to create a unified technology platform with a budget of ₹7,210 crore.
 - **Centrally Sponsored Scheme (CSS) for Judicial Infrastructure:** The Central Government provides financial assistance to State Governments/UT Administrations for the construction of court buildings and residential accommodations for judicial officers under this scheme, sharing costs in a defined ratio with states.

Election Commission to Undertake Special Intensive Revision of Electoral Rolls in Odisha What's the News?

- The **Election Commission of India (ECI)** has announced a month-long **Special Intensive Revision (SIR)** of electoral rolls in Odisha, commencing from **May 30, 2026**.
- The announcement was made by Odisha's Chief Electoral Officer (CEO), **R. S. Gopalan**.
- This exercise is part of the **Phase III** of the SIR, which covers **16 States and 3 Union Territories** across the country.

Special Intensive Revision (SIR) of Electoral Rolls

- **Overview:** The SIR is a rigorous, field-based process to update electoral rolls through **house-to-house verification** by Booth Level Officers (BLOs). Its primary objectives are to:
 - Identify and remove **duplicate entries**, deceased electors, and shifted voters.
 - Enroll newly eligible citizens (those who have attained 18 years of age).
 - Rectify errors in existing voter details (e.g., spelling, age, EPIC number).
 - Delete names of any **ineligible persons**, including foreign nationals.
- **Odisha-Specific Schedule:**
 - **Training of BLOs and Booth Level Agents (BLAs):** May 20 to May 29.
 - **Door-to-Door Verification:** May 30 to June 28.
 - **Publication of Draft Electoral Rolls:** July 5.
 - **Filing of Claims and Objections:** July 5 to August 4.

- **Publication of Final Electoral Rolls:** September 6 (after disposal of objections).
- **Manpower and Polling Stations:**
 - A total of **45,255 BLOs** will be deployed for the verification process.
 - **27,723 BLAs** have been appointed by seven political parties to assist and ensure transparency.
 - The number of polling booths in the state is expected to increase from **38,123 to 45,255** after the rationalization exercise.

Additional Info

- **Constitutional & Legal Framework:**
 - **Election Commission of India (ECI):** A permanent and independent constitutional body established under **Article 324** of the Constitution, responsible for the superintendence, direction, and control of elections.
 - **Electoral Rolls:** Prepared under the provisions of the **Representation of the People Act, 1950**.
- **Functionaries:**
 - **Booth Level Officer (BLO):** A field-level official (usually from the state government) assigned to a specific polling booth area, responsible for the door-to-door verification of voters.
 - **Booth Level Agent (BLA):** A representative appointed by a recognized political party to assist the BLO in the verification process, helping to ensure no eligible voter is left out and to raise objections.
- **Related Form:**
 - **Enumeration Form:** The primary form distributed and collected by BLOs during the SIR process to capture/update voter details. No additional documents are collected during this enumeration exercise.

Supreme Court Allows Euthanasia of Rabid & Dangerous Stray Dogs

What's the News?

- The **Supreme Court of India** has permitted the **euthanasia of rabid, incurably ill, or demonstrably dangerous** free-ranging (stray) dogs to protect public safety.
- The order was passed by a three-judge bench comprising **Justices Vikram Nath, Sandeep Mehta, and N.V. Anjaria**.
- The court directed that euthanasia must be carried out strictly in accordance with the **Animal Birth Control (ABC) Rules, 2023** and the **Prevention of Cruelty to Animals (PCA) Act, 1960**, following assessment by qualified veterinary experts.
- It also **refused to modify or recall** its earlier November 2025 directions on the removal of stray dogs from public institutions.

Background & Key Directives

- **Suo Motu Case:** The Supreme Court initiated the matter *suo motu* after taking note of deeply disturbing media reports of free-ranging dogs attacking children, elderly persons, and even international tourists.
- **November 2025 Order:** The court had earlier directed that:
 - All stray dogs be **removed from public institutions** such as schools, colleges, hospitals, bus depots, railway stations, sports complexes, and other high-footfall public areas.
 - Sterilised and vaccinated dogs **must not be returned** to these same locations.
 - States and Union Territories must **establish at least one fully functional ABC centre in each district**, equipped with requisite infrastructure, trained personnel, and surgical facilities.
 - Authorities must ensure **adequate availability of anti-rabies vaccines and immunoglobulin**.

Legal Basis for Euthanasia

- The court held that the **Prevention of Cruelty to Animals Act, 1960**, and the **Animal Birth Control Rules, 2023**, provide the statutory framework for humane euthanasia of animals.
- **Section 13** of the PCA Act already permits the killing of animals that are mortally injured, diseased, or in a condition where survival would amount to cruelty. The court's direction effectively expands the operational context to include **public safety grounds**.
- The order requires that euthanasia be carried out **only after assessment by a team of qualified veterinary experts** and through approved humane methods such as intravenous administration of **sodium pentobarbital**.
- **Protection for Officials:** The court stated that officers implementing its directions in good faith would be **protected from criminal proceedings**.

Why This Matters: The Stray Dog & Rabies Crisis in India

- **Dog Bite Burden:** India recorded over **3.7 million (37 lakh) dog bite cases** in 2024 alone, according to data presented in Parliament under the **Integrated Disease Surveillance Programme (IDSP)**.
- **Rabies Deaths:** The **World Health Organization (WHO)** estimates that India accounts for **nearly one-third of global rabies deaths**—approximately **18,000–20,000 annually**, though officially confirmed cases are much lower (54 suspected rabies deaths reported in 2024).
- **Stray Dog Population:** Estimates vary widely. A 2025 report put India's total dog population at **10.2 million**, while other sources estimate stray dog numbers between **35–60 million**.
- **State-wise Data:** In **Rajasthan**, Sri Ganganagar reported **1,483 cases** in three months, while Udaipur recorded over **1,700 cases** in early 2026. **Tamil Nadu** reported **2.4 lakh cases**, including **71,000 in March 2026 alone**, with 34 deaths.

Constitutional & Judicial Observations

- The court observed that the **right to live with dignity** under **Article 21** of the Constitution encompasses the **right to move freely without the threat of harm from dog bite attacks**.
- The bench remarked that the Constitution does not envisage a society where **children and elderly persons are left to survive on the mercy of physical strength**, invoking concerns akin to a “survival of the fittest” scenario in the absence of government action.

Additional Info

- **Animal Birth Control (ABC) Rules, 2023:**
 - Notified under the **Prevention of Cruelty to Animals Act, 1960** on **10 March 2023**, superseding the earlier ABC (Dog) Rules, 2001.
 - Mandate that local bodies (municipalities and panchayats) carry out **sterilisation and anti-rabies vaccination** programmes for stray dogs through organisations approved by the **Animal Welfare Board of India (AWBI)**.
 - Euthanasia is permitted for **incurably ill and mortally wounded dogs**, as diagnosed by a team appointed by the **Local Animal Birth Control Monitoring Committee**.
- **Animal Welfare Board of India (AWBI):**
 - A statutory body established under **Section 4** of the PCA Act, 1960.
 - Provides financial assistance to recognised animal welfare organisations for sheltering stray, injured, or sick animals.
 - Issued **Standard Operating Procedures (SOPs)** for civic bodies on the relocation of stray animals following the Supreme Court's orders.
- **National Action Plan for Rabies Elimination (NAPRE):**
 - India aims to eliminate dog-mediated rabies by **2030**, in line with the **WHO's “Zero by 30”** global strategic plan.
 - The plan focuses on mass dog vaccination, public awareness, and strengthening surveillance and healthcare response.
- **Statutory Provisions:**
 - **Prevention of Cruelty to Animals Act, 1960:** The primary legislation governing animal welfare in India.
 - **Section 13** of the PCA Act: Deals with the destruction of suffering animals.
 - **Article 21 of the Constitution:** Right to life and personal liberty, interpreted to include the right to a safe environment free from threat to life.

India Notifies Technical Standards for E30 Petrol Blends What's the News?

- The **Bureau of Indian Standards (BIS)** has notified technical specifications for higher ethanol-petrol blends: **E22, E25, E27, and E30** under standard **IS 19850:2026**.

- The notification establishes a regulatory framework for blending **anhydrous ethanol** with motor gasoline for use in **positive ignition engine-powered vehicles** (petrol vehicles).
- This is a **preparatory regulatory step**, not an immediate nationwide rollout; fuel stations will not start selling E30 petrol instantly.
- The move signals India's long-term roadmap beyond the current **E20 Ethanol Blending Programme**, aligning with energy security and clean mobility goals.

Technical Standards & Scope

- **Nodal Agency:** **Bureau of Indian Standards (BIS)**, under the **Ministry of Consumer Affairs, Food & Public Distribution**.
- **Standard Notified:** **IS 19850:2026** — “E22, E25, E27 and E30 Fuel, Admixture of Anhydrous Ethanol and Motor Gasoline for Usage in Positive Ignition Engine Powered Vehicles”.
- **Blend Definitions:**
 - **E22:** 22% ethanol + 78% gasoline
 - **E25:** 25% ethanol + 75% gasoline
 - **E27:** 27% ethanol + 73% gasoline
 - **E30:** 30% ethanol + 70% gasoline
- **Key Requirement:** Use of **anhydrous ethanol** (very low water content) to ensure fuel stability and engine compatibility.

Ethanol Blending Policy: Strategic Context

- **Programme Goal:** Reduce crude oil import dependence, support farm incomes, and lower transport emissions.
- **E20 Target Acceleration:** Original target of 20% ethanol blending by **2030** advanced to **Ethanol Supply Year 2025-26** following successful pilot implementation.
- **Feedstock Sources:** Primarily **sugarcane molasses**, maize, and other biomass—linking fuel policy to **agricultural value addition**.
- **Current Blending Achievement:** India achieved **~12-15%** average ethanol blending in recent years; E20 rollout is ongoing in select states.
- **Future Exploration:** Government is also evaluating feasibility of **E85** (85% ethanol) and **E100** (100% ethanol) for flex-fuel ecosystems.

Vehicle Compatibility & Infrastructure Readiness

- **Technical Challenge:** Higher ethanol concentrations can impact:
 - Engine components (seals, gaskets, fuel lines)
 - Combustion efficiency and cold-start performance
 - Mileage due to ethanol's lower energy density vs. petrol
- **Automotive Research Association of India (ARAI):** Commissioned by the **Ministry of Petroleum** to study E25 impact on existing **E10/E20-compliant vehicles** (mileage, engine life).
- **Flex-Fuel Vehicles (FFVs):** Critical for higher blends; designed to operate on multiple ethanol-gasoline ratios. India's FFV policy framework is under development.

- **Infrastructure Needs:** Upgrades required in fuel storage, transportation, and retail dispensing to handle ethanol's hygroscopic (moisture-absorbing) nature.

Additional Info

- **Historical Background:**
 - **Ethanol Blending Programme (EBP)** launched in **2003**; initially voluntary, later made mandatory.
 - **National Policy on Biofuels 2018:** Set indicative target of 20% ethanol blending by 2030; later accelerated.
 - **BIS Act, 2016:** Empowers BIS to formulate and notify Indian Standards for products and processes.
- **Related Initiatives & Organisations:**
 - **Pradhan Mantri JI-VAN Yojana:** Promotes 2nd generation (cellulosic) ethanol from agricultural residues.
 - **Global Biofuels Alliance (GBA):** India-led initiative to accelerate global biofuel adoption; E30 norms strengthen India's leadership role.
 - **Automotive Research Association of India (ARAI):** Key R&D agency for vehicle-fuel compatibility studies.
- **Constitutional & Policy Linkages:**
 - Supports **Article 48A** (Directive Principle: protect environment) and **Article 51A(g)** (Fundamental Duty: protect natural resources).
 - Aligns with **National Green Hydrogen Mission** and **Panchamrit** climate commitments (net-zero by 2070).
 - Advances **SDG 7** (Affordable Clean Energy), **SDG 13** (Climate Action), and **SDG 2** (Zero Hunger via farm income support).

PRAGATI 2026

What's the News?

- The **Indian Army** has launched **PRAGATI 2026**, a two-week multinational military exercise at **Umroi Military Station**, Meghalaya.
- Armed forces from **12 friendly nations**—Bhutan, Cambodia, Indonesia, Laos, Malaysia, Maldives, Myanmar, Nepal, Philippines, Seychelles, Sri Lanka, and Vietnam—are participating alongside India.
- The exercise focuses on **counter-terrorism operations** in semi-mountainous and jungle terrain, aiming to enhance **interoperability, intelligence sharing, and joint operational coordination** among regional partners.
- PRAGATI stands for **Partnership of Regional Armies for Growth and Transformation in the Indian Ocean Region**, reflecting India's commitment to collaborative security frameworks.

Exercise Framework & Operational Focus

- **Nodal Agency:** Indian Army, under the **Ministry of Defence**.
- **Venue:** **Umroi Military Station**, near Shillong, Meghalaya—a strategic location offering realistic jungle and semi-mountainous training terrain.

Core Objectives:

- Strengthen **military-to-military cooperation** and professional exchange among participating nations.
- Develop **common operational concepts** for multinational counter-terrorism missions.
- Institutionalise mechanisms for **best-practice sharing** and **joint intelligence management**.
- Build **trust and camaraderie** through joint training and cultural interaction.

Training Components:

- **Joint Planning Exercises:** Scenario-based mission planning for complex counter-terrorism operations.
- **Tactical Drills:** Small-unit tactics, ambush/counter-ambush, and cordon-and-search operations.
- **Field Operations:** Coordinated patrols, heliborne insertions, and night operations in challenging terrain.
- **Soft Skills Emphasis:** Physical fitness, discipline, and cross-cultural team coordination.

Additional Info

Historical Background:

- India regularly hosts multinational exercises: **Mitra Shakti** (Sri Lanka), **Surya Kiran** (Nepal), **Ex Ekuverin** (Maldives), and **CORPAT** (maritime patrols with Southeast Asian nations).
- **Umroi Cantonment:** Established in the 1970s; strategically located near India's eastern border for rapid deployment and training.

Related Initiatives & Organisations:

- **Indian Ocean Rim Association (IORA):** Promotes regional cooperation on maritime security, trade, and disaster management.
- **Quad Defence Cooperation:** India's participation in quadrilateral security dialogue with US, Japan, Australia complements sub-regional exercises like PRAGATI.
- **Defence Research & Development Organisation (DRDO):** Supports indigenous equipment showcased during the exercise (e.g., UAVs, communication systems, personal gear).

Constitutional & Policy Linkages:

- Supports **Article 51** (Directive Principle: promote international peace and security) and **Article 246** (Union List: defence and foreign affairs).
- Aligns with **National Security Strategy** emphasis on technology-enabled, network-centric warfare and regional partnerships.
- Advances **SDG 16** (Peace, Justice, and Strong Institutions) and **SDG 17** (Partnerships for the Goals).

Operation RAGEPILL: India's First-Ever Captagon Seizure

What's the News?

- The **Narcotics Control Bureau (NCB)** under **Operation RAGEPILL** has seized approximately **227.7 kg of Captagon** (tablets and powder), marking India's first-ever interception of this synthetic psychotropic substance.
- Estimated illicit market value: **₹182 crore** in destination markets across the Gulf and Middle East.
- One **Syrian national** linked to the international syndicate arrested for visa overstay and drug trafficking.
- Seizures executed at two strategic locations: New Delhi (concealed in a commercial chapati-cutting machine) and Mundra Port, Gujarat (hidden in a wool consignment from Syria).
- The consignment was destined for transshipment to **Saudi Arabia** and neighbouring Middle Eastern countries.

Operation RAGEPILL

- **Overview:** Multi-agency, intelligence-led operation coordinated by **NCB** under the **Ministry of Home Affairs**.
- **Trigger:** Intelligence inputs from a foreign drug law enforcement agency indicating India's use as a transit route for Captagon trafficking.
- **Methodology:** Combined human intelligence, electronic surveillance, and customs coordination at ports/airports.
- **Significance:** Exposes attempts by transnational syndicates to exploit India's commercial cargo routes for synthetic drug trafficking; reinforces India's role in global counter-narcotics cooperation.

About Captagon

- **Composition:** Synthetic stimulant primarily containing **Fenetylline** and **Amphetamine**, classified as psychotropic substances under the **NDPS Act, 1985**.
- **Effects:** Prolongs wakefulness, reduces fatigue, increases alertness; reported to trigger aggressive behaviour.
- **Strategic Label:** Often termed "Jihadi drug" or "war drug" due to reported misuse in conflict zones and by extremist networks in West Asia/Middle East.
- **Market Dynamics:** High demand in Gulf countries has made it a lucrative commodity for international trafficking networks.

Additional Info

- **Legal Framework:**
 - **Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985:** Primary legislation governing production, possession, transport, sale, and consumption of prohibited substances in India.
 - Psychotropic substances like Fenetylline and Amphetamine are listed under Schedules of the NDPS Act, attracting stringent penalties.
- **Institutional Mechanism:**
 - **Narcotics Control Bureau (NCB):** Apex federal agency for drug law enforcement;

coordinates with Customs, State Police, and international counterparts.

- **MANAS Helpline (1933):** Toll-free citizen reporting mechanism for narcotics-related intelligence; informant identity protected.
- **Strategic Context:**
 - Recent parallel seizure: **349 kg of cocaine** from Ecuador intercepted in Mumbai, indicating growing misuse of containerized trade routes by drug cartels.
 - India's geographic position makes it a potential transit corridor between West Asia, South Asia, and Southeast Asia for synthetic drug trafficking.
 - Emphasizes need for enhanced **international intelligence sharing, mutual legal assistance, and port security protocols**.

Sansad Ratna Awards 2026: Recognising Parliamentary Excellence Through Data-Driven Assessment

What's the News?

- The **Sansad Ratna Awards 2026** have been announced, honouring **12 Members of Parliament** (10 Lok Sabha, 2 Rajya Sabha) and **4 Parliamentary Standing Committees** for outstanding legislative performance.
- Notable recipients include **Dr. Medha Kulkarni** (Rajya Sabha, Pune) and **Smita Uday Wagh** (Lok Sabha, Jalgaon), the latter recognised for attending parliamentary sessions despite undergoing cancer treatment.
- **Maharashtra** leads with 5 awardees; the 150th award in the series will be presented at the ceremony in **New Delhi** in July 2026.
- Awards are instituted by the **Prime Point Foundation** (Chennai), inspired by former President **Dr. APJ Abdul Kalam**, and selected via an independent jury using official parliamentary data.

Selection Process & Evaluation Criteria

- **Data Sources:** Performance metrics sourced from **PRS Legislative Research, Lok Sabha Secretariat, and Rajya Sabha Secretariat**.
- **Key Parameters:**
 - Questions asked in Parliament (oral/written)
 - Participation in debates and discussions
 - Private Member Bills introduced and pursued
 - Committee membership and contribution
 - Attendance records and constituency engagement
- **Jury Composition:** Retired parliamentarians, constitutional experts, academicians, and civil society representatives ensure non-partisan, merit-based selection.
- **Significance:** Promotes **accountability, transparency, and performance-oriented governance** in India's legislative framework.

Awardees Overview

- **Individual MPs:**
 - Jagdambika Pal (Uttar Pradesh), P.P. Chaudhary (Rajasthan), Nishikant Dubey (Jharkhand)
 - Dr. Shrikant Eknath Shinde, Dr. Hemant Vishnu Savara, Smita Uday Wagh, Naresh Ganpat Mhaske (Maharashtra)
 - Praveen Patel (Uttar Pradesh), Bidyut Baran Mahato (Jharkhand), Lumbaram Chaudhary (Rajasthan)
 - Narhari Amin (Gujarat), Dr. Medha Vishram Kulkarni (Maharashtra)
- **Parliamentary Committees:**
 - **Committee on Agriculture** (Chair: Dr. Charanjit Singh Channi)
 - **Finance Committee** (Chair: Bhartruhari Mahtab)
 - **Rural Development & Panchayati Raj Committee** (Chair: Saptagiri Sankar Ulaka)
 - **Coal and Mines Committee** (Chair: Anurag Thakur)

Additional Info

- **Historical Context:**
 - Instituted in **2010**; over **143 awards** conferred across 15 editions to date.
 - First ceremony launched by **Dr. APJ Abdul Kalam**, emphasising youth engagement and parliamentary excellence.
 - Awards presented by **civil society**, not the government, reinforcing independent recognition of legislative work.
- **Governance & Policy Linkages:**
 - Aligns with **Article 100** (quorum and voting in Parliament) and **Article 105** (powers and privileges of MPs) by encouraging active participation within constitutional bounds.
 - Supports **SDG 16** (Peace, Justice and Strong Institutions) by promoting accountable, inclusive legislative practices.
 - Complements **PRS Legislative Research** initiatives to make parliamentary data accessible and actionable for citizens.

SARTHAK-PDS: Major Reform of India's Public Distribution System

What's the News?

- The **Cabinet Committee on Economic Affairs (CCEA)** has approved the **SARTHAK-PDS** scheme with a central outlay of about **₹25,530 crore** for the period up to **2031**.
- The scheme aims to modernise and strengthen the **Public Distribution System (PDS)** serving nearly **80 crore beneficiaries** under the **National Food Security Act (NFSA), 2013**.
- It integrates existing foodgrain transportation support and technology-driven PDS reforms under a single umbrella framework.

SARTHAK-PDS Scheme

- **SARTHAK-PDS** stands for **Scheme for Assistance in Ration Transport and Handling-Income with Automation in PDS**.
- It merges:
 - **Assistance to State Agencies for intra-State movement of foodgrains and FPS dealers' margin under NFSA**.
 - **Scheme for Modernization and Reforms through Technology in Public Distribution System (SMART PDS)**.
- The scheme will operate during the **16th Finance Commission cycle** up to March 2031.

Objectives

- Ensure efficient **last-mile delivery** of subsidised food grains.
- Provide assured financial support for:
 - Intra-state transportation of food grains.
 - Handling costs.
 - Margins for **Fair Price Shop (FPS)** dealers.
- Reduce leakages and diversion of food grains.
- Promote a **citizen-centric, interoperable, and technology-enabled PDS ecosystem**.

Features

- Creation of a **unified digital architecture** for PDS operations.
- Greater use of:
 - Automation.
 - Data-driven monitoring.
 - Technology-based transparency measures.
 - Integrated beneficiary management systems.
- Revised norms for Central assistance to States and Union Territories for foodgrain movement and handling.
- Continued support for FPS dealers to improve service delivery at the grassroots level.

Additional Info

National Food Security Act (NFSA), 2013

- Provides legal entitlement to subsidised food grains.
- Covers:
 - Up to **75% of the rural population**.
 - Up to **50% of the urban population**.
- Beneficiaries include:
 - **Priority Households (PHH)**.
 - **Antyodaya Anna Yojana (AAY)** households.

Public Distribution System (PDS)

- Government mechanism for distributing subsidised food grains through **Fair Price Shops (FPSs)**.
- Managed jointly by:
 - **Central Government:**
 - Procurement.
 - Storage.
 - Allocation of food grains.
 - **State Governments:**
 - Distribution to beneficiaries through FPS networks.

SMART PDS

- Technology-driven reform initiative for:
 - Automation.
 - Transparency.
 - Beneficiary authentication.
 - Supply-chain monitoring.

- Now integrated into the SARTHAK-PDS umbrella framework.

Cabinet Committee on Economic Affairs (CCEA)

- Cabinet committee responsible for major economic policy decisions.
- Approves large-scale investment and infrastructure-related schemes.

National e-Governance Service Delivery Assessment (NESDA) 2025 Portal Launched

What's the News?

- The **Department of Administrative Reforms and Public Grievances (DARPG)** has launched the **National e-Governance Service Delivery Assessment (NESDA) 2025 Portal**.
- The portal will assess and benchmark the quality of digital governance and online public service delivery across States, Union Territories, and Central Ministries.
- **NESDA 2025** aims to strengthen citizen-centric governance by evaluating the accessibility, efficiency, and effectiveness of government digital services.
- The assessment is part of the government's broader **Digital India** and administrative reforms agenda.

NESDA 2025

What is NESDA?

- **National e-Governance Service Delivery Assessment (NESDA)** is a biennial assessment framework developed by **DARPG**.
- It evaluates the maturity and effectiveness of government digital service delivery systems.
- It serves as a benchmarking tool to encourage healthy competition and adoption of best practices among governments.

Objectives

- Improve the quality and accessibility of online public services.
- Promote citizen-centric digital governance.
- Identify gaps and areas requiring improvement.
- Encourage interoperability and integrated service delivery.
- Enhance transparency, accountability, and ease of access.

Features of NESDA 2025

- Assessment of:
 - **State Portals**
 - **District Portals**
 - **Central Ministry Portals**
 - Online citizen services
- Focus on:
 - Service availability
 - Accessibility standards
 - Mobile readiness
 - User experience
 - Data security and privacy
 - End-to-end digital service delivery
- Emphasis on inclusive governance through multilingual and accessible platforms.

Assessment Methodology

- Evaluation is conducted through a structured framework covering:
 - **Accessibility**
 - **Content Availability**
 - **Ease of Use**
 - **Service Delivery**
 - **Integrated Service Portals**
 - **Citizen Feedback Mechanisms**
- Services are examined from the perspective of citizens' actual usage and convenience.

Significance

- Supports the vision of **Minimum Government, Maximum Governance**.
- Promotes evidence-based administrative reforms.
- Helps States and Ministries compare performance against national benchmarks.
- Encourages adoption of emerging technologies and digital best practices.
- Strengthens India's transition toward a digitally empowered society and knowledge economy.

Previous NESDA Assessments

- NESDA has been conducted periodically since 2019.
- Successive assessments have shown:
 - Expansion of online service delivery.
 - Growth in integrated service portals.
 - Improved adoption of mobile-friendly government platforms.
 - Increased focus on accessibility and citizen experience.

Additional Info

Department of Administrative Reforms and Public Grievances (DARPG)

- Functions under the **Ministry of Personnel, Public Grievances and Pensions**.
- Nodal agency for:
 - Administrative reforms.
 - Public grievance redressal.
 - Promotion of e-governance initiatives.
- Implements and monitors governance reform frameworks across the country.

Related Initiatives

- **Digital India Programme**
 - Seeks digital empowerment of citizens and digital transformation of governance.
- **CPGRAMS (Centralized Public Grievance Redress and Monitoring System)**
 - Online platform for grievance redressal.
- **National e-Governance Plan (NeGP)**
 - Framework for delivering government services electronically.
- **UMANG**
 - Unified platform providing access to multiple government services through a single application.

Social Issues

India-UAE, India-US Among Top 10 Global Migration Corridors in 2024: UN Report

What's the News?

The **International Organisation for Migration (IOM)**, the UN's migration agency, released its **World Migration Report 2026**. The report identifies **India-United Arab Emirates (UAE)** and **India-United States (US)** among the world's top 10 country-to-country migration corridors as of 2024. Globally, international migrants numbered around **304 million**, with India solidifying its position as both a major source of migrants and a leading recipient of remittances.

Findings from the World Migration Report 2026

- **Global Overview:**
 - **Total Migrants:** Around **304 million** people lived outside their country of birth as of mid-2024.
 - **Share of Population:** This represents **3.7%** of the global population, a gradual increase from 2.9% in 1990.
- **Top 5 Migration Corridors Globally:**
 - **Mexico → United States:** The world's largest corridor with approximately **11 million** migrants.
 - **Afghanistan → Iran:** Over **3.7 million** migrants.
 - **Syria → Türkiye:** Over **3.5 million** migrants, mainly refugees.
 - **Russia → Ukraine.**
 - **India → United Arab Emirates:** The **fifth-largest** corridor globally, comprising mainly migrant workers.
- **Other Corridors Involving India:**
 - **India → United States:** Ranked as the **sixth-largest** corridor worldwide.
 - **Bangladesh → India:** Ranked **11th** globally.
 - **India → Saudi Arabia:** Ranked **14th** globally.

Profile of Indian Migrants

- **India-UAE Corridor:**
 - Over **8 million** international migrants reside in the UAE, accounting for **74%** of its total population.
 - **Indians constitute the largest nationality**, numbering over **3 million**.
 - This corridor is dominated by **male migrant workers**, as Gulf countries have a significantly higher share of male immigrants than female.
- **India-US Corridor:**
 - Approximately **3.2 million** Indian migrants were living in the US in 2024, according to the IOM report. Other agencies estimate the Indian diaspora there to be around **5 million**.
 - Indians form the **second-largest foreign-born group** in the US, after Mexicans.
 - Migration to the US is increasingly driven by **highly skilled workers and international students**.

Gender Dimensions:

- Among the top 10 countries of origin in Asia, most—including India—have a **larger share of male than female emigrants**.
- India is noted as an exception among destination countries in the region, having a **higher share of female than male immigrants**.

Economic Dimension: Remittances

- **Remittances to India:** India received a record **\$134 billion** in remittances in 2024, reaffirming its status as one of the world's largest recipients.
- **Definition:** Remittances are cross-border personal transfers sent by migrant workers to households in their country of origin.
- **Significance:** These transfers form a crucial part of India's **balance of payments** and are tracked in external sector analysis.

Policy Implications and Diaspora Engagement

- **Influencing Bilateral Relations:** The IOM report highlights that the **Indian diaspora in the US**, particularly through organizations like the **United States-India Political Action Committee (USINPAC)**, has played a role in strengthening bilateral ties.
 - Areas of influence include **trade agreements, defence cooperation, and visa policies**.

Additional Info

- **International Organisation for Migration (IOM):**
 - Established in **1951**, the IOM became a related organization of the United Nations in 2016.
 - Headquartered in **Geneva, Switzerland**, it is the leading intergovernmental organization in the field of migration.
 - Its flagship publication, the **World Migration Report**, is published biennially and provides comprehensive data and analysis on global migration trends.
- **Understanding Migration Corridors:**
 - A **migration corridor** is a defined route or flow of people between a country of origin and a country of destination.
 - These are used in demographic and economic studies to track labour movement, diaspora links, and remittance flows.
- **India's Policy Context:**
 - The large-scale emigration from India underscores the importance of the **Emigration Act, 1983**, which regulates the recruitment of Indian workers for overseas employment.
 - Schemes like the **Pravasi Kaushal Vikas Yojana (PKVY)** focus on skill upgradation and pre-departure orientation for potential migrant workers.
 - The figures also highlight India's robust engagement with the Gulf Cooperation Council (GCC) countries and the US, managed

through the Ministry of External Affairs' Pravasi Bharatiya initiatives.

NCRB 'Crime in India 2024' Report What's the News?

The **National Crime Records Bureau (NCRB)** released its annual "**Crime in India 2024**" report. While overall cognizable crimes declined by **6%** (from 62.41 lakh in 2023 to 58.85 lakh), the report flags a worrying **17.9% spike in cybercrimes**, which crossed the 1 lakh mark for the first time. The report also highlights mixed trends in violent crimes, crimes against women and children, and a sharp rise in juvenile offences, with specific states and cities emerging as significant outliers.

- **Overall Crime Rate:** The crime rate per lakh population decreased from **448.3 in 2023 to 418.9 in 2024**.
- **Crimes Against Women:** Saw a marginal decline of **1.5%**, with **4,41,534 cases** registered.
- **Murder Cases:** Declined by **2.4%**, with **27,049 cases** reported.

Cybercrime Surge: Bengaluru Tops Metro Charts

- **National Trend:** Cybercrime cases registered a sharp **17.9% increase**, rising from **86,420 in 2023 to 1,01,928 in 2024**.
- **Dominant Motive:** Online financial **fraud accounted for nearly 73%** (73,987 cases) of all cyber offences.
- **Cybercrime Rate:** The national rate increased from **6.2 to 7.3 per lakh population**.
- **Metro City Hotspot:** **Bengaluru** recorded the highest number of cybercrimes among 19 metropolitan cities, with **17,561 cases** (85% of all metro cybercrimes). Its cybercrime rate is a staggering **206.6 per lakh population**.
- **State Leader:** **Karnataka** topped all states with **21,993 cases**.
- **Telangana's Per Capita Lead:** While Karnataka led in absolute volume, **Telangana** recorded the nation's highest cybercrime rate at **71.1 cases per lakh**—nearly ten times the national average.

State and City-Specific Outliers

- **Highest Violent Crime Rate: Odisha**
 - Recorded a violent crime rate of **161.6 victims per lakh population**, the highest in the country, despite having the fourth-highest absolute number of total cases (75,403).
- **Human Trafficking Hub: Telangana**
 - Registered **423 cases**, the highest among all states, accounting for nearly **20%** of the national total (2,135 cases). The state's trafficking crime rate of **1.1 per lakh** is significantly above the national average of **0.2**, with sexual exploitation for prostitution as the dominant motive.
- **Suicide Capital (Rate): Bengaluru**
 - Among 53 mega-cities, **Delhi** had the highest absolute number of suicides (2,905), but **Bengaluru** recorded the highest suicide rate at **16.7 per lakh population**—a figure that has remained close to 20 per lakh over the three-year period from 2022 to 2024.

- **Crimes Against Children: Delhi**
 - The national capital recorded **7,662 cases**, the highest among Union Territories and metros, with a crime rate of **138.4 per lakh child population** against a national average of 42.3. However, Maharashtra recorded the highest number of cases (24,171) among all states.
- **Juvenile Crime: Delhi & Bihar**
 - Nationally, cases against juveniles surged by **11.2%** (34,878 cases).
 - Among states, **Bihar** recorded the highest number of juvenile crimes (5,037 cases).
 - Among metros, **Delhi** topped the list with **2,306 cases** and a juvenile crime rate of 42 per one lakh minors.

India's Demographic Shift

Fertility Rate Falls Below Replacement Level, Infant Mortality Declines

What's the News?

- India's **Total Fertility Rate (TFR)** has declined to **1.9**, falling below the **replacement level of 2.1**, as per the latest **Sample Registration System (SRS) 2024** bulletin.
- **Infant Mortality Rate (IMR)** has dropped to **24 deaths per 1,000 live births** in 2024, down from 30 in 2019, reflecting improved maternal and child healthcare access.
- **Crude Birth Rate** declined from 21 per 1,000 population in 2014 to **18.3 in 2024**, while **Crude Death Rate** marginally reduced to 6.4.
- Significant **inter-state disparities persist**, with southern and western states achieving lower fertility and mortality rates compared to several northern and eastern states.

Fertility Trends: Below Replacement Level

- **National TFR at 1.9:** India now joins the group of countries with below-replacement fertility, indicating a long-term demographic transition.
- **State-wise variation:**
 - Only **six states** (including **Bihar** at 2.9 and **Uttar Pradesh**) remain above replacement level.
 - **Delhi** records the lowest TFR at **1.2**, followed by other southern states like Kerala and Tamil Nadu.
- **Working-age population:** Now constitutes **66.4%** of India's population, presenting a potential **demographic dividend** if coupled with skill development and employment generation.
- **Population ageing:** States like **Kerala** report over **15%** of population above 60 years, signaling emerging challenges in elderly care and social security.

Infant Mortality: Progress with Persistent Gaps

- **IMR decline:** National IMR fell from 39 (2014) to **24 (2024)**, with rural areas showing sharper improvement (36% decline) than urban (35%).
- **State-level disparities:**

- **Lowest IMR:** Kerala (8), Himachal Pradesh, Tamil Nadu, Delhi (11 each).
- **Highest IMR:** Chhattisgarh (36), Uttar Pradesh and Madhya Pradesh (35 each).
- **Neo-natal mortality:** Accounts for **~73% of infant deaths**, highlighting the critical importance of care during the first 28 days of life.
- **Institutional deliveries:** Increased from **<83% (2019)** to **>95% (2024)**, a key driver behind IMR reduction.

Additional Info

- **Sample Registration System (SRS):**
 - India's largest demographic survey, conducted by the **Office of the Registrar General & Census Commissioner**.
 - Provides annual, reliable estimates of birth rate, death rate, fertility, and infant mortality at national and sub-national levels.
- **Constitutional & Policy Framework:**
 - **Entry 6, List III (Concurrent List):** Empowers both Centre and States to legislate on population control and family planning.
 - **National Population Policy 2000:** Aims for stable population by 2045 through voluntary, targeted interventions.
- **Challenges:**
 - **Gender disparity in IMR:** States like Bihar show higher female infant mortality (25 vs. 21 for males), reflecting socio-cultural biases.
 - **Neo-natal care gaps:** High proportion of infant deaths in first 28 days necessitates strengthened **Newborn Care Corners** and **Special Newborn Care Units (SNCUs)**.
 - **Data-driven planning:** SRS findings should inform state-specific health action plans under **NHM**.

Centre Constitutes High-Level Committee on Demographic Change

What's the News?

- The **Union Ministry of Home Affairs** has constituted a **High-Level Committee on Demographic Change** to conduct a comprehensive assessment of population shifts linked to **illegal immigration** and other unnatural causes.
- The panel will be chaired by **Justice (Retd) Prakash Prabhakar Naolekar**, former Judge of the **Supreme Court of India**, and includes experts from administration, policing, economics, and census data.
- The committee is mandated to analyse structural demographic variations at **community and regional levels**, and recommend **policy, legislative, and administrative measures** to address challenges affecting national security, social cohesion, and tribal identity.

Committee Composition & Institutional Framework

- **Chairperson:** Justice (Retd) Prakash Prabhakar Naolekar – served on the Supreme Court bench (2004–2008), with prior roles as Chief Justice of Gauhati High Court and Lokayukta of Madhya Pradesh.

Core Members:

- **Census Commissioner of India:** Provides technical expertise on population data and demographic trends.
- **Durga Shankar Mishra:** Former IAS officer (UP cadre, 1984), ex-Housing & Urban Affairs Secretary, and DMRC Chairman.
- **Balaji Srivastava:** Former IPS officer (AGMUT cadre, 1988), ex-Delhi Police Commissioner, with extensive experience in intelligence and internal security.
- **Dr Shamika Ravi:** Economist, Member of the **Prime Minister's Economic Advisory Council**, specialising in public policy and development economics.
- **Member Secretary:** Joint Secretary (Foreigners-I), Ministry of Home Affairs – ensures inter-ministerial coordination and implementation linkage.

Mandate & Objectives

- **Scientific Assessment:** Evaluate demographic changes across Indian states/districts attributable to **illegal immigration**, cross-border infiltration, and abnormal settlement patterns.
- **Community-Level Analysis:** Study population shifts within specific **religious and social communities**, particularly where trends deviate from national or regional averages.
- **Policy Recommendations:** Propose a streamlined mechanism for **identification, detention, and deportation** of illegal immigrants, aligned with constitutional and international legal standards.
- **Border Management Framework:** Suggest institutional reforms to strengthen **border surveillance**, population stabilisation, and real-time demographic monitoring systems.
- **Centre-State Coordination:** Develop a comprehensive policy framework to enhance cooperation between Union and State governments on immigration-related demographic imbalances.
- **Timeline:** Submit report within **one year**, extendable by up to six months if required.

Significance & Governance Dimensions

- **National Security:** Addresses concerns that unregulated migration may impact **electoral rolls**, resource allocation, and internal security in border-sensitive regions.
- **Tribal & Cultural Preservation:** Aims to protect demographic integrity of **Scheduled Tribes** and indigenous communities in Northeast India, Jharkhand, and other ecologically sensitive zones.
- **Data-Driven Governance:** Leverages **Census data**, NSSO surveys, and digital identification systems (**Aadhaar**) to ensure evidence-based policy formulation.
- **Legal-Administrative Alignment:** Recommendations expected to interface with the **Foreigners Act, 1946**, **Passport (Entry into India) Act, 1920**, and provisions under the **Citizenship Act, 1955**.

Additional Info

- **Constitutional & Legal Provisions:**

- **Article 246A:** Empowers Parliament to legislate on matters of national importance, including immigration and citizenship.
- **Seventh Schedule, Union List (Entry 17):** Covers citizenship, naturalisation, and aliens.
- **Foreigners Act, 1946:** Defines "foreigner" and grants central government powers to regulate entry, presence, and departure.
- **Citizenship Act, 1955:** Governs acquisition and termination of Indian citizenship; amendments (e.g., CAA, 2019) remain contextually relevant.
- **Related Policies & Initiatives:**
 - **National Register of Citizens (NRC):** Proposed pan-India exercise for citizen verification; currently operational only in Assam.
 - **Border Management Infrastructure:** Includes **Comprehensive Integrated Border Management System (CIBMS)**, smart fencing, and multi-agency coordination under **Border Security Force (BSF)**.
 - **Digital India & Aadhaar:** Supports biometric identification for welfare delivery and population tracking, subject to **Digital Personal Data Protection Act, 2023** safeguards.
- **Relevant Context:**
 - **Demographic Transition:** India is in Stage III (declining birth/death rates), but regional variations persist due to migration, fertility differentials, and socio-economic factors.
 - **Illegal Immigration Estimates:** Official figures vary; Assam's NRC exercise excluded ~1.9 million applicants (2019), highlighting complexity of verification.
 - **International Comparators:** Similar demographic committees exist in **EU (Frontex)**, **USA (DHS)**, and **Australia (ABF)** for migration governance.

Sample Registration System (SRS) Statistical Report 2024 Released

What's the News?

- The **Registrar General of India (RGI)** has released the **Sample Registration System (SRS) Statistical Report 2024**, providing estimates on fertility, mortality, and demographic indicators across India.
- The report highlights continued demographic transition with declining fertility and mortality rates, improvement in life expectancy, and significant interstate variations in population indicators.
- The findings are important for planning in sectors such as **healthcare, nutrition, women and child development**, and **population policy**.

What is the Sample Registration System (SRS)?

- The **Sample Registration System (SRS)** is India's largest demographic survey system for generating reliable annual estimates of:
 - Birth Rate.

- Death Rate.
- Infant Mortality Rate (IMR).
- Total Fertility Rate (TFR).
- Maternal and child health indicators.
- It is implemented by the **Office of the Registrar General and Census Commissioner, India** under the **Ministry of Home Affairs**.
- SRS follows a **dual-record system**:
 - Continuous enumeration by a resident part-time enumerator.
 - Independent retrospective survey by a full-time supervisor.
- The two records are matched to improve accuracy and reliability.

Key Findings of the SRS Report 2024

Total Fertility Rate (TFR)

- India's **Total Fertility Rate (TFR)** has remained below the replacement level of **2.1 children per woman**.
- The national TFR is estimated at around **2.0**, indicating stabilization of population growth.
- States such as:
 - **Bihar**
 - **Meghalaya**
 - **Uttar Pradesh** continue to record relatively higher fertility levels.
- Southern and western states generally report lower fertility rates.

Infant Mortality Rate (IMR)

- India has recorded a continued decline in **Infant Mortality Rate (IMR)**.
- Significant improvements have been observed due to:
 - Expansion of institutional deliveries.
 - Better immunisation coverage.
 - Strengthened maternal and child healthcare services.
- Interstate disparities remain, with some states continuing to record higher infant mortality levels than the national average.

Birth Rate and Death Rate

- The **Crude Birth Rate (CBR)** has shown a gradual decline, reflecting lower fertility levels.
- The **Crude Death Rate (CDR)** remains relatively stable with improvements in healthcare access and disease control.
- The trends indicate progress towards a mature demographic profile.

Life Expectancy

- Average life expectancy in India continues to improve.
- Females generally report higher life expectancy than males.
- Improvements are linked to:
 - Better healthcare services.
 - Expanded vaccination programmes.
 - Increased awareness regarding nutrition and maternal health.

Demographic Significance

- Declining fertility suggests India is moving towards a **stable population structure**.
- Lower mortality rates indicate improvements in public health outcomes.

- Demographic data supports evidence-based policymaking for:
 - Health infrastructure.
 - Education planning.
 - Social welfare schemes.
 - Labour force projections.
- The report is crucial for monitoring progress towards:
 - **Sustainable Development Goals (SDGs).**
 - National health and population targets.

Additional Info

Important Demographic Indicators

Total Fertility Rate (TFR)

- Average number of children a woman is expected to have during her reproductive years.
- Replacement-level fertility is generally considered **2.1**.

Crude Birth Rate (CBR)

- Number of live births per **1,000 population** in a year.

Crude Death Rate (CDR)

- Number of deaths per **1,000 population** in a year.

Infant Mortality Rate (IMR)

- Number of deaths of infants below one year of age per **1,000 live births**.

Maternal Mortality Ratio (MMR)

- Number of maternal deaths per **100,000 live births**.

Registrar General of India (RGI)

- Established under the **Ministry of Home Affairs**.
- Responsible for:
 - Conducting the **Census of India**.
 - Maintaining the **Civil Registration System (CRS)**.
 - Publishing demographic statistics through the **SRS**.

Policy Relevance

- Supports implementation of:
 - **National Population Policy (2000).**
 - **National Health Mission (NHM).**
 - **POSHAN Abhiyaan.**
 - Maternal and child health programmes.
- Provides data for resource allocation and welfare planning across states.

Empowerment

Indian Army Conducts "Op Netra 1.0" Mega Eye Camp in High-Altitude Ladakh

What's the News?

The Indian Army successfully concluded "Op Netra 1.0", a landmark four-day Advanced Surgical Eye Camp at **153 General Hospital** in Leh, Ladakh. The high-altitude humanitarian mission provided advanced ophthalmic care to remote communities, screening **950 patients** from seven districts and performing **214 specialized surgeries**.

What is Op Netra 1.0?

- **Nature of Initiative:** Op Netra 1.0 was an **Advanced Surgical Eye Camp** conducted by the Indian Army under the leadership of the **Director General, Armed Forces Medical Services (DGAFMS)**—Surg Vice Adm Arti Sarin, the first woman to hold that position.
- **Primary Aim:** To deliver **high-end ophthalmic medical care and humanitarian outreach** to citizens in remote, high-altitude regions, ensuring geographical barriers do not prevent access to essential healthcare services.
- **Venue:** **153 General Hospital, Leh**—a key military medical facility of the **Fire & Fury Corps** (14 Corps), which inaugurated and supervised the camp under **Lt Gen Hitesh Bhalla**, General Officer Commanding, 14 Corps.

Features and Data

- **Wide Outreach:** Screened **950 patients** from **seven districts of Ladakh**, including extremely remote border areas such as **Chushul, Hanle, Demchok, Durbuk, Turtuk, Zaskar, and Drass**, where access to specialized healthcare is severely limited.
- **Specialized Surgeries:** Performed **214 procedures**, comprising:
 - **197** complex cataract surgeries
 - **10** vitreo-retinal interventions
 - Other advanced procedures including Pterygium Excision, IOL Repositioning
- **Advanced Techniques:** Deployed cutting-edge ophthalmic procedures:
 - **Glued Intraocular Lens (IOL) implantation**—for complex cataract cases
 - **Minimally Invasive Glaucoma Surgery (MIGS)**—a modern approach to glaucoma management
 - **Vitrectomy**—a delicate retinal surgery
 - **IOL Repositioning and Pterygium Excision**
- **Humanitarian Impact:** Restored sight to **15 completely visually impaired patients**, significantly impacting their quality of life.
- **Surgical Leadership:** The operations were led by **Brigadier Sanjay Kumar Mishra**, Head of Ophthalmology at **Army Hospital (Research & Referral), Delhi**

Op Netra App

- **What is it?** A key milestone of the mission was the launch of the **indigenously developed Op Netra App** by 153 General Hospital.

Features & Purpose:

- Enables **end-to-end digitization of patient records** for streamlined camp workflow
- Uses **QR code-based identification** for patient management and safety
- Automates **surgical scheduling**, ensuring operational efficiency in a high-volume, high-altitude setting
- Enhances **diagnostic accuracy** and ensures **100% accuracy in patient safety**

- **Significance:** Represents a stride towards **technological self-reliance**, leveraging home-grown innovation to solve complex problems in challenging environments.

Inter-Service Coordination and Logistics

- The mission was enabled by the **Indian Air Force (IAF)** through the **airlift of advanced medical equipment** to the high-altitude setting, ensuring the standard of care matched the highest benchmarks.
- Serves as a premier example of **civil-military liaison**, demonstrating seamless collaboration between the armed forces, government leadership, and the Union Territory of Ladakh administration.

Nationwide Context: A Series of Eye Cams

- Op Netra 1.0 is part of a larger nationwide initiative, building on the success of **Operation Drishti** conducted in November 2025 at **Command Hospital, Northern Command, Udhampur**, which screened over 2,000 patients and performed 400+ surgeries.
- Subsequent camps were organized in **Dehradun, Jaipur, Bagdogra, Gorakhpur, Bhuj, and Lakshadweep**—spanning from desert frontiers to tropical islands.
- **Cumulative Impact:** The series has delivered over **2,500 sight-restoring surgeries** across India since November 2025.

Supreme Court Expands Maternity Leave for Adoptive Mothers

What's the News?

- The **Supreme Court** has struck down the age-based restriction in **Section 60(4)**, ruling that adoptive mothers are entitled to **12 weeks of maternity leave** irrespective of the child's age at adoption.
- A two-judge Bench held that the earlier provision—granting benefits only for children below three months—violated **Article 14** (equality) and **Article 21** (life with dignity) of the Constitution.
- The judgment recognises **motherhood as extending beyond biological childbirth**, emphasising emotional bonding, caregiving, and child welfare as core objectives of maternity protection.

Legal & Policy Details

- **Revised Entitlement:**

- Adoptive mothers and **commissioning mothers** (surrogacy) now receive 12 weeks of maternity benefit from the date the child is handed over.
- Removes the arbitrary cutoff that excluded many adoptive parents due to procedural delays under **CARA** and the **Juvenile Justice Act, 2015**.
- **Constitutional Basis:**
 - **Article 14:** The three-month restriction created an unreasonable classification without rational nexus to the law's objective.
 - **Article 21:** Reproductive autonomy, dignity, and the right to family life include adoption as a valid expression of parenthood.
- **Policy Significance:**
 - Aligns labour welfare with **gender justice** and **SDG 5** (Gender Equality).
 - Addresses "institutional invisibility" of unpaid care work performed by women.
 - Supports workforce participation by reducing the employment-caregiving trade-off for women.

Broader Implications & Governance Context

- **Paternity Leave Observations:**
 - The Court noted the absence of uniform statutory paternity leave reinforces gender stereotypes.
 - While **Central Civil Services Rules** provide 15 days' paternity leave (including for adoptive fathers), the Bench urged the Union Government to introduce **paternity leave as a recognised social security benefit** across sectors.
- **Labour Code Integration:**
 - The **Code on Social Security, 2020** consolidates nine central labour laws, including the **Maternity Benefit Act, 1961**.
 - This judgment sets a precedent for interpreting social security provisions through a **rights-based, inclusive lens**.
- **International Alignment:**
 - The ruling references **CEDAW** and the **Convention on the Rights of the Child**, reinforcing India's commitment to global care economy standards.

Additional Info

- **Constitutional Provisions:**
 - **Article 14:** Equality before law; prohibits arbitrary classification.
 - **Article 21:** Right to life and personal liberty; interpreted to include dignity, privacy, and reproductive autonomy.
 - **Article 39(a) & (e):** Directive Principles guiding State policy towards equal livelihood and humane working conditions.
- **Relevant Laws & Institutions:**
 - **Maternity Benefit Act, 1961:** Original legislation governing paid maternity leave; amended in 2017 to include adoptive mothers (with age restriction).

- **Central Adoption Resource Authority (CARA):** Statutory body under **Ministry of Women & Child Development** regulating adoption procedures.
- **Juvenile Justice** (Care and Protection of Children): Governs legal adoption process; timelines often exceed three months.

PM-AJAY Portal & Mobile App

What's the News?

- The **Ministry of Social Justice and Empowerment** has launched the centralized **PM-AJAY Portal** and **AJAY Mobile App** to digitally transform implementation of welfare schemes for **Scheduled Castes (SCs)**.
- The initiative shifts from paper-based workflows to end-to-end digital governance, enabling **real-time monitoring, milestone-linked fund flows**, and **transparent beneficiary tracking** across all scheme components.
- Union Minister **Dr. Virendra Kumar** launched the platforms, emphasizing enhanced efficiency, accountability, and last-mile delivery for SC communities.

PM-AJAY Scheme: Umbrella Framework

- **Pradhan Mantri Anusuchit Jaati Abhyuday Yojana (PM-AJAY)** is a **100% Centrally Sponsored Scheme** launched in **FY 2021-22**, consolidating three earlier schemes:
 - **Pradhan Mantri Adarsh Gram Yojana (PMAGY)**
 - **Special Central Assistance to SC Sub-Plan (SCA to SCSP)**
 - **Babu Jagjivan Ram Chhatrawas Yojana (BJRCY)**
- **Nodal Agency:** Department of Social Justice and Empowerment
- **Core Objective:** Reduce poverty among SC communities through sustainable livelihoods, skill development, infrastructure creation, and educational support.

Three Operational Pillars & Digital Integration

- **Adarsh Gram Component:**
 - Targets villages with **>40% SC population** (and ≥ 500 total population) for model village development.
 - Provides **₹2 lakh gap-filling infrastructure grant + ₹1 lakh administrative support** per village.
 - Portal digitizes **Village Development Plans (VDPs)**; monitors progress via **50 socio-economic indicators** across **10 domains** (e.g., drinking water, sanitation, literacy, financial inclusion).
 - Mobile app enables **offline door-to-door surveys** and **real-time VDP generation**.
- **Grants-in-Aid (GIA) Component:**
 - Funds livelihood projects, skill training, and income-generating assets for **SC-BPL households**.

- Portal acts as centralized **Management Information System (MIS)** to track state-wise financial allocations, fund utilization, and project progress.
- Mobile app facilitates **digital beneficiary registration** and end-to-end tracking of skill development journeys.
- **Hostel Component:**
 - Supports construction of hostels in **NIRF-ranked educational institutions** for SC students.
 - Portal tracks physical/financial progress; mobile app enables **geo-tagged, time-stamped photo uploads** for visual validation of construction milestones before fund release.

PM-AJAY Portal and Mobile App: A Digital Leap

- **Digital Governance:** The portal and app replace paper-based planning and reporting with digital workflows, enabling electronic approval of Village Development Plans (VDPs) and automated milestone-linked fund flows.
- **Real-time Monitoring and Transparency:** The portal provides national, state, and district-level dashboards to monitor development against the 50 socio-economic indicators. The app enables field inspectors to upload geo-tagged, time-stamped photographs of project sites for visual validation before releasing funds.
- **Key Digital Features:** The system includes a unified login, role-based access control, offline door-to-door survey capability, and dashboard-based reporting.
- **Beneficiary & Scheme Management:** The GIA component allows for digital beneficiary registration and real-time tracking of livelihood initiatives. The hostel component enables online submission of construction and repair proposals.

Culture & Arts

16th Century Telugu Inscription Discovered

What's the News?

- A **Telugu** inscription dating back to the **16th century** has been discovered on the north wall of the **Sri Bugga Ramalingeswara Swamy temple** in **Tadipatri**, Anantapur district, Andhra Pradesh.
- The inscription was deciphered by historian **MyNaa Swamy**.
- It records the obeisance paid by **Basavappa**, son of Satram Cheruvupalli Kalayya from Mahimaluru in **Udayagiri Seema**, to Sri Tatiparti Rameshwara Deva.
- The inscription is estimated to date to either **1574 or 1634 CE** based on the mention of the Telugu cyclic year **Bhava**.

Details of the Inscription

- **Content:** The inscription records a devotional act by Basavappa, who likely served as a regional representative of the Mahimaluru region.
- **Linguistic Features:**
 - The base of the inscription features carvings of Basavappa and his wife, identified as '**Basavappa Pendlamu Naga Easwaramma**'.
 - The use of the word '**Pendlamu**' (meaning wife) is characteristic of the local **Rayalaseema dialect**, offering insights into the regional linguistic variations of the period.
- **Significance of the Event:** The event is recorded as taking place on **Chaitra Bahula Dwadashi**.

Historical and Administrative Context

- **Tadipatri's Strategic Importance:**
 - During the **Vijayanagara Empire**, Tadipatri was a crucial part of the **Pennabadi Seema** within the **Gutti Kingdom**.
 - The **Gutti Kingdom** was a significant administrative division under the Vijayanagara rulers.
- **Geopolitical Insights:**
 - The presence of a representative from **Udayagiri Seema**, located approximately **220 km** from Tadipatri, indicates the extensive reach and influence of the Bugga Ramalingeswara temple during that era.
 - This highlights the temple's role not just as a religious centre but also as a focal point for socio-political interactions across different regions.

Additional Information

- **Epigraphy and Its Importance**
 - **Definition:** Epigraphy is the scientific study of inscriptions engraved on durable materials such as stone, metal, and copper plates.
 - **Role in Indian History:** Inscriptions are invaluable for understanding Indian history

and culture from the time of Emperor Ashoka (3rd century BCE) to the late medieval period.

- **Key Publications:** The **Archaeological Survey of India (ASI)** regularly publishes inscriptions in journals such as **Epigraphia Indica** and **South Indian Inscriptions**.
- **The Bugga Ramalingeswara Temple**
 - **Construction:** The temple was likely built between **1490 and 1509** by **Pemmasani Ramalinga Nayudu I**, a chieftain of the Gutti-Gandikota region under the Vijayanagara Empire.
 - **Architectural Significance:** The temple is noted for integrating major shrines of **Shaiva, Vaishnava, and Shakti** traditions, reflecting the syncretic religious culture of the Vijayanagara period.
 - **Ancient Records:** The temple's history is also documented in the **Tadipatri Kaifiyat**, a detailed local record collected by **Colin Mackenzie** in 1802, which mentions its construction by Ramalinga Nayudu.

Netherlands Returns Chola Copper Plates to India

What's the News?

- The **Netherlands** has formally returned the **11th-century Anaimangalam Copper Plates** (also known as **Leiden Plates**) to India, concluding a long-standing diplomatic effort for repatriation of colonial-era cultural artefacts.
- The handover, completed during a high-level bilateral engagement, involved **21 large and 3 small copper plates** weighing nearly **30 kilograms**, inscribed with grants issued during the reign of **Emperor Rajaraja Chola I**.
- The plates document land revenue and tax exemptions granted to **Chudamani Vihara**, a Buddhist monastery in **Nagapattinam** (Tamil Nadu), highlighting medieval **maritime trade links** and **interfaith patronage** between South India and Southeast Asia.

Historical Significance of the Artefacts

- **Provenance & Content:**
 - Issued during **Rajaraja Chola I's reign** (985–1014 CE), with inscriptions later engraved under his successor **Rajendra Chola I**.
 - Text is bilingual: **Sanskrit** (religious/formal portions) and **Tamil** (administrative details).
 - Plates are bound by a bronze ring bearing the **royal Chola tiger seal**, authenticating their imperial origin.
- **Cultural & Academic Value:**
 - Provide primary evidence of **Chola-era religious tolerance**, showing Hindu rulers supporting Buddhist institutions.
 - Offer insights into **Indian Ocean trade networks**, monastic endowments, and land revenue systems of medieval South India.

- Recognised globally as among the most significant **Tamil heritage records** preserved outside India.

Repatriation Process & Legal Framework

- **Diplomatic & Institutional Pathway:**
 - India formally requested restitution in **2012**; momentum accelerated after the Netherlands adopted a **colonial restitution policy** (2022).
 - **Leiden University** conducted a provenance investigation, advised by the Dutch **Colonial Collections Committee**, which concluded the plates were taken **without consent** during Dutch East India Company (VOC) control of Nagapattinam (1687–1700).
 - The **Intergovernmental Committee for Promoting the Return of Cultural Property** (ICPRCP) under **UNESCO** supported India's claim, recognising it as the rightful country of origin.
- **Policy Mechanism:**
 - Return executed under the Netherlands' **2022 Restitution Policy**, which permits unconditional return of colonial-acquired artefacts where involuntary loss of possession is established.
 - Aligns with India's **Antiquities and Art Treasures Act, 1972**, which regulates export/import of cultural property and asserts state interest in repatriating illegally removed heritage.

Policy Implications

- **Cultural Diplomacy & Soft Power:**
 - Strengthens India's advocacy for **global restitution norms** and reinforces bilateral ties with European nations holding colonial-era collections.
 - Supports the **G20 New Delhi Leaders' Declaration** commitment to combat illicit trafficking of cultural property.
- **Domestic Heritage Governance:**
 - Plates will be conserved and displayed under the **Archaeological Survey of India (ASI)**, enhancing public access and scholarly research.
 - Reinforces implementation of the **National Mission on Monuments and Antiquities (NMMA)**, which documents and repatriates Indian artefacts dispersed globally.
- **International Law Alignment:**
 - Advances India's engagement with the **1970 UNESCO Convention** on illicit trafficking and the **UNIDROIT Convention** (1995) on stolen or illegally exported cultural objects.

Additional Info

- **Historical Context:**
 - **Chola Dynasty** (c. 9th–13th century CE):
 - Peak territorial expansion under Rajaraja I and Rajendra I, with naval dominance in the Bay of Bengal.
 - Patronised temple architecture (e.g., **Brihadisvara Temple**,

Thanjavur—UNESCO World Heritage Site) and copper-plate charters for land grants.

- **Dutch Coromandel Presence:**
 - VOC established trading posts in Nagapattinam (1662); many artefacts removed during colonial administration were later absorbed into European museum collections.
- **Relevant Constitutional & Legal Provisions:**
 - **Entry 67, Union List** (Seventh Schedule): Parliament empowered to legislate on ancient and historical monuments of national importance.
 - **Article 49** (Directive Principles): State obligation to protect monuments and places of national importance from spoliation, disfigurement, or export.
 - **Antiquities and Art Treasures Act, 1972:** Regulates export, import, and trade of antiquities; mandates licensing and registration.

Ice Age Hunting Structures Found Beneath Lake Huron

What's the News?

- Archaeologists have identified **9,000-year-old stone hunting structures** on the **Alpena-Amberley Ridge**, a submerged land bridge beneath **Lake Huron** in North America.
- The features—including **caribou drive lanes, hunting blinds, and stone tool caches**—were preserved in cold, low-oxygen lake waters, offering a rare "time capsule" of **Paleoindian and early Archaic period** human activity.
- Using **multibeam sonar, remotely operated vehicles (ROVs), and underwater diving**, researchers from the **University of Michigan** and **NOAA** have documented over **80 archaeological locations** on the ridge.
- The discovery provides critical insights into **early human adaptation, hunting strategies, and long-distance trade networks** in post-Ice Age North America.

Archaeological Discovery

- **Site Location:** Alpena-Amberley Ridge—a 10-mile-wide former land bridge connecting present-day **Michigan (USA)** and **Ontario (Canada)** when lake levels were lower during the **Late Pleistocene**.
- **Structures Identified:**
 - **Drive Lanes:** Stone alignments (e.g., 1,148-foot "Drop 45 Drive Lane") used to funnel migrating **caribou** toward concealed hunters.
 - **Hunting Blinds:** Stone enclosures for ambush tactics during seasonal hunts.
 - **Lithic Caches:** Stored raw materials (chert, obsidian) for on-site tool production.
- **Material Evidence:**
 - **Obsidian artifacts** traced to **Oregon** (~2,500 km away), indicating extensive **prehistoric exchange networks**.

- Stone tools reflect sophisticated **lithic technology** adapted to subarctic hunting.
- **Preservation Advantage:** Submerged, sediment-free environment prevented erosion and agricultural disturbance, preserving the landscape in exceptional condition.

Additional Info

- **Historical & Geographic Context:**
 - **Great Lakes Formation:** Result of glacial retreat ~14,000 years ago; Lake Huron is the **second-largest by surface area** among the five Great Lakes.
 - **Paleoindian Period:** Earliest well-documented human cultural phase in the Americas (~13,000–8,000 years ago), characterized by big-game hunting and mobile lifeways.
 - **Alpena-Amberley Ridge:** Named after towns on either side of the submerged feature; exposed during the **Lake Stanley low-stand phase**.
- **Related Initiatives & Organisations:**
 - **NOAA Office of National Marine Sanctuaries:** Manages underwater archaeological resources in US waters; supports Great Lakes research.
 - **UNESCO Convention on the Protection of the Underwater Cultural Heritage (2001):** International framework for preserving submerged sites; India is a signatory.
 - **Archaeological Survey of India (ASI):** Conducts underwater archaeology in Indian waters (e.g., Dwarka, Poompuhar); potential for knowledge exchange on submerged site methodologies.

Odisha Launches Bomkai Weaving Revival Drive to Preserve GI-Tagged Handloom Heritage

What's the News?

- Odisha's **Handlooms, Textiles and Handicrafts Department** has launched the "**Revival of Languishing Products (Cotton Bomkai Saree)**" initiative to preserve the original **Bomkai weaving tradition** in Ganjam district.
- The project focuses on **documenting traditional designs, motifs, and colour specifications** while training a new generation of artisans in authentic weaving techniques.
- Only **two weaving families** currently practice the original Bomkai craft in Bomkai village, highlighting urgent need for intervention to prevent cultural erosion.
- A five-day orientation programme was conducted with the **State Agency for Development of Handloom Clusters** to assess challenges faced by existing weavers and collect design databases.

Bomkai Weaving: Heritage & GI Status

- **Origin & Identity:** Bomkai is a traditional handwoven cotton saree linked to **Bomkai village in Ganjam district**, with **Subarnapur** as another recognised weaving centre.

- **Geographical Indication (GI) Tag:** Registered under the **Geographical Indications of Goods Act, 1999**, protecting its unique identity and preventing unauthorised commercial use.
- **Distinctive Features:**
 - Intricate **ikat-inspired motifs** and traditional colour combinations rooted in Odia cultural aesthetics.
 - Handloom weaving technique passed down through generations, requiring specialised skill and patience.
- **Current Challenge:** Growing market demand has led to **design modifications and mechanised adaptations**, diluting the original craft's authenticity.

Revival Strategy: Documentation & Skill Development

- **Documentation Drive:**
 - Systematic recording of original motifs, patterns, and dye specifications from surviving master weavers.
 - Creation of a **digital reference database** to guide future artisans and ensure design fidelity.
- **Training & Capacity Building:**
 - Orientation programmes for new artisans from Bomkai and surrounding villages in Ganjam district.
 - Focus on **inter-generational knowledge transfer** to address youth migration and artisan shortage.
- **Cluster-Based Approach:**
 - Leveraging **State Agency for Development of Handloom Clusters** for infrastructure support and market linkages.
 - Integration with **Odisha's Handloom Policy** to enhance livelihood opportunities for rural weavers.

Additional Info

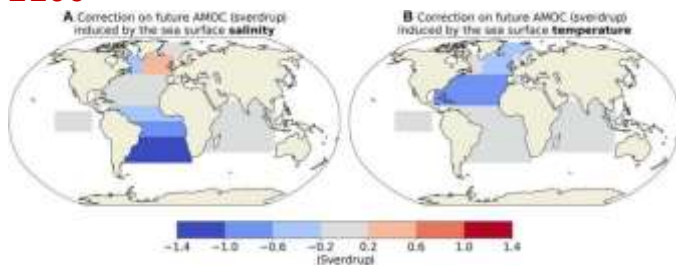
- **Key Organizations:**
 - **Odisha Handlooms, Textiles & Handicrafts Department:** Nodal agency for implementation.
 - **State Agency for Development of Handloom Clusters:** Provides technical support and cluster infrastructure.
 - **Office of the Registrar of Geographical Indications:** Administers GI registration and enforcement.
- **Related Schemes & Initiatives:**
 - **National Handloom Development Programme (NHDP):** Provides financial assistance for raw materials, equipment, and skill upgradation.
 - **Crafts Mark & Handloom Mark:** Certification schemes to authenticate genuine handloom products and protect consumer interests.
 - **PM Vishwakarma Scheme:** Supports traditional artisans with skill training, toolkit incentives, and digital empowerment.
- **Constitutional & Legal Framework:**

- **Entry 33, List III (Concurrent List):** Enables joint Centre-State legislation on trade and commerce in handicrafts.
 - **Geographical Indications of Goods Act, 1999:** Provides legal protection to region-specific products; violation attracts penalties.
-



Environment

Atlantic Ocean's Critical Current System Could Weaken by 59% by 2100



What's the News?

New research has warned that the Atlantic Meridional Overturning Circulation (AMOC) — a vast system of ocean currents acting as a global climate conveyor belt — could weaken by up to 59% by 2100. This is significantly more severe than previous estimates. Scientists caution that the collapse of this system could have catastrophic consequences for global weather, with particularly grave implications for the Indian summer monsoon, agriculture, and food security.

Understanding the Atlantic Meridional Overturning Circulation (AMOC)

- **What is it?** The AMOC is a major system of ocean currents in the Atlantic Ocean that functions like a massive, invisible conveyor belt, distributing heat and regulating climate across the globe.
- **How it Works:**
 - **Surface Flow:** Warm, salty water from the tropics flows northward towards Greenland.
 - **Cooling and Sinking:** As it reaches the freezing Arctic, the water cools, becomes dense, and sinks several kilometers into the deep ocean.
 - **Deep Water Return:** This cold water then drifts back south as a deep-water current.
 - **Upwelling:** Eventually, the water rises back to the surface to warm up, completing a cycle that takes about 1,000 years.
- **Key Functions:**
 - **Heat Distribution:** It is the primary reason Europe enjoys a relatively mild climate compared to other regions at similar latitudes.
 - **Rainfall Regulation:** It heavily influences global rainfall patterns, including those in Africa, the Americas, and Asia.
 - **Carbon and Nutrient Cycling:** It transports carbon and nutrients through the marine ecosystem by sinking surface water into the deep ocean.

Why is the AMOC Slowing Down?

- **The Problem: Freshwater Influx:** Human-induced climate change is causing an accelerated melting of the Greenland ice sheet and increased rainfall. This dumps massive amounts of freshwater into the North Atlantic.

- **The Mechanism:** Freshwater is lighter and less salty than seawater, making it harder to sink. This acts as a brake on the entire circulation system, as the sinking motion is a crucial engine for the AMOC.
- **New Research vs. Old Estimates:**
 - Previous estimates had projected a relatively modest slowdown of the AMOC.
 - However, a new study by **Dr. Valentin Portmann** that combines real-world observations with climate models projects a much sharper decline. It estimates that the AMOC could weaken by **42% to 58%** (with a potential of up to **59%**) by **2100**.
 - This new finding significantly reduces the uncertainty and suggests that the most pessimistic climate models are, in fact, the most realistic.

Impact of a Weakening AMOC on India

For India, a slowdown or collapse of the AMOC is a direct threat to its water and food security, given its reliance on the monsoon.

- **Weakening of the Indian Summer Monsoon:**
 - The AMOC transports heat from the Southern to the Northern Hemisphere. A slowdown traps more heat in the south, altering the fundamental temperature gradient that drives global atmospheric circulation.
 - This disruption weakens the large-scale north-south temperature gradient and regional land-sea thermal contrast, which in turn weakens the monsoon circulation over South Asia.
 - Crucially, a weakened AMOC pulls the planet's tropical rain belt southward, away from the Indian subcontinent. This results in shorter wet seasons and longer dry spells.
- **Palaeoclimate Evidence:** Historical data from 133,000 years ago shows that a past collapse of the AMOC caused a dramatic decrease in the intensity of the Indian summer monsoon.

The El Niño Connection

The impacts are magnified through a dangerous link with the El Niño phenomenon in the Pacific Ocean.

- **Mechanism:** A sluggish AMOC traps heat in the Southern Hemisphere and leaves the North Pacific cooler. This disrupts the delicate temperature balance that drives the El Niño-Southern Oscillation (ENSO).
- **Consequence:** Studies suggest a weakened AMOC will make **El Niño events more extreme and unpredictable**. For India, El Niño is already associated with suppressed monsoon rainfall, leading to compound climate risks of extreme droughts and erratic floods.

Additional Info

- **Definition of 'Climate Tipping Point':** A critical threshold beyond which a system reorganizes, often abruptly and irreversibly. The AMOC is one of the major identified global climate tipping points.
- **Related International Bodies:**
 - **Intergovernmental Panel on Climate Change (IPCC):** The UN body for assessing the science related to climate change. Its reports have previously projected an AMOC decline but considered a collapse before 2100 unlikely, a view now being challenged by newer research.
- **India's Domestic Climate Framework:**
 - **National Action Plan on Climate Change (NAPCC):** India's comprehensive framework for climate action, which includes the National Water Mission and National Mission for Sustainable Agriculture, both crucial for building resilience against monsoon variability.
 - **Ministry of Earth Sciences (MoES):** The nodal body for climate change science in India. It published the first-ever "Assessment of Climate Change over the Indian Region" report, which details projected changes in the monsoon.

Delhi Faces Emerging Threat from Ground-Level Ozone Pollution

What's the News?

- Air quality data reveals a significant shift in Delhi's pollution profile. While traditional pollutants like **Nitrogen Dioxide (NO₂)** and **Carbon Monoxide (CO)** are showing a gradual decline, **ground-level ozone** has emerged as a rapidly rising threat.
- Analysis of the **Central Pollution Control Board (CPCB)** dashboard shows Delhi's annual average ozone concentration rose from **52 µg/m³ in 2021 to 66 µg/m³ in 2025**.
- The number of **ozone-dominant days** has seen a sharp increase, marking a troubling new dimension to the capital's air quality crisis.
- The trend is not isolated to Delhi; cities across the **National Capital Region (NCR)** like Meerut, Noida, and Muzaffarnagar have also recorded notable increases.

Ground-Level Ozone: The Science

- **Stratospheric vs. Ground-Level Ozone:** It is crucial to distinguish between the protective stratospheric ozone layer and harmful ground-level ozone.
 - **Stratospheric Ozone (Good):** Located in the upper atmosphere, it forms the "ozone layer" which absorbs harmful ultraviolet (UV) radiation from the sun.
 - **Ground-Level Ozone (Bad):** A colourless, highly irritating gas that forms near the Earth's surface. It is the main component of **photochemical smog**.

- **Formation:** Ground-level ozone is a **secondary pollutant**, meaning it is not emitted directly. It forms through complex photochemical reactions.
 - **Precursors:** Primary pollutants like **Nitrogen Oxides (NO_x)** and **Volatile Organic Compounds (VOCs)** act as precursors.
 - **Catalyst:** **Sunlight** and **high temperatures** are essential. These reactions are accelerated during hot summer months, leading to peak ozone levels.

Delhi's Shifting Pollution Profile

- **Key Data Trends (2021-2025):**
 - **Annual Average Ozone:** Rose from **52 µg/m³ (2021) to 66 µg/m³ (2025)**.
 - **Ozone-Dominant Days:** A sharp surge signals ozone is increasingly becoming the primary pollutant on certain days.
- **Seasonal Shift:** This change creates a **tale of two seasons** for Delhi's air pollution:
 - **Winter (Oct-Feb):** Dominated by high levels of particulate matter (PM_{2.5} & PM₁₀) due to stagnant air and emissions.
 - **Summer (Mar-May):** Characterized by spiking ozone levels, ironically coinciding with clear skies and intense sunlight. Even when particulate levels are lower, ozone can push the Air Quality Index (AQI) to dangerous levels.
- **Beyond Delhi:** A similar rising trend has been observed across the NCR, including Meerut, Noida, and Muzaffarnagar, indicating a regional challenge. However, it is not uniform, as some places like Bulandshahr have seen a sharp drop, highlighting the importance of local factors.

Health and Environmental Impacts

- **An "Invisible" Threat:** Unlike the visible haze of particulate pollution, ground-level ozone is colourless and odourless, making it harder for citizens to perceive without monitoring data.
- **Health Consequences:** Ozone is a powerful respiratory irritant.
 - **Acute Effects:** Irritation of the eyes, nose, and throat; coughing; chest tightness; and reduced lung function.
 - **Chronic Risks:** Can exacerbate asthma, bronchitis, and other chronic respiratory conditions.
 - **Vulnerable Groups:** Children, older adults, and individuals with pre-existing respiratory illnesses are at the highest risk.
- **Environmental Effect:** Ozone damages sensitive vegetation and ecosystems, impacting crop yields and forest health. It is a major component of smog, which reduces visibility.

Policy and Regulatory Framework

- **Monitoring and Regulation in India:**
 - **CPCB**, under the **Ministry of Environment, Forest and Climate Change (MoEFCC)**, sets the **National Ambient Air Quality Standards (NAAQS)**. For ground-level ozone, the standard is **100 µg/m³ over an 8-hour average** and **180 µg/m³ over a 1-hour average**.

- CPCB manages the **National Air Quality Monitoring Programme (NAMP)** and the real-time **AQI dashboard**, which now provides crucial data on the rising ozone trend.
- **Mitigation Challenge:** Curbing ground-level ozone is more complex than controlling primary pollutants.
 - It requires managing a combination of precursor emissions—**NO_x and VOCs**—from vehicles, industries, and other combustion sources simultaneously.
 - This necessitates a shift from a single-pollutant focus to a multi-pollutant abatement strategy under existing mechanisms like the **Graded Response Action Plan (GRAP)**, which primarily targets particulate matter during winter.

UN Expands Methane Alert System (MARS) to Coal and Waste Sectors

What's the News?

The United Nations Environment Programme (UNEP) has expanded its **Methane Alert and Response System (MARS)** to cover **coal mines and waste facilities**. This decision follows a satellite-based analysis that identified the **Kanjurmarg landfill** in India as one of the world's three largest methane-emitting sites, alongside a landfill in Chile. The expansion was announced on the sidelines of a high-level methane event hosted by France under its **G7 presidency**.

About MARS

- **What it is:** A global satellite-based system that detects large methane emission sources ("super-emitters") and connects this data to rapid mitigation efforts.
- **Parent Body:** A component of the **International Methane Emissions Observatory (IMEO)**, under UNEP.
- **Launch:** Announced at **COP27 (2022)** and made operational in **January 2023**.
- **Working Mechanism:**
 - Uses data from **over 35 satellites**.
 - Employs **AI and machine learning models** to analyze thousands of satellite images within minutes.
 - Follows a four-step lifecycle: **Detection & Attribution → Notification & Engagement → Mitigation Action → Tracking & Verification**.
- **Transparency:** All detection data is made public **30 to 45 days** after an event to ensure accountability.

Why the Expansion?

- A recent UNEP analysis (April 2026) found that **coal mining and waste management** are major global sources of methane.
- Among the **top 50 emitters** identified by satellites, **22 were coal mines** and **11 were waste facilities/landfills**.
- Previously, MARS focused only on **oil and gas facilities** under the Oil and Gas Methane Partnership 2.0 (OGMP 2.0).

India's Methane Challenge

- The **Kanjurmarg landfill** in Mumbai is among the world's three largest methane-emitting sites.

- Another analysis identified **two Indian landfills (Secunderabad and Mumbai)** among the world's 25 largest methane-emitting sites, based on data from **Carbon Mapper** and **UCLA's Stop Methane Project**.
- This underscores India's significant methane emissions from its waste sector, where large, unmanaged landfills are a major source.

Additional Information

- **Methane as a Greenhouse Gas:**
 - **Global Warming Potential (GWP):** More than **80 times** more powerful than CO₂ over a 20-year period.
 - **Atmospheric Lifetime:** Relatively short-lived (~12 years), compared to centuries for CO₂.
 - Reducing methane emissions is considered one of the **fastest ways to slow global heating**.
- **International Energy Agency (IEA):** Estimates that plugging methane leaks could return about **200 billion cubic metres** of natural gas to global markets annually.
- **Impact So Far:** Since launch, MARS has helped detect and mitigate **41 distinct super-emitter sources in 11 countries**, with combined emissions of **1.2 million tonnes of methane**.
- **Related Initiatives:**
 - **Global Methane Pledge (COP26):** To reduce global methane emissions by at least 30% from 2020 levels by 2030.
 - **India's Initiatives:** India has schemes like the **Gobardhan Yojana** (converting waste to biogas) and the **Swachh Bharat Mission** which can help reduce methane from landfills.

India Ranks 3rd Globally in Installed Renewable Energy Capacity

What's the News?

- India has become the world's **third-largest** country in terms of installed renewable energy capacity, moving ahead of Brazil.
- **Key Data Point:** As per the **International Renewable Energy Agency (IRENA)**'s Renewable Energy Statistics 2026, India's total renewable energy installed capacity stands at **250.52 GW**, behind China (2,258.02 GW) and the United States (467.92 GW).
- This was announced by Union Minister for New and Renewable Energy, **Pralhad Joshi**, who also highlighted that India's total non-fossil fuel capacity, including large hydro and nuclear, has reached **283.46 GW**.
- The milestone was driven by a record **55.3 GW** of non-fossil capacity addition during Financial Year (FY) 2025-26.

Global and Domestic Energy Landscape

- **IRENA's Top 5 Ranking (as of Dec 2025):**
 - **China:** 2,258.02 GW
 - **United States:** 467.92 GW
 - **India:** 250.52 GW

- **Brazil:** 228.20 GW
- **Germany:** 199.92 GW
- **India's Non-Fossil Fuel Capacity Mix (as of 31 March 2026):** The total non-fossil fuel capacity of **283.46 GW** is broken down as follows:
 - **Total Renewable Energy: 274.68 GW**
 - **Solar Power:** 150.26 GW (~53% of non-fossil capacity)
 - **Large Hydropower:** 51.41 GW
 - **Wind Power:** 56.09 GW
 - **Bioenergy:** 11.75 GW
 - **Small Hydropower:** 5.17 GW
 - **Nuclear Power: 8.78 GW**
- **Record Generation:** In July 2025, renewables met an all-time high of **51.5%** of the country's total electricity demand.

Drivers and Challenges

- **Key Growth Drivers:**
 - **Record Solar Surge:** India installed **~44.6 GW** of new solar capacity in FY 2025-26, an 87.2% increase year-on-year, with ground-mounted solar installations alone growing 106%.
 - **Policy Support:** The government's ambitious target of **500 GW** of non-fossil fuel capacity by 2030, announced at **COP26**, is a major catalyst. A plethora of schemes have been launched to achieve this, including the **Production Linked Incentive (PLI) Scheme** for high-efficiency solar PV modules, with an outlay of ₹24,000 crore.
- **Persistent Bottlenecks:**
 - **Import Dependence:** Despite domestic manufacturing growth, India still heavily relies on imports for upstream solar components like **wafers and polysilicon**. In FY 2024-25, India imported ~35 million solar modules worth \$1.6 billion, with an estimated **60–80% sourced from China**.
 - **Financing Gap:** Achieving the 500 GW target by 2030 requires an estimated investment of **\$300 billion**. While instruments like **Sovereign Green Bonds (SGRBs)** are being used, investor demand remains a challenge.

Additional Info

- **Historical Context:**
 - **1970s:** India began exploring renewable energy after the oil crisis, establishing a Commission for Additional Sources of Energy in 1981.
 - **1992:** The Ministry of Non-Conventional Energy Sources was formed, later renamed the **Ministry of New and Renewable Energy (MNRE)** in 2006.
 - **2010:** The **Jawaharlal Nehru National Solar Mission (JNNSM)** was launched under the National Action Plan on Climate Change (NAPCC), with an initial target of 20 GW solar by 2022, later revised to 100 GW.
- **Key Initiatives & Policies:**

- **Production Linked Incentive (PLI) Scheme:** Aims to build a domestic ecosystem for high-efficiency solar PV module manufacturing to reduce import dependence. It has attracted ₹48,120 crore in investment and created ~38,500 direct jobs.
- **Sovereign Green Bonds (SGRBs):** The Government of India issued its first tranche of SGRBs worth INR 80 billion in January 2023 to fund green infrastructure projects, including renewable energy.
- **Green Energy Corridors:** A scheme to facilitate the evacuation and integration of power from large-scale renewable energy projects into the national grid.
- **Key Organizations:**
 - **International Renewable Energy Agency (IRENA):** An intergovernmental organization that publishes the authoritative annual Renewable Energy Statistics.
 - **Solar Energy Corporation of India (SECI):** A CPSU implementing various schemes, including the PLI scheme, and responsible for solar park development.
 - **Ministry of New and Renewable Energy (MNRE):** The nodal ministry for all renewable energy policy matters in India.
 - **Bureau of Energy Efficiency (BEE):** A statutory body under the Ministry of Power, which handles programs related to energy conservation.
- **Constitutional & Legal Framework:**
 - **Energy Transition and Renewable Capacity:** A subject in the **Concurrent List**, allowing both the Centre and states to legislate.
 - **Electricity Act, 2003:** Mandates state electricity regulatory commissions to promote renewable energy through specified purchase obligations (Renewable Purchase Obligations - RPOs).
 - **Energy Conservation Act, 2001:** Provides a legal framework for energy efficiency and lays the basis for BEE star ratings and energy savings certificates.

Global Forest Goals Report 2026

What's the News?

The United Nations launched **The Global Forest Goals Report 2026**, a comprehensive assessment of global progress toward the **United Nations Strategic Plan for Forests 2017–2030** and its six **Global Forest Goals (GFGs)**. The report, prepared by **UN DESA** and the **UN Forum on Forests (UNFF) Secretariat**, reveals that while some progress has been made, it is insufficient to meet the 2030 targets. Critically, global forest area declined by over **40 million hectares** between 2015 and 2025, and current financing for sustainable forest management remains far below the estimated **\$300 billion** needed annually.

Global Forest Goals (GFGs)?

- **What are they?** A set of six voluntary goals adopted in 2017 as part of the **UN Strategic Plan for Forests**

2017–2030, aiming to promote sustainable forest management, halt deforestation, and enhance forest-based economic, social, and environmental benefits.

- **Key Objectives:**

- Reverse the loss of forest cover worldwide.
- Enhance forest-based economic, social and environmental benefits.
- Increase significantly the area of protected forests and sustainably managed forests.
- Mobilize financial resources for sustainable forest management.
- Promote governance frameworks to implement sustainable forest management.
- Enhance cooperation and coordination on forest-related issues.

- **The 2026 Assessment:** The report evaluates progress against **26 targets** under the six GFGs, based on voluntary national reports from **48 countries** (representing 51% of global forest area) and the latest global data.

Key Findings

- **Forest Cover Decline:**

- Global forest area shrank from **4.18 billion hectares (2015)** to **4.14 billion hectares (2025)**.
- **Primary forest loss:** Nearly **16 million hectares** of primary forests were lost (2015–2025), with the largest decline in South America.

- **Target Achievement Status:**

- **7 targets** broadly met (e.g., expansion of protected areas, forest monitoring systems).
- **17 targets** partially achieved.
- **2 targets off track:** reversing forest loss and eradicating extreme poverty for forest-dependent people.

- **Major Drivers of Deforestation & Degradation:**

- **Agricultural Expansion:** Remains the single largest driver globally.
- **Fuelwood & Charcoal Demand:** A newly identified critical driver, especially in sub-Saharan Africa and parts of Asia, linked to energy poverty.
- **Climate Pressures:** Intensifying droughts, wildfires, heatwaves, pests, and diseases.

- **Restoration Gap:**

- **91 countries** pledged to restore **190 million hectares**.
- Only **44 million hectares** restored by 2025.
- **Asia's performance:** Highest restoration, with over **31 million hectares** restored (42.2% of pledged area).

- **Finance Gap:**

- Forest finance reached a record **\$84 billion in 2023**, but this is dwarfed by the estimated **\$300 billion annual need by 2030**.
- Barriers include weak governance, insecure land tenure, illegal trade, and limited institutional capacity.

Relevance for India

- **India's Forests:** India's reported forest and tree cover stands at **25.17%** of its geographical area (ISFR 2023).

The nation emphasizes conservation through schemes like the **National Afforestation Programme**, **Green India Mission**, and commitments under the **Paris Agreement** (creating an additional carbon sink of 2.5–3 billion tonnes of CO₂ equivalent).

- **Global Commitments:** India is a member of the **UNFF** and participates in initiatives like the **Bonn Challenge** (pledge to restore 26 million hectares of degraded land by 2030).

Additional Info

- **UN Forum on Forests (UNFF):**

- Established in **2000** as a subsidiary body of the UN Economic and Social Council (ECOSOC).
- Composed of all UN member states and specialized agencies.
- Mandate: Promote management, conservation, and sustainable development of all types of forests.

- **UN Strategic Plan for Forests 2017–2030:**

- Adopted by the UN General Assembly in 2017.
- Provides a global framework to sustainably manage all types of forests, halt deforestation, and increase forest area.
- Contains the **6 Global Forest Goals** and **26 associated targets**.

Nicobarese Tribal Council Opposes Three Proposed Wildlife Sanctuaries in Nicobar Islands

What's the News?

The **Tribal Council of Little and Great Nicobar** has formally demanded the revocation of three wildlife sanctuaries notified by the Union Government on **Little Nicobar, Menchal, and Meroe** islands. The council argues that the notification process bypassed the mandatory **free, prior, and informed consent** of the indigenous Nicobarese community, as required under the **Forest Rights Act (FRA), 2006**. This development adds a new dimension to the ongoing legal challenges against the **₹92,000-crore Great Nicobar Island (GNI) development project**, for which these sanctuaries were declared as compensatory environmental measures.

Details of the Proposed Sanctuaries

- **Genesis:** In **October 2022**, the Union Government notified three sanctuaries as a compensatory measure for the ecological damage expected from the **Great Nicobar Island (GNI) mega-infrastructure project**, which includes an international transshipment port, airport, and township.
- **Objective:** To conserve critical nesting habitats of the **Giant Leatherback Turtle**, the endemic **Nicobar Megapode bird**, and fragile **coral reef ecosystems** that would be impacted by the GNI project.
- **The Three Sanctuaries:**
 1. **Leatherback Turtle Sanctuary (Little Nicobar Island):** Aims to protect the turtle's nesting beaches.
 2. **Megapode Sanctuary (Menchal Island):** Created to conserve the Nicobar Megapode, a

unique bird known for building large incubation mounds.

3. **Coral Sanctuary (Meroe Island):** Designed to preserve diverse marine biodiversity and coral colonies.

The Core of the Opposition Procedural Violations

- The Tribal Council maintains that the government failed to seek the **free and informed consent** of the traditional owners and residents before notifying the sanctuaries.
- They allege the process initiated in **August 2022** was carried out without any notice to the community members who have lived on and managed these ecosystems for generations.
- The council's chairman was not consulted before the formation of the committee to determine eco-sensitive zones; he was merely informed a month later.

Cultural and Spiritual Dimensions

- **Menchal Island:** The Nicobarese consider this a **sacred site** believed to be the dwelling place of ancestral spirits. Sanctuary status is feared to prohibit their spiritual practices and access.
- **Meroe Island:** The community views this as a part of their ancestral domain, and sanctuary notification threatens to erase their traditional roles as historical caretakers.
- **Little Nicobar Island:** The sanctuary is perceived as a threat to traditional **coconut and areca nut plantations** and would restrict access to their **ancestral ritual hunting grounds**.
- Overall, the Nicobarese view these islands not just as ecosystems but as **spiritual landscapes**. They warn that sanctuary regulations will effectively **criminalize** traditional activities central to their cultural identity, such as ancestral worship and ritual hunts.

Broader Context: The Great Nicobar Project

The ₹92,000 Crore Mega-Project

- The **Great Nicobar Island (GNI) mega-infrastructure project** is a flagship initiative spearheaded by **NITI Aayog** to develop a strategic economic hub on the island.
- Key components include an **International Container Transshipment Port (ICTP)**, a dual-use civil-military airport, and a greenfield township spanning **166 sq km**.
- The project is located near **Galathea Bay** at the western entrance of the **Malacca Strait**, a critical global trade route, making it strategically significant for India's maritime presence.

Legal and Environmental Challenges

- The project has faced numerous legal hurdles. The **Calcutta High Court** has overruled the Union Government's preliminary objections and admitted a batch of Public Interest Litigations (PILs) alleging **violations of the Forest Rights Act, 2006**.
- Petitioners allege that consent for forest land diversion was obtained through **Gram Sabhas representing settler families** and not the **Tribal Council of the Nicobarese communities**, who hold claims over the forest land under the FRA.

- The government-controlled **Andaman Adim Janjati Vikas Samiti** was allegedly used to grant consent on behalf of the **Shompen**, a Particularly Vulnerable Tribal Group (PVTG), which has been questioned by former Environment Minister Jairam Ramesh.
- While the **National Green Tribunal (NGT)** has cleared the project, citing its "strategic importance" over biodiversity concerns, the matter remains under judicial review.

Additional Information

The Nicobarese Community

- **Ethnicity:** Belong to the **Mongoloid** racial group, distinct from the Negrito tribes of the Andaman Islands.
- **Population:** Approximately **29,099** individuals, making them the largest tribal group in the Andaman & Nicobar Islands.
- **Livelihood:** Traditionally horticulturists and pig-herders, they live in permanent coastal villages and are known for their coconut and areca nut plantations.
- **PVTG Status:** Unlike the Shompen of Great Nicobar, the Nicobarese are **not** classified as a Particularly Vulnerable Tribal Group (PVTG).

Legal and Constitutional Framework

- **Forest Rights Act (FRA), 2006:** Section 3(1)(e) specifically provides for **habitat rights** to Particularly Vulnerable Tribal Groups (PVTGs) and pre-agricultural communities. The Act mandates that the **Gram Sabha** (or the equivalent traditional institution in tribal areas) must give free and informed consent before any project or sanctuary is established on community forest land.
- **Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Regulation, 1956:** This pre-independence era regulation prohibits the entry of unauthorized persons into designated **Tribal Reserve areas** to protect aboriginal tribes. It underscores the special constitutional protection afforded to these communities.
- **Constitutional Provisions:**
 - **Article 244(1)** and the **Fifth Schedule:** Provide for the administration of Scheduled Areas, though specific provisions for the A&N Islands are managed through special regulations rather than direct extension of the Fifth Schedule.
 - **Article 342:** Specifies the process for the President to declare tribes as "Scheduled Tribes" through a public notification, conferring upon them the rights and protections associated with this status.

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 - **Asia's performance:** Highest restoration, with over **31 million hectares** restored (42.2% of pledged area).
- **Finance Gap:**

- Forest finance reached a record **\$84 billion in 2023**, but this is dwarfed by the estimated **\$300 billion annual need by 2030**.
- Barriers include weak governance, insecure land tenure, illegal trade, and limited institutional capacity.

Relevance for India

- **India's Forests:** India's reported forest and tree cover stands at **25.17%** of its geographical area (ISFR 2023). The nation emphasizes conservation through schemes like the **National Afforestation Programme**, **Green India Mission**, and commitments under the **Paris Agreement** (creating an additional carbon sink of 2.5–3 billion tonnes of CO₂ equivalent).
- **Global Commitments:** India is a member of the **UNFF** and participates in initiatives like the **Bonn Challenge** (pledge to restore 26 million hectares of degraded land by 2030).

Additional Info

- **UN Forum on Forests (UNFF):**
 - Established in **2000** as a subsidiary body of the UN Economic and Social Council (ECOSOC).
 - Composed of all UN member states and specialized agencies.
 - Mandate: Promote management, conservation, and sustainable development of all types of forests.
- **UN Strategic Plan for Forests 2017–2030:**
 - Adopted by the UN General Assembly in 2017.
 - Provides a global framework to sustainably manage all types of forests, halt deforestation, and increase forest area.
 - Contains the **6 Global Forest Goals** and **26 associated targets**.

Thirteen Major Reservoirs Fall Below 50% Storage Amid Rapid Water Decline

What's the News?

- The **Central Water Commission (CWC)** reported that 13 major reservoirs across India have fallen below 50% of their normal storage capacity, as total live storage in 166 monitored reservoirs dropped from **71.082 BCM (April 30, 2026)** to **63.232 BCM (May 14, 2026)** – just **34.45% of total capacity**.
- Three reservoirs – **Chandan Dam (Bihar)**, **Bhima Ujjaini (Maharashtra)**, and **Maudaha (Uttar Pradesh)** – have completely dried up, reaching **zero storage**.
- The sharp decline is attributed to **51% of districts receiving deficient or no rainfall since March 1**, and fears of a weak monsoon due to **El Niño** could further worsen the crisis.

Reservoir Storage Crisis

- **Storage Decline:** In just two weeks, storage fell by nearly **8 BCM** (from 38.72% to 34.45% of total capacity).
- **Below-Normal Reservoirs:** The number of reservoirs below 50% normal storage rose from **9 on April 30** to **13 by May 14**.
- **Critically Low Reservoirs:**

- **Vaigai (Tamil Nadu):** 12.47% of normal storage
- **Aliyar (Tamil Nadu):** 21.25%
- **Periyar (Kerala):** 41.65%
- **Khandong (Assam):** 17.42%
- **Tattahalla (Karnataka):** 26.27%
- **Mettur Dam (Tamil Nadu)** was below its critical threshold at **79.165 feet**, threatening the **Kuruvai paddy crop**.

Regional Disparities

- **Southern Region:** Worst-affected, with **36 reservoirs below 40% capacity**. States like Tamil Nadu, Kerala, Karnataka, and Telangana are severely impacted.
- **Northern Region:** Relatively better at **41.37% storage** (May 18), aided by western disturbances.
- **Eastern & Western Regions:** Storage levels in Assam, Goa, Maharashtra, Jharkhand, and West Bengal were lower than the previous year.

River Basin Status

- **Krishna Basin:** Most alarming at **19.31%** storage.
- **Barak Basin (Northeast):** Below **20%** of normal.
- **Ganga Basin:** Declined to **43.34%** (from ~50%).
- **Godavari Basin:** **36.52%** (from ~40%).
- **Narmada Basin:** **34.96%** (from ~39%).
- **Brahmani-Baitarani, Cauvery, and Mahanadi-Pennar** basins also remain below normal.

Additional Info

- **Central Water Commission (CWC):**
 - National agency under the **Ministry of Jal Shakti**.
 - Monitors **166 major reservoirs** and publishes **weekly storage bulletins**.
 - **Live storage:** Usable water above the dead storage level.
- **Government Initiatives:**
 - **Jal Shakti Abhiyan:** Focus on water conservation and rainwater harvesting.
 - **Atal Bhujal Yojana:** Groundwater management.
 - **Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):** Enhancing irrigation efficiency.

India Records 97 of World's 100 Hottest Cities Amid Severe Heatwave

What's the News?

- **97 of the world's 100 hottest cities** were located in India, as per real-time global weather tracking data (AQI.in), with temperatures exceeding **45°C** across northern, central, and eastern regions.
- **Balangir (Odisha)** and **Sasaram (Bihar)** recorded the highest temperature at **48°C**, followed by **Varanasi (Uttar Pradesh)** at **47°C**.
- **Low humidity levels (6-8%)** in several cities intensified heat stress, elevating risks of dehydration, heat exhaustion, and heatstroke.
- **Andhra Pradesh** reported over **325 suspected heatstroke cases** between March and mid-May; hospitals across multiple states witnessed surges in heat-related illnesses.

- **India Meteorological Department (IMD)** issued **Red and Orange alerts** for heatwave to severe heatwave conditions persisting across the Indo-Gangetic plains.

Heat Dome Phenomenon: Causes & Mechanism

- **Overview:** A stagnant, high-pressure atmospheric system—termed a **"heat dome"**—is trapping hot air over the Indian subcontinent, preventing heat dissipation and cooler air inflow.
- **Key Drivers:**
 - **Delayed Western Disturbances:** Absence of pre-monsoon moisture-bearing systems from the Mediterranean has eliminated natural cooling breaks.
 - **Dry Northwesterly Winds:** Blistering winds from arid western borders continuously feed the heat dome with hot, dry air.
 - **Urban Heat Island Effect:** Concrete infrastructure, reduced green cover, and low soil moisture in cities like **Banda (UP)** and **Balangir** amplify local temperatures by retaining thermal energy.
 - **Climate Change Link:** Asia is warming faster than the global average; rising baseline temperatures increase frequency and intensity of extreme heat events.

Health, Infrastructure & Socio-Economic Impacts

- **Public Health:**
 - Heatstroke is a medical emergency; vulnerable groups include outdoor workers, elderly, children, and persons with chronic illnesses.
 - States advised restricting outdoor activities between **11 AM–4 PM**, promoting hydration, and establishing heat-health surveillance.
- **Power & Water Stress:**
 - Peak power demand crossed **270 GW**, straining grids due to continuous cooling appliance usage.
 - Water shortages reported in Gujarat and parts of Rajasthan, impacting agriculture and domestic supply.
- **Economic Productivity:**
 - Extreme heat reduces labour productivity, especially in construction, agriculture, and informal sectors—critical for India's GDP growth and livelihood security.

Additional Info

- **Institutional Framework:**
 - **India Meteorological Department (IMD):** Nodal agency for weather forecasting; classifies heatwaves based on temperature thresholds and departure from normal.
 - **National Disaster Management Authority (NDMA):** Issued **Heat Action Plan (HAP) Guidelines** for states, emphasizing early warning, capacity building, and inter-agency coordination.
- **Policy & Governance:**
 - **State-Level Heat Action Plans:** Over 23 states have adopted HAPs; focus areas

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include public awareness, healthcare preparedness, and urban planning interventions.

- **National Mission on Sustainable Habitat (under NAPCC):** Promotes urban resilience through green buildings, water management, and heat-resistant infrastructure.
- **Constitutional & Legal Context:**
 - **Article 21 (Right to Life):** Judicial interpretations include protection from extreme weather as part of the right to a healthy environment.
 - **Disaster Management Act, 2005:** Provides legal basis for heatwave response as a notified disaster in some states.
- **Key Metrics:**
 - **Heatwave declaration criteria (plains):** Temperature $\geq 40^{\circ}\text{C}$ AND departure from normal $\geq 4.5^{\circ}\text{C}$ to 6.4°C (heatwave) or $> 6.4^{\circ}\text{C}$ (severe heatwave).
 - **Heat Index:** Combines temperature and humidity; values $> 40^{\circ}\text{C}$ indicate "extreme caution" to "danger" levels for human exposure.

Road Dust Pollution in Delhi: Emerging as the Dominant Air Quality Challenge

What's the News?

- A recent expert panel report by the **Commission for Air Quality Management (CAQM)** and a joint **CSIR-NEERI/CRRI study** have identified **road dust** as the single largest contributor to particulate pollution in Delhi, surpassing vehicular exhaust and industrial emissions.
- Road dust is now classified as "**both a primary emission and a persistent source**" due to the mechanism of **resuspension**, where deposited particles are repeatedly lifted by vehicular movement, keeping PM levels elevated even without active dust-generating activities.
- The **Municipal Corporation of Delhi (MCD)** has intensified mechanised sweeping and water sprinkling, but experts emphasise that current measures are reactive and lack scientific standardisation for long-term mitigation.

Scale of the Problem: Data & Health Impact

- **Source Apportionment:** Road dust accounts for **~56% of PM_{10}** and **~38% of $\text{PM}_{2.5}$** in Delhi (IIT Kanpur study), making it the dominant non-exhaust pollution source.
- **Extreme Concentrations:** PM_{10} levels near high-traffic roads have been recorded as high as **$1,700 \mu\text{g}/\text{m}^3$** , against the **24-hour NAAQS limit of $100 \mu\text{g}/\text{m}^3$** and **WHO guideline of $45 \mu\text{g}/\text{m}^3$** .
- **Health Burden:** Nationwide exposure to road dust is linked to **over 10,200 premature deaths annually**; $\text{PM}_{2.5}$ from dust penetrates lung-blood barriers, aggravating asthma, COPD, and cardiovascular diseases.

- **Silt Load:** Delhi's roads carry an average surface silt load of **$14.47 \text{ g}/\text{m}^2$** , significantly higher than cleaner Indian cities, indicating poor baseline road maintenance.

Why Road Dust Persists: Multi-Dimensional Causes

- **Environmental & Geographic Factors:**
 - Delhi's **dry climate**, low rainfall, and frequent western dust storms create a high baseline dust load.
 - **Degradation of the Aravalli range** has weakened a natural dust barrier, allowing wind-blown desert dust from Rajasthan to enter the NCR.
 - **Landlocked geography** with Himalayan obstruction traps polluted air, reducing dispersion.
- **Infrastructural Deficits:**
 - **Unpaved road shoulders, medians, and secondary streets** expose loose alluvial soil to vehicular resuspension.
 - **Potholes and edge breakdown** from delayed maintenance continuously generate fine mineral dust.
 - **Flawed irrigation practices:** Use of high-pressure hoses for median plantation spills soil onto roads, which dries and becomes airborne.
- **Operational & Governance Gaps:**
 - **Absence of Standard Operating Procedures (SOPs)** for mechanised sweeping leads to inconsistent, non-scientific cleaning.
 - **Encroachments and illegal parking** obstruct cleaning machinery and sanitation workers.
 - **C&D waste transport:** Inadequate coverage of vehicles carrying construction debris contributes to roadside dust accumulation.

Current Policy Measures & Limitations

- **Mechanised Road Sweeping Machines (MRSMs):**
 - Deployed across MCD's 12 zones with 57,000 sanitation workers for inaccessible areas.
 - **Limitation:** Sweeping frequency not aligned with road-type, traffic volume, or particle-size analysis; may resuspend fine particles without SOPs.
- **Water Sprinklers & Anti-Smog Guns (ASGs):**
 - Used for temporary dust suppression during high-AQI episodes.
 - **Limitation:** Merely relocates dust; particles resuspend after surface dries; humidification may worsen secondary aerosol formation.
- **Graded Response Action Plan (GRAP):**
 - Mandates escalated dust mitigation (e.g., daily vacuum sweeping) under Stage I (AQI 201-300) and Stage II (AQI 301-400).
 - **Limitation: Reactive by design;** does not address baseline road maintenance or structural causes.
- **CAQM's Operation Clean Air:**
 - Flying-squad inspections identify high-dust stretches; exploring **real-time dust sensors** for targeted monitoring.

- *Limitation:* Enforcement gaps persist in C&D waste management and inter-agency coordination.
-



Health & Pharma

Indian Scientists Discover Bacteriophage That Kills Drug-Resistant Bacteria

What's the News?

Two young researchers from India, mentored by a professor at **Banaras Hindu University (BHU)**, have discovered a novel virus that can infect and kill a dangerous drug-resistant bacterium. The virus, a bacteriophage named **Proteus phage ram_arti_1324**, targets **Proteus mirabilis**, a pathogen known to cause severe urinary tract infections and resist antibiotic treatment by forming protective biofilms. The discovery has been published in the journal *Applied Microbiology and Biotechnology* and holds promise for developing alternatives to antibiotics in the fight against **Antimicrobial Resistance (AMR)**.

The Discovery

- **Source and Nature:**
 - The bacteriophage was isolated from **sewage**.
 - It is classified as a member of the **Podoviridae** family and is strictly **lytic**, meaning it destroys the bacterial cell it infects.
- **Genomic Profile:**
 - It possesses a linear, double-stranded DNA genome of **91,735 base pairs**.
 - Crucially, its genome **lacks any identifiable virulence factors, antibiotic resistance genes, or markers indicative of a lysogenic life cycle**, making it a safe candidate for therapeutic use.
- **Efficacy:**
 - In laboratory tests, the phage demonstrated potent activity against established **P. mirabilis biofilms**—a key mechanism that makes these infections hard to treat—achieving a **55% reduction in total biomass** in vitro.

Understanding Bacteriophages

- Bacteriophages, or phages, are **viruses that specifically infect bacteria**.
- **Mechanism:**
 - They attach to a target bacterial cell, inject their genetic material, and replicate inside the host, eventually causing the cell to burst (lysis) and die.
 - They are the **most abundant biological entities on Earth**, found in soil, water, and the human body.
- **Phage Therapy:**
 - The use of bacteriophages to treat bacterial infections is known as **phage therapy**.
 - It is a promising alternative to antibiotics, especially against multi-drug resistant organisms. Phages are highly specific, usually targeting only one or a few strains of bacteria, which can minimize damage to the body's beneficial microbiota.

Significance for AMR in India

- **The AMR Crisis:**
 - **Antimicrobial Resistance (AMR)** is recognized by the **World Health Organization**

(WHO) as one of the top 10 global public health threats.

- India carries one of the highest burdens of drug-resistant infections in the world. A recent analysis indicated that India recorded the highest proportion of multidrug-resistant organisms among participating countries at **83%**.
- **Policy Context:**
 - India has operationalised a **National Action Plan on Antimicrobial Resistance (NAP-AMR)** grounded in "One Health" principles. The second version, **NAP-AMR 2.0**, was launched for the period 2025-29.
 - Overuse and misuse of antibiotics in healthcare and agriculture are primary drivers of AMR in the country.
- **A Novel Solution:**
 - This discovery demonstrates India's growing capacity for cutting-edge biotechnology research to address homegrown public health challenges.
 - The phage's potent anti-biofilm activity and safe genomic profile make it a strong candidate for developing new antimicrobial agents, aligning with the goals of NAP-AMR.

Additional Info

- **Research Team:**
 - 32-year-old **Sovon Acharya** from Kolkata.
 - 30-year-old **Parmanand Kushwaha** from Kannauj.
 - Mentored by Prof. **Gyaneshwar Chaubey** of **Banaras Hindu University (BHU)**.
- **Name of the Phage:**
 - The bacteriophage has been named "**Proteus phage ram_arti_1324**" in memory of Parmanand Kushwaha's mother, Ram Arti.
- **Global Context:**
 - Separately, researchers at the **California Institute of Technology (Caltech)** reported in the journal *Nature* that several unrelated viruses were found to disable a key bacterial protein called **MurJ**, essential for building the bacterial cell wall. This highlights a global push to find new weak spots in superbugs, with the Indian discovery contributing a direct viral agent against a specific, high-threat pathogen.

JANANI Digital Platform for Maternal and Child Healthcare

What's the News?

The Union Ministry of Health and Family Welfare has launched **JANANI** (Journey of Antenatal, Natal and Neonatal Integrated Care), a QR-based digital platform aimed at strengthening maternal and child healthcare services across India. The platform was inaugurated during

the National Summit on Innovation and Inclusivity Best Practices Shaping India's Health Future.

Features of JANANI

- **Digital Health Records:** JANANI creates longitudinal, interoperable health records for women during their reproductive years, capturing service delivery events across the continuum of care—from antenatal care to family planning.
- **QR-Enabled MCH Cards:** A standout feature is the introduction of QR-based digital Mother and Child Health (MCH) cards. These make health records portable and easily accessible across healthcare facilities.
- **Automated Alerts:** The platform generates automated alerts for high-risk pregnancies, due-date reminders and real-time dashboards for supervisory review by health officials.
- **Beneficiary Registration:** Registration is possible using multiple identifiers—ABHA (Ayushman Bharat Health Account), Aadhaar (OTP and biometric), and mobile numbers. A pan-India search functionality ensures continuity of care for migratory populations and prevents duplication.
- **Self-Registration:** Beneficiaries can self-register via web and mobile platforms, empowering them to track their own healthcare journey, schedule antenatal visits and immunizations, and access nutritional guidance.

Integration with Existing Platforms

JANANI has been designed as a service-oriented, interoperable system that integrates with:

- **U-WIN:** A digital platform for immunisation services, enabling seamless tracking of vaccination schedules.
- **POSHAN Abhiyaan:** The national nutrition mission, ensuring convergence of maternal-child health data with nutrition indicators.
- **RCH Portal:** JANANI is an upgraded version of the existing **Reproductive and Child Health (RCH) portal**, thereby enhancing legacy data systems.

Additional Info

- **ABHA:** Ayushman Bharat Health Account, used for digital health record linkage under the Ayushman Bharat Digital Mission.
- **U-WIN:** A digital platform for universal immunisation, capturing every vaccination event in near-real time.
- **POSHAN Abhiyaan:** The Prime Minister's Overarching Scheme for Holistic Nourishment, targeting reduction in stunting, wasting and anaemia.
- **RCH Programme:** The Reproductive and Child Health programme is a component of the National Health Mission that provides a wide range of maternal and child health services.
- **Constitutional Framework:** Health is a **State subject** under the 7th Schedule, but the Centre provides technical and financial support through national programmes. Digital health initiatives fall under the broader umbrella of the **National Digital Health Mission**.

Centre Launches Free Annual Health Check-Up Scheme for Workers Above 40

What's the News?

- The Union Labour Ministry launched a **free annual health check-up scheme** for all workers aged **40 and above**, to be conducted through the **Employees' State Insurance Corporation (ESIC)** network.
- The initiative is a key component of the **new Labour Codes**, specifically the **Code on Social Security, 2020**.
- The launch event was presided over by Union Labour Minister **Mansukh Mandaviya** at the ESIC Medical College & Hospital, Basaidarapur, Delhi, with simultaneous rollouts at 11 other ESIC hospitals nationwide.

Scheme Framework & Coverage

- **Eligibility:** All insured workers aged 40 and above, as well as workers in **hazardous occupations** (chemical handling, toxic substance exposure, heavy machinery operations) irrespective of their age, who will undergo mandatory check-ups.
- **Implementing Body:** The scheme operates through ESIC hospitals and affiliated facilities as part of the social security framework under the **Code on Social Security, 2020**.
- **Services Provided:** Annual health screenings will focus on early detection and treatment of **Non-Communicable Diseases (NCDs)**. Tests include diabetes screening, blood pressure measurement, cholesterol testing, anaemia testing, ECG, and chest X-ray.
- **Follow-up Care:** Any treatment and medicines required based on the screening results will be provided free of cost through ESIC facilities.

Social Security Context

- **Expanded Coverage:** Under the present government, social security coverage in India has expanded from approximately **30 crore beneficiaries a decade ago to 94 crore today**. ESIC coverage alone has grown from **7 crore to nearly 15 crore beneficiaries** in the same period.
- **Labour Code Reforms:** This scheme is aligned with the **Shramik Jayanti** framework. The new Labour Codes also introduce progressive measures such as:
 - Equal wages for men and women workers.
 - Increased maternity leave (from 12 weeks to 26 weeks) and work-from-home provisions for women.
 - Extension of ESIC benefits to gig workers and employees in establishments with fewer than 10 workers.

Additional Info

- **The Code on Social Security, 2020:** One of the four major Labour Codes in India, it subsumes nine existing central labour laws to universalize social security. The other three codes are the Code on Wages, the Industrial Relations Code, and the Occupational Safety, Health and Working Conditions Code.
- **Employees' State Insurance Corporation (ESIC):** A statutory body under the Ministry of Labour and

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Employment that provides socio-economic protection to workers and their dependents against sickness, maternity, disablement, and death due to employment injury.

- **Shramev Jayate:** A broad government framework aimed at labour welfare, including initiatives like the 'Shram Suvidha' portal, universal account numbers for Provident Fund, and various skill development schemes.

US CDC Classifies Hantavirus Outbreak as Level 3 Emergency Response

What's the News?

- The **United States Centers for Disease Control and Prevention (CDC)** has classified a **hantavirus outbreak** as a **Level 3 emergency response**.
- Level 3 is the **lowest tier** in the CDC's emergency activation framework, signifying a need for active monitoring and coordination, but indicating a **low risk to the general public**.
- The outbreak is linked to the **MV Hondius**, a Dutch-flagged cruise ship, and involves the rare **Andes strain** of the virus, which has a limited potential for human-to-human transmission.
- The **World Health Organization (WHO)** reported **5 confirmed cases, 3 suspected cases, and 3 deaths** among passengers connected to the voyage, with over **two dozen people from at least 12 countries** being traced.

Hantavirus and the Andes Strain

- **What is Hantavirus?**
 - A family of viruses primarily spread through contact with the **droppings, urine, or saliva of infected rodents**.
 - Human infection typically occurs by **inhaling contaminated airborne particles** in enclosed spaces.
- **The Unique Andes Strain:**
 - Most hantaviruses are not transmissible between humans. The **Andes strain** is an exception, with **rare documented cases of person-to-person spread** after prolonged close contact.
 - This characteristic elevated international concern, as multiple passengers and crew members across several countries required isolation and testing.
- **Symptoms and Severity:**
 - **Early symptoms** often mimic the flu: **fever, fatigue, muscle aches, and headaches**.
 - In severe cases, it can lead to **Hantavirus Pulmonary Syndrome (HPS)**, a potentially fatal respiratory illness with rapid progression to respiratory failure. Early supportive treatment significantly improves survival chances.

CDC Emergency Response Levels

- The CDC uses a **tiered system** to manage public health emergencies.

- **Level 3:** The lowest activation level. Used for active monitoring and limited deployment of emergency support staff when public risk is low.
- **Level 2:** Indicates a moderate-level emergency requiring a more substantial operational response.
- **Level 1:** The highest level, requiring maximum staff working 24/7. This has only been activated three times in CDC history: for **Hurricane Katrina (2005)**, the **H1N1 influenza outbreak (2009)**, and the **Ebola outbreak (2014)**.

- A Level 3 activation for this hantavirus outbreak means the CDC has **assembled a dedicated response team** to coordinate international case monitoring, laboratory testing, and transmission tracking.

Outbreak Details and Global Response

- **The MV Hondius:** The cruise ship is owned by **Oceanwide Expeditions** and was carrying approximately **150 passengers from 23 nationalities**.
- **Current Situation:** Roughly **140 people remain on the ship**, which is expected to dock in Spain's **Canary Islands** for medical assessments. No remaining passengers have been reported as ill.
- **International Tracing:** Health authorities in at least **5 U.S. states and 11 other countries** are monitoring individuals who disembarked before cases were confirmed, following WHO and CDC coordination.
- **Public Health Assessment:** The WHO has stated that the outbreak is **not expected to trigger a large epidemic** comparable to COVID-19, given the virus's typical transmission patterns. Infectious disease experts emphasize that **hantavirus does not spread easily through casual community interaction** like coronavirus or influenza.

Additional Info

- **Indian Context:**
 - Sporadic hantavirus cases have been reported in India, though outbreaks are rare. The country maintains surveillance for emerging infectious diseases under the **Integrated Disease Surveillance Programme (IDSP)**.
 - This global event is relevant for India's **International Health Regulations (IHR) 2005** compliance, which requires reporting and managing public health events of international concern.
- **Organisations:**
 - **CDC:** The national public health agency of the United States, headquartered in Atlanta, Georgia.
 - **WHO:** A specialized agency of the United Nations responsible for international public health, headquartered in Geneva.
- **Related Terms:**
 - **Hantavirus Pulmonary Syndrome (HPS):** A severe respiratory disease caused by hantavirus infection, first recognized in the U.S. in 1993.
 - **Zoonotic Disease:** An infectious disease that can spread from animals to humans.

Hantavirus is a classic example of a zoonotic pathogen.

India Activates 165-Lab 'Viral Shield' for Hantavirus Surveillance

What's the News?

- The Union Health Ministry has activated the nationwide **Viral Research and Diagnostic Laboratory (VRDL) Network**—termed the '**Viral Shield**'—comprising **165 specialised laboratories** to conduct surveillance for **Hantavirus**.
- The precautionary measure follows an outbreak of the **Andes strain of Hantavirus** aboard the Dutch-flagged cruise ship **MV Hondius**, which resulted in multiple cases and three fatalities. Two **Indian nationals** aboard the vessel were identified; both were **asymptomatic** and placed under observation as per international health protocols.
- The **World Health Organization (WHO)** has assessed the overall public health risk as **low**. India's activation of the network is a proactive step to ensure that any potential imported cases are identified and isolated immediately.

The 'Viral Shield' Network and Surveillance Mechanism

- **Network Composition:** The **165 laboratories** under the VRDL Network are equipped with **RT-PCR (Real-Time Reverse Transcription-Polymerase Chain Reaction)** technology specifically tailored to detect the genetic signature of the **Andes virus**.
- **Operational Agencies:**
 - The surveillance is coordinated by the Union Health Ministry in collaboration with the **World Health Organization (WHO)**, the **National Centre for Disease Control (NCDC)**, and the **Integrated Disease Surveillance Programme (IDSP)**.
 - Diagnostic support is led by the **Indian Council of Medical Research (ICMR)** and its apex virology institute, the **National Institute of Virology (NIV)**, Pune, headed by **Dr. Naveen Kumar**.
- **Alert Criteria:** All 165 labs have been instructed to maintain high vigilance for patients presenting with **severe respiratory distress or sudden high fever**, especially those with a recent history of international travel.
- **Diagnostic Window:** The ICMR protocol emphasises that the virus is most detectable in blood (viremia) during the early febrile phase, typically within the first five days of symptom onset, enabling a rapid turnaround time to prevent community transmission.

About Hantavirus and the Andes Strain

- **Virus Family:** Hantaviruses are **RNA viruses** belonging to the **Hantaviridae family**. They are **zoonotic**, with rodents serving as the primary reservoirs.
- **Transmission:** Human infection typically occurs through inhalation of aerosolised rodent excreta (urine, droppings, saliva) or contact with contaminated dust.
- **Andes Strain Specifics:**

- The strain involved in the MV Hondius outbreak is the **Andes virus**, which is one of the few Hantaviruses with **documented limited human-to-human transmission** through prolonged close contact.
- This characteristic distinguishes it from other Hantaviruses and necessitates stringent public health monitoring.

Clinical Presentation:

- In **Asia and Europe**, Hantaviruses are commonly associated with **Haemorrhagic Fever with Renal Syndrome (HFRS)**, which primarily affects the kidneys.
- The **South American Andes strain**, however, targets the lungs and can cause **Hantavirus Pulmonary Syndrome (HPS)**. Early symptoms (high fever, muscle aches, abdominal distress) can mimic tropical diseases like dengue, requiring a careful **differential diagnosis** approach.

National Florence Nightingale Awards 2026

What's the News?

President **Droupadi Murmu** conferred the **National Florence Nightingale Awards for 2026** upon **15 nursing professionals** at **Rashtrapati Bhavan**. The ceremony took place on the occasion of **International Nurses Day**, which is observed annually on **May 12th** to mark the birth anniversary of **Florence Nightingale**. The award, considered the highest national honor for nursing personnel in India, recognizes meritorious services, compassion, and dedication in patient care.

About the National Florence Nightingale Award

- **Instituted By:** The Ministry of Health and Family Welfare, Government of India, in **1973**.
- **Highest National Recognition:** It is the apex honor for nursing professionals in the country.
- **Categories of Awardees:** The award is open to **Registered Nurses, Auxiliary Nurse Midwives (ANMs), Registered Midwives, and Lady Health Visitors (LHVs)**.
- **Sectors Covered:** Nursing professionals working in **Central Government, State Government, Union Territories, Private Institutions, Missionary Organizations, and Voluntary Organizations** are eligible.
- **Award Components:** Each awardee receives:
 - A **Certificate of Merit**
 - A **Medal**
 - A **Cash Prize of ₹ 1,00,000 (₹ 1 Lakh)**

Highlights of the 2026 Ceremony & Awardees

- **Number of Awardees:** **15** nursing professionals were recognized for the year 2026.
- **Presidential Address:** President Murmu described the occasion as a fitting tribute to nursing personnel who serve with compassion and unwavering dedication, often in challenging circumstances. She commended

their devotion to duty and tireless efforts in upholding the highest standards of patient care.

- **Presence of Officials:** Union Minister for Health and Family Welfare **Jagat Prakash Nadda**, Ministers of State for Health **Prataprao Jadhav**, and other senior officials attended the event.
- **Notable Awardees (Examples of Exemplary Service):**
 - **Aysha Beebi K** (Lakshadweep): Recognized for successfully conducting a critical midnight delivery on a remote island.
 - **Kulwinder Parhi** (Ladakh): An Auxiliary Nurse Midwife honored for nearly three decades of dedicated service in the challenging high-altitude terrain of Ladakh.
 - **Dr. Sharwan Kumar Dhaka** (Delhi): Acknowledged for his significant contributions to **Covid-19 vaccination** outreach and broader public health services.
 - **Major General Lissamma P.V.** (Army Medical Services): Recognized for her distinguished contributions to military healthcare.

Eligibility & Selection Process

- **Minimum Experience:** A nominee must have a minimum of **10 years** of professional experience in nursing.
- **Selection Process:**
 - Nominations are invited through a prescribed application process and must be routed through the respective **State/UT Health Department Selection Committee**.
 - The State/UT level committee, which includes representatives from bodies like the **Trained Nurses Association of India (TNAI)**, screens and recommends candidates.
 - The final selection is made by a **Central Selection Committee** constituted by the **Indian Nursing Council (INC)**.

Additional Info

- **Florence Nightingale (1820–1910):**
 - A British social reformer and statistician, considered the **founder of modern nursing**.
 - Earned the nickname "**The Lady with the Lamp**" for her nightly rounds tending to wounded soldiers during the **Crimean War (1853–1856)**.
 - Pioneered the use of data visualization (the "**Coxcomb**" diagram) to advocate for sanitary reforms in hospitals.
 - Established the **Nightingale Training School** at St. Thomas' Hospital in London in 1860, the first secular nursing school in the world.
- **International Nurses Day:**
 - Observed annually on **May 12th**, the birth anniversary of Florence Nightingale, to honor the contributions of nurses worldwide.

PFAS 'Forever Chemicals' Detected in 98.8% of Human Blood Samples

What's the News?

- A U.S. study published in the Journal of Occupational and Environmental Hygiene detected **PFAS (per- and polyfluoroalkyl substances)** in **98.8% of 10,566 human blood samples** analysed.
- The study by toxicologists from NMS Labs in Pennsylvania revealed that **98.5% of samples contained multiple PFAS types**, with over 70 unique chemical combinations identified.
- Only **0.18% of samples** contained a single PFAS chemical, highlighting the pervasiveness of combined human exposure to these synthetic compounds.
- One specific compound, **PFHxS (perfluorohexane sulfonic acid)**, used in textiles, furniture, and adhesives, was detected in **97.9% of the samples**.

PFAS: Overview & Findings

- **What are PFAS?**
 - PFAS are a class of over **15,000 synthetic chemicals** characterised by extremely strong carbon-fluorine bonds.
 - These bonds give them high thermal stability and resistance to water, oil, and stains, earning them the label "**forever chemicals**" because they persist in the environment and human body for decades without breaking down.
 - Commonly used since the 1940s in products like non-stick cookware, waterproof clothing, food packaging, cosmetics, and firefighting foams.
- **Findings of the Blood Sample Study:**
 - **Sample Size:** Serum and plasma samples from **10,566 individuals** were analysed.
 - **Prevalence:** **98.8%** of samples contained detectable PFAS.
 - **Chemical Mixtures:** Over **70 unique PFAS combinations** were identified; most individuals carry a body burden of five or more different PFAS compounds.
 - **PFHxS Specifics:** Detected in 97.9% of samples; this compound is increasingly restricted in many countries due to concerns about liver and immune system effects.
 - **Testing Limitation:** The study tested for only **13 common PFAS**, meaning the actual number of chemicals present in the human body could be significantly higher.

Health & Exposure Context

- **Exposure Pathways:**
 - **Ingestion:** Contaminated drinking water and food (especially fish from polluted water bodies).
 - **Consumer Products:** Contact with non-stick cookware, stain-resistant textiles, and food packaging.
 - **Inhalation:** Dust particles containing PFAS.
 - **Occupational:** Workers in manufacturing facilities face elevated risk.

- **Prenatal:** Studies confirm PFAS cross the placental barrier; a landmark study detected **42 different PFAS compounds in umbilical cord blood**.
- **Associated Health Impacts:**
 - **Cancer:** Kidney cancer, testicular cancer.
 - **Organ Damage:** Liver damage, thyroid disorders.
 - **Immune System:** Suppression of immune responses.
 - **Reproductive & Developmental:** Low birth weight, preterm birth, developmental delays in children, reduced fertility in adults.
 - **Other:** Links to faster ageing and changes in brain function.

Additional Info

- **Indian Context & Regulatory Gaps:**
 - **PFAS Contamination Detected:** Studies have found alarming PFAS levels across India:
 - **Chennai:** PFAS concentrations in water bodies found to be nearly **19,400 times higher than U.S. EPA safety levels**.
 - **Kerala:** A study of five major rivers (Periyar, Bharathapuzha, Pamba, Meenachil, Puzhakkal) detected **43 individual PFAS compounds**; the Periyar River showed the highest contamination (558 ng/L Σ 77 PFAS).
 - **Bengaluru:** IISc-British Geological Survey study found PFAS exceeding EU drinking water thresholds in Bengaluru's water sources.
 - **Ganges River:** Standard monitoring identified only **1%** of toxic PFAS organofluorine contamination, indicating severe underestimation.
 - **High-Risk States:** Predictive modelling indicates states with high fish consumption rates, such as **West Bengal and Tamil Nadu**, face elevated PFAS exposure risks.
- **India's Regulatory Status:**
 - India currently **lacks a comprehensive regulatory framework** for monitoring, treating, or limiting PFAS in drinking water and the environment.
 - The **Central Pollution Control Board (CPCB)** and the **Union Environment Ministry** have been urged by tribunals and experts to issue specific PFAS guidelines.
 - A **draft amendment to the Food Safety and Standards (Packaging) Regulations** aims to prohibit the use of PFAS in food contact materials, signalling a nascent regulatory step.
 - The **National Green Tribunal (NGT)** has registered suo motu cases based on reports of PFAS contamination in water bodies.
- **Challenges in India:**
 - **No Monitoring Mandate:** Zero monitoring of PFAS in pregnant women or newborns, despite 25 million annual births.

- **Treatment Gap:** Current water treatment facilities, such as those in Chennai, lack the infrastructure and technical expertise to remove PFAS.
- **Industrial Concerns:** Incidents like the controversial PFAS plant in **Ratnagiri, Maharashtra**, using machinery from a shuttered Italian firm, highlight governance gaps in industrial permitting.
- **Global Regulatory Examples:**
 - **United States:** The EPA has set Maximum Contaminant Levels (MCLs) for several PFAS in drinking water.
 - **European Union:** Stringent drinking water thresholds are being implemented.
 - **Japan & Australia:** Advanced PFAS treatment methods are being explored, though adoption in developing nations remains limited due to high costs.

WHO Declares Ebola Outbreak in DRC and Uganda a Public Health Emergency of International Concern

What's the News?

- The World Health Organization (WHO) has officially declared the ongoing Ebola outbreak in the Democratic Republic of Congo (DRC) and Uganda a **Public Health Emergency of International Concern (PHEIC)**.
- The outbreak is driven by the rare **Bundibugyo virus (BVD)**, for which there are currently **no approved vaccines or specific treatments**.
- As of mid-May, over 130 deaths have been linked to the outbreak, with more than 500 suspected cases reported.

The Outbreak: A Critical Overview

- **Causative Agent:** The outbreak is caused by the **Bundibugyo virus (Orthoebolavirus bundibugyoense)**, a rare strain of Ebola. This marks only the **17th Ebola outbreak in the DRC** but is exceptionally dangerous due to the lack of pharmaceutical countermeasures.
- **Affected Regions:**
 - **DRC:** Heavily concentrated in the northeastern **Ituri Province**, with cases also tracked in the capital, **Kinshasa**.
 - **Uganda:** Active cross-border transmission has resulted in laboratory-confirmed cases in the capital city, **Kampala**.
- **Transmission & Symptoms:**
 - **Natural Reservoir:** Fruit bats of the **Pteropodidae family** are the presumed natural hosts.
 - **Human-to-Human Spread:** Transmission occurs via direct contact with blood, secretions, or bodily fluids of an infected person. Individuals are not infectious during the incubation period (2–21 days).
 - **Symptoms:** Include abrupt high fever, fatigue, muscle pain, headache, and sore throat,

progressing to vomiting, diarrhea, and in later stages, internal and external bleeding.

- **Key Concerns:** The WHO is "deeply concerned about the scale and speed" of the outbreak. Delayed detection, the strain's rarity, and the fact that it is spreading in a conflict-affected region with significant population movement are major impediments to containment.

India's Response and Preparedness

- Following the WHO's PHEIC declaration, India has strengthened its public health surveillance and preparedness as a matter of "abundant caution".
- **Current Risk:** The Union Health Ministry has clarified that there is **no reported case of Ebola in India** and the current risk remains minimal.
- **Measures Initiated:**
 - **Screening & Quarantine:** Standard Operating Procedures (SOPs) for screening, surveillance, quarantine, and case management are being reviewed and strengthened at all points of entry.
 - **Laboratory Preparedness:** The **National Institute of Virology (NIV), Pune**, has been designated as the nodal testing center, with additional labs being onboarded in phases.
 - **Coordination:** The Health Ministry is coordinating with other ministries to monitor international travel from affected regions.

Additional Info

- **The Bundibugyo Virus:**
 - First identified in 2007 in the Bundibugyo district of western Uganda.
 - Previous outbreaks have shown a case fatality rate between **30% and 50%**.
 - The only two previous known outbreaks were in Uganda (2007) and eastern DRC (2012).
- **International Health Regulations (IHR) and PHEIC:**
 - The **International Health Regulations (2005)** is a binding international legal agreement involving 196 countries, aimed at preventing and responding to public health risks with cross-border potential.
 - A **PHEIC** is defined as an extraordinary event that constitutes a public health risk to other states through international spread and potentially requires a coordinated international response.
 - The final determination of a PHEIC is made by the **WHO Director-General** based on advice from an Emergency Committee.
- **Other Key Agencies Involved:**
 - **Africa Centres for Disease Control and Prevention (Africa CDC)** has declared a continental public health emergency.
 - India's response involves the **National Centre for Disease Control (NCDC)**, **Integrated Disease Surveillance Programme (IDSP)**, and **Indian Council of Medical Research (ICMR)**.

Ayush Anudan Portal

What's the News?

- The **Ministry of Ayush** has launched the **Ayush Anudan Portal**, a centralized digital platform to manage grant proposals under its **Central Sector Schemes**.
- Launched by Union Minister **Shri Prataprao Jadhav**, the portal aims to ensure **100% transparency, efficiency, and accountability** in the end-to-end grant management process—from proposal submission to fund disbursement.
- It replaces manual, paper-based workflows with a structured online system, aligned with the government's **Ease of Doing Business** and **Digital India** vision.

Portal Framework & Key Features

- **Nodal Ministry:** Ministry of Ayush, Government of India.
- **Parent Initiative:** Developed under the **Ayush Grid**—a comprehensive digital ecosystem for the traditional medicine sector, conceptualized in **2018** under **Digital India**.
- **Core Objectives:**
 - Digitize and streamline grant application, processing, approval, and monitoring.
 - Enable paperless governance and reduce processing delays.
 - Enhance institutional credibility through automated verification.
- **Salient Features:**
 - **NGO Darpan Integration:** Seamless authentication of applicant organizations via **NITI Aayog's NGO Darpan** portal, ensuring faster, error-free verification.
 - **Scheme-Wise Application Management:** Proposals are categorized and processed as per specific guidelines of individual Central Sector Schemes (e.g., **IEC, International Cooperation, AYURSWASTHYA, AYURGYAN**).
 - **Real-Time Tracking Dashboard:** Applicants and officials can monitor proposal status at every stage—submission, review, approval, or rejection.
 - **Single-Window Access:** Available via the Ministry's **My Ayush Integrated Services Portal (MAISP)** or directly at the portal link.

Policy Context & Governance Significance

- **Digital Public Infrastructure (DPI):** The portal strengthens India's DPI stack by extending digital governance to the **Ayush sector**, promoting interoperability and citizen-centric service delivery.
- **ABDM Alignment:** The **Ayush Grid** (and by extension, this portal) is compliant with the **Ayushman Bharat Digital Mission (ABDM)**, enabling future integration of traditional medicine records with mainstream health systems.
- **Central Sector Schemes Coverage:** The portal manages grants for schemes fully funded by the Union Government, including:

- Promotion of **Information, Education & Communication (IEC)** in Ayush
- **Conservation of Medicinal Plants**
- **International Cooperation** for global propagation of Ayush
- **AYURSWASTHYA** (public health integration) and **AYURGYAN** (education & capacity building)

Additional Info

- **Historical Background:**
 - Ministry of Ayush was formed in **2014** (earlier: Department of ISM&H, 1995; renamed Ayush, 2003).
 - **Ayush Grid** initiated in **2018** to create a unified digital backbone for Ayurveda, Yoga, Unani, Siddha, Sowa-Rigpa, and Homoeopathy.
- **Related Initiatives & Portals:**
 - **MAISP (My Ayush Integrated Services Portal):** Single-window platform for all Ayush services.
 - **Ayush Sanjivani App:** For telemedicine and wellness services.
 - **NGO Darpan:** NITI Aayog's platform for voluntary organization registration and verification.
- **Constitutional & Policy Linkages:**
 - Supports **Article 47** (Directive Principle: duty to improve public health) by strengthening traditional healthcare delivery.
 - Aligns with **National Health Policy 2017** emphasis on integrating AYUSH systems into mainstream healthcare.
 - Advances **SDG 3** (Good Health and Well-being) and **SDG 9** (Industry, Innovation, and Infrastructure).

JEEVAN App & SHATAYU Dashboard

What's the News?

- The **Ministry of Social Justice and Empowerment** has launched the **JEEVAN mobile app** and **SHATAYU dashboard** to strengthen India's elder care ecosystem through technology.
- **JEEVAN** (Joint Elderly Empowerment & Virtual Assistance Network) is a citizen-facing app providing single-window access to welfare schemes, emergency support, and healthcare information for senior citizens.
- **SHATAYU** (Senior Holistic Care Assistance and Training For Your Utility) is a national dashboard to map, certify, and deploy verified geriatric caregivers across districts.
- The initiative aims to formalize the unorganized elderly care sector, improve service accessibility, and support India's growing senior population through a structured **care economy** framework.

JEEVAN App: Features & Accessibility

- **Unified Welfare Gateway:** Aggregates information on Central/State pension schemes, healthcare entitlements, and social benefits for seniors in one interface.
- **SOS Emergency Matrix:** One-touch panic button linking users to local emergency services, medical networks, and the **National Elder Helpline (14567)**.

- **Institutional Home Locator:** Geo-tagged directory of government-supported senior citizen homes and day-care facilities.
- **Elder-Centric Design:** Large fonts, voice-assisted navigation, and simplified UI tailored for elderly users with sensory or digital literacy constraints.
- **Target Reach:** Designed for India's **149 million senior citizens** (aged 60+), projected to rise to **347 million by 2050** (UN estimates).

SHATAYU Dashboard: Formalizing Geriatric Care

- **District-Level Micro-Mapping:** Real-time visibility of verified caregiver availability, enabling families to locate trained support within their locality.
- **Standardized Training Tracker:** Monitors certification benchmarks and skill modules for caregivers, aligning with **National Skill Development Corporation (NSDC)** frameworks.
- **Verified Service Directory:** Backend validation of caregiver credentials, background checks, and legal compliance to ensure user safety.
- **Care-Economy Integration:** Aggregates data from NGOs, medical councils, and state agencies to balance caregiver supply-demand gaps, especially in rural/underserved regions.
- **Policy Impact:** Supports transition of eldercare from informal domestic work to a regulated, skill-based employment sector under the **Care Economy Mission** framework.

Additional Info

- **Constitutional & Legal Framework:**
 - **Article 41 (DPSP):** Directs State to secure public assistance in old age.
 - **Entry 24, List III (Concurrent List):** Enables joint Centre-State legislation on welfare of elderly.
 - **Maintenance and Welfare of Parents and Senior Citizens Act, 2007:** Provides legal basis for elder protection; JEEVAN app aids implementation via grievance redressal integration.
- **Related Schemes & Initiatives:**
 - **Indira Gandhi National Old Age Pension Scheme (IGNOAPS):** Provides monthly pension to BPL seniors; JEEVAN app simplifies application tracking.
 - **Rashtriya Vayoshri Yojana:** Supplies assisted living devices; app enables beneficiary registration and delivery monitoring.
 - **National Programme for Health Care of Elderly (NPHCE):** Focuses on geriatric healthcare infrastructure; SHATAYU complements by strengthening human resource pipeline.
- **Organizations:**
 - **Department of Social Justice and Empowerment:** Nodal agency for both platforms.
 - **National Institute of Social Defence (NISD):** Provides training modules integrated into SHATAYU certification.

- **International Longevity Centre - India (ILC-India):** Technical partner for caregiver standards development.

Supreme Court Recognises Right to Trauma Care Under Article 21

What's the News?

- The **Supreme Court of India** has held that the **right to trauma care and emergency medical treatment** is an integral part of the **Right to Life under Article 21** of the Constitution.
- The Court issued **nationwide directions** to improve emergency response systems for road accident victims and strengthen trauma care infrastructure.
- The judgment aims to address delays in medical treatment, which remain a major cause of preventable deaths following road accidents.

Right to Trauma Care Under Article 21

- The Court reaffirmed that:
 - Timely emergency medical treatment is a constitutional obligation.
 - Access to trauma care cannot be denied because of procedural, financial, or jurisdictional barriers.
- It emphasized that preservation of life is a fundamental constitutional duty of the State.
- The ruling expands the scope of **Article 21**, which guarantees protection of life and personal liberty.

Directions Issued by the Supreme Court

- States and Union Territories have been directed to:
 - Strengthen trauma care facilities along highways and accident-prone zones.
 - Improve ambulance and emergency response systems.
 - Ensure coordination among hospitals, police, and emergency agencies.
 - Establish effective referral mechanisms for accident victims.
 - Develop standard operating procedures for emergency treatment.
- Authorities have been asked to ensure that accident victims receive immediate medical attention without unnecessary delays.

Road Safety and Public Health Concerns

- India records one of the highest numbers of road accident fatalities globally.
- A large proportion of deaths occur during the **"golden hour"** — the critical period immediately after a serious injury when prompt treatment can save lives.
- Challenges include:
 - Inadequate trauma centres in rural and remote areas.
 - Delayed ambulance response.
 - Shortage of specialised emergency care personnel.

- Weak coordination among emergency services.

Additional Info

Article 21 of the Constitution

- Provides that:
 - *"No person shall be deprived of his life or personal liberty except according to procedure established by law."*
- Through judicial interpretation, Article 21 has been expanded to include:
 - Right to health.
 - Right to medical care.
 - Right to a clean environment.
 - Right to dignity.
 - Right to livelihood.

Important Supreme Court Precedents

Parmanand Katara v. Union of India (1989)

- Held that every doctor, whether in a government or private hospital, has a professional obligation to provide immediate medical aid to preserve life.

Paschim Banga Khet Mazdoor Samity v. State of West Bengal (1996)

- Recognised the State's responsibility to provide adequate medical facilities.
- Linked access to emergency healthcare with Article 21.

Golden Hour

- Refers to the first hour after a traumatic injury.
- Timely medical intervention during this period significantly improves survival chances and reduces long-term disability.

Road Safety in India

- Road accidents cause over **1.5 lakh deaths annually** in India.
- Key government initiatives include:
 - **Motor Vehicles (Amendment) Act, 2019**
 - National Road Safety Strategy
 - Good Samaritan Guidelines
 - Integrated Road Accident Database (iRAD)
 - National Highway trauma care programmes

Good Samaritan Guidelines

- Protect individuals who voluntarily assist accident victims.
- Prevent harassment by police or hospitals for helping injured persons.
- Encourage immediate assistance during emergencies.

Education

QS Executive MBA Rankings 2026

What's the News?

The QS Executive MBA Rankings 2026 have been released, evaluating business schools on parameters such as **career outcomes, employer reputation, diversity, executive profile, and thought leadership**. IIM Bengaluru has retained its position as India's highest-ranked business school, placed **64th globally** in the Executive MBA category. It remains the **only Indian institution to feature in the global top 100**.

India's Performance

- **IIM Bengaluru's Ranking & Metrics:**
 - Secured **64th position globally**, though it slipped from its previous year's rank of 50th.
 - Showed strong domain-specific performance, ranking **42nd globally in Employer Reputation** and **47th globally in Career Outcomes**.
 - Measures like diversity and executive profile continue to be areas with significant room for improvement.
- **Other Indian Institutes:** A total of **seven Indian business schools** are featured in the rankings. India is the **second-most represented country in the Asia-Pacific region** after China. The other ranked institutions are:
 - Indian School of Business (ISB)
 - IIM Kozhikode
 - IIM Indore
 - Institute of Management Technology (IMT) Ghaziabad
 - Woxsen School of Business
 - IIM Ranchi (debuted in the rankings this year).
- **India's Gap:** While India has high overall representation (7 institutes), only one is in the top 100. In contrast, China has 4 of its 8 ranked institutes in the top 100, and Singapore has all 3 in this elite bracket.

Global & Asia-Pacific Leaders

- **Global Top 3:**
 1. **University of Oxford (Saïd Business School)**
 2. **HEC Paris**
 3. **MIT Sloan**.
- **Asia-Pacific (APAC) Top Performers:**
 - The region featured **35 business schools** from 14 countries.
 - Leading schools include **National University of Singapore Business School (14th globally)** and **Melbourne Business School (29th globally)**.

Additional Info

- **QS Rankings:** An annual publication by **Quacquarelli Symonds** that evaluates universities and business schools worldwide. For Executive MBA programmes, the methodology weighs five indicators:
 - **Career Outcomes:** Salary uplift and promotions.
 - **Employer Reputation:** Perception of recruiters.

- **Thought Leadership:** Research output and academic influence.
- **Executive Profile:** Seniority and experience level of participants.
- **Diversity:** Gender and international representation.
- **IIM Bengaluru (IIM-B):** A premier public business school and an Institute of National Importance, known for its flagship Post Graduate Programme in Management (PGP) and executive education.
- **Related Government Initiative:** The **National Institutional Ranking Framework (NIRF)** by the Ministry of Education is India's domestic equivalent for ranking higher education institutions.

Education Minister Launches School Management Committee (SMC) Guidelines 2026

What's the News?

Union Education Minister **Dharmendra Pradhan** launched the **School Management Committee (SMC) Guidelines 2026**, a unified national framework that redefines the role of SMCs in India's nearly 15 lakh schools. The guidelines aim to strengthen community participation, enhance transparency, and align school governance with the **National Education Policy (NEP) 2020**.

Features of the SMC Guidelines 2026

- **Universal Formation:** Every school (including secondary schools up to Grade 12) must constitute an SMC within one month of the academic year.
- **Inclusive Composition:**
 - **75%** of SMC members must be parents or guardians.
 - Remaining **25%** includes local authority members, teachers, educationists, and frontline workers (e.g., ASHA, Anganwadi).
- **Gender & Social Balance:**
 - At least **50%** women members.
 - Proportionate representation for **Socio-Economically Disadvantaged Groups (SEDGs)** and parents of **Children with Special Needs (CwSN)**.
- **Three-Year School Development Plan (SDP):**
 - SMCs must prepare a three-year SDP with annual sub-plans for infrastructure and academic improvements.
- **Specialized Sub-Committees:**
 - **School Building Committee** for infrastructure.
 - **Academic Committee** for monitoring learning outcomes.
- **Financial Oversight & Transparency:**
 - SMCs monitor government grant utilization and can execute civil works up to **₹30 lakh**.
 - Mandatory **social audit** at least once a year.
- **Safety & Well-being:**
 - SMCs participate in preparing a **School Safety and Security Plan** and conduct quarterly safety walks.

SMC Composition & Membership

- **Chairperson and Vice-Chairperson** (elected from among parents/guardians).
- **Member Secretary** (the school Principal/Headmaster).
- **Members:** Parents from all grades, elected local authority representatives, teachers, local educationists, subject experts, alumni, and frontline workers.
- **Size:** Depends on student enrolment:
 - Up to 100 students: **12–15 members**.
 - More than 500 students: **20–25 members**.

From Monitoring Bodies to Governing Institutions

The guidelines mark a paradigm shift from the earlier SMC framework (introduced after the **Right to Education (RTE) Act, 2009**), which was largely limited to grant monitoring and infrastructure supervision. The new framework elevates SMCs into “**school community governing institutions**” that actively contribute to:

- Child safety
- Mental health
- Foundational Literacy and Numeracy (FLN)
- Digital transparency
- Learning outcomes
- Community participation

NITI Aayog Releases Comprehensive Report on School Education System in India

What's the News?

- **NITI Aayog** has released a policy report titled “**School Education System in India: Temporal Analysis and Policy Roadmap for Quality Enhancement**”.
- The report presents a **decade-long analysis (2014-15 to 2024-25)** of India's school education, using data from **UDISE+, PARAKH, NAS, and ASER**.
- It provides a **strategic roadmap** to improve quality and equity, aligning with the **Viksit Bharat @2047** vision.
- The report highlights **near-universal primary enrolment** but warns of **sharp dropouts at secondary level, weak learning outcomes, and structural inefficiencies**.

Findings of the Report

- **Scale:** India has the world's largest school system with **14.71 lakh schools** and **24.69 crore students**, supported by **1.01 crore teachers**.
- **Enrolment & Dropout Trends:**
 - **Gross Enrolment Ratio (GER)** is **90.9% at primary** and **90.3% at upper primary** level, but drops to **78.7% at secondary** and **58.4% at higher secondary**.
 - **Secondary dropout rate** is **11.5% nationally**, significantly higher than the primary rate of **0.3%**.
- **Infrastructure Gains:**
 - **Functional electricity** in schools improved from **55.96% (2014-15) to 91.9% (2024-25)**.
 - **Internet connectivity** surged from **8.05% to 63.5%** in the same period.

- **Learning Crisis:**
 - Nearly **50% of Grade 5 children in rural India** cannot read a Grade-2 level text (ASER 2024).
 - Many teachers struggle with subject knowledge; **only 10-15% of CTET/TET candidates score above 60%** qualifying threshold.
- **Privatization Shift:** Government school enrolment has fallen from **71% (2005) to 49.24% (2024-25)**, while private unaided schools now enroll **38.8%** of students.
- **Fragmented Structure:** Only **~5% of schools offer continuous schooling from Grades 1 to 12**.
- **Small & Single-Teacher Schools:**
 - **Over one-third of schools have fewer than 50 students**.
 - **1.04 lakh schools** (7% of total) operate with **just one teacher**.
- **Teacher Vacancies:** Bihar alone reports **over 2.08 lakh elementary-level teacher vacancies**.

Challenges Identified

- **Fragmented Schooling Structure:** The **pyramidal distribution** of schools (7.3 lakh primary vs. only 1.64 lakh higher secondary) forces students to change schools frequently, leading to **dropouts**.
- **High Secondary Dropout Rate:** Financial constraints, early workforce entry, and social pressures impede progression after Grade 10.
- **Weak Learning Outcomes:** Rote-based pedagogy prioritizes **textbook completion over conceptual understanding**.
- **Inequitable Digital Access:** While Chandigarh has functional smart classrooms in **>95% of schools**, Meghalaya has **<5%**.
- **Teacher Quality & Non-Academic Burden:** Teachers lose **~14% of planned teaching days** to non-academic work like election duties and surveys.
- **Low-Fee Private School Underperformance:** **35% of Class 5 students** in such schools cannot read a Class 2 textbook; **60% cannot solve a basic division problem**.

Recommendations of NITI Aayog

- **Structural Reform:** Move towards **Composite Schools (Grades 1-12)** and evidence-based rationalization of small schools.
- **Governance Enhancement:** Establish independent **State School Standards Authorities (SSSAs)** to monitor safety, infrastructure, and learning quality.
- **Teacher Development:** Create structured career pathways (**Senior → Master → Mentor Teacher**) and free teachers from non-teaching duties.
- **Pedagogical Transformation:** Shift from textbook completion to **competency-based assessments** and **Teaching at the Right Level (TaRL)**.
- **Inclusive & Digital Learning:** Expand digital and broadcast-based education, support children with special needs and migrant populations.
- **AI Integration:** Introduce **AI literacy from upper primary onwards**, with safeguards against overuse.

- **Implementation Framework:** The report proposes **33 implementation pathways** across short, medium, and long-term timelines, tracked by **125+ measurable indicators**.
- **Overarching Vision:** Calls for a “**Sushikshit Bharat Abhiyaan**” — a system-wide transformation rather than piecemeal reforms.

Additional Info

- **Historical Context:**
 - Ancient **Gurukul** system evolved into a colonial model focused on clerical and English-medium proficiency.
 - Post-independence milestones: **Mudaliar Commission (1952)** and **Kothari Commission (1964-66)** laid the constitutional foundation for free and universal education.
 - **Sarva Shiksha Abhiyan (2001)** and **Right to Education (RTE) Act 2009** made elementary education a justiciable right.
 - **Samagra Shiksha (2018)** integrated pre-primary, elementary, and secondary education into a single framework.
 - **National Education Policy (NEP) 2020** introduced the **5+3+3+4 curricular structure** aligned with developmental stages.
- **Constitutional Provisions:**
 - **Article 21A:** Right to free and compulsory education for children aged 6-14 years (inserted by 86th Amendment, 2002).
 - **Article 45:** Provision for early childhood care and education to children below the age of six years.
 - **Article 46:** Promotion of educational and economic interests of SCs, STs, and other weaker sections.
- **Related Initiatives:**
 - **NIPUN Bharat Mission:** Aimed at achieving foundational literacy and numeracy by 2026-27.
 - **PARAKH (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development):** A national assessment regulator under NEP 2020.
 - **SATH-E (Sustainable Action for Transforming Human Capital-Education):** A NITI Aayog program supporting states in school education transformation.

NEET-UG 2026 Cancelled After Alleged Paper Leak

What's the News?

The National Testing Agency (NTA) cancelled the NEET-UG 2026 exam after law enforcement agencies uncovered the pre-exam circulation of a “guess paper” containing over **400 questions**. The paper allegedly matched **120 questions** in the actual examination—mainly in Biology and Chemistry—accounting for nearly **600 of the 720 total marks**. The exam, held in pen-and-paper mode for approximately **22.79 lakh candidates** across 551 Indian cities and 14 international centres, will be re-conducted on a date to be announced. The case has been handed over to the Central Bureau of Investigation (CBI).

Examination Governance Crisis

What went wrong?

- **Leak of Confidential Material** – A handwritten document with ~410 questions was circulated **15 to 30 days** before the exam through coaching networks and WhatsApp groups; some copies were sold for as much as **₹5 lakh** two days before the test.
- **Operational Fragility** – The pen-and-paper model relies on physical booklets that pass through multiple touchpoints, increasing the risk of human interference.
- **Leadership Vacuum** – NTA functioned without a full-time chief for over **a year**; a permanent CEO was appointed only in March 2026.
- **Digital Blind Spots** – Despite blocking **120 Telegram channels**, the leak spread virally on encrypted platforms, exposing gaps in NTA's digital surveillance.

Why it matters?

- The cancellation affects **~22.79 lakh** aspirants, making it the largest re-test exercise in Indian competitive exam history.
- This is the **first complete cancellation** since NTA took over NEET-UG in 2019; the 2024 exam saw only a partial re-test for **1,563 candidates** after mark discrepancies.
- The leak follows a pattern of recurring failures. In 2024, investigations identified **155 beneficiaries** of a leak, and an unprecedented **67 students** scored full marks (up from just **two** in **2023**), leading to hyper-competition for the **1.1 lakh MBBS seats** available.

Allegations & Probe Findings

Sequence of Events

Date/Phase	Key Development
Pre-Exam	A “guess paper” with 410+ questions began circulating in coaching hubs (Sikar, Jhunjhunu, Dehradun) at least two weeks before the exam.
May 3	NEET-UG 2026 conducted for 22.79 lakh candidates.
May 7	NTA received an email complaint with a PDF alleging irregularities.
May 8	NTA handed the probe to central agencies.
May 10	Rajasthan Police Special Operations Group (SOG) began its formal investigation.
May 12	Exam cancelled; 13 persons already arrested from Rajasthan and Uttarakhand.
Post-Cancellation	CBI takes over the case; at least 15 arrests by May 13.

Spread

- The document originated from a **Churu (Rajasthan)-based MBBS student** enrolled in a Kerala medical college, who sent it to an associate in Sikar. From a paying-guest accommodation, it spread through coaching networks and WhatsApp.
- Investigators confirmed “forwarded many times” labels on recovered chats, indicating wide dissemination.
- Arrested individuals include **Manish Yadav, Rakesh Mandwaria**, and **Shubham Khairnar** (a BAMS student

from Nashik). Some suspects are linked to consultancy centres in Sikar.

Broader Systemic Issues

Why are Indian exams so vulnerable?

- **Pen-and-Paper Model** – Physical question papers are vulnerable at printing, storage, transportation, and distribution stages. The **K. Radhakrishnan Panel** had flagged this as a major security risk.
- **Inadequate Digital Infrastructure** – NTA's computer-based testing (CBT) capacity is only **1.5 lakh students per day**, far short of the **22 lakh** needed for a simultaneous NEET. A 2024 tender to expand CBT labs was never finalised, leaving NTA with just **552 centres**.
- **Weak Regulatory Oversight** – Until the **Public Examinations (Prevention of Unfair Means) Act, 2024** came into force, penalties for paper leaks were minimal, encouraging organised cheating rackets. The Act now prescribes **imprisonment of 3–10 years** and fines up to **₹1 crore** for offenders.
- **Rise of Digital Smuggling** – Encrypted messaging apps and disappearing messages have outpaced traditional anti-cheating measures like biometric verification and AI-assisted CCTV, which NTA deployed but failed to integrate with effective cyber-surveillance.

What can be done?

- **Accelerate CBT/Online Mode:** NEET must shift to a secure, encrypted online format. The government should fast-track the creation of CBT centres, especially in rural areas, to meet the demand of 22+ lakh aspirants.
- **Strengthen Institutional Integrity:** Ensure NTA is led by a full-time, empowered director with a fixed tenure to avoid leadership vacuums.
- **Adopt End-to-End Digital Locking:** Use blockchain-based tracking for question paper logistics and real-time digital audits at every stage of the examination cycle.
- **Implement the 2024 Act Strictly:** Swift investigation, prosecution, and conviction under the new law can act as a deterrent.
- **Enhance Cyber-Surveillance:** Deploy AI-driven social media monitoring tools to detect and block leaked content in real time, complementing physical security measures.

Additional Info

Institutions & Policies

- **National Testing Agency (NTA)** – Established in 2017 as a specialised, autonomous testing organisation under the Ministry of Education to conduct entrance examinations for higher educational institutions.
- **Central Bureau of Investigation (CBI)** – India's premier investigating agency, empowered to probe cases of national importance under the Delhi Special Police Establishment Act, 1946.
- **Public Examinations (Prevention of Unfair Means) Act, 2024** – Aims to curb malpractices in public exams. Key provisions:
 - **Punishment:** 3–5 years imprisonment and fine up to ₹10 lakh for individuals; for organised crime, 5–10 years and fine up to ₹1 crore.

- **Offences:** Leakage of question papers, tampering with answer sheets, impersonation, and use of unfair means.
- **Enforcement:** Designated “Examining Authorities” can file complaints; offences are cognisable and non-bailable.

Constitutional and Legal Backdrop

- **Right to Education (Article 21A)** – While directly applicable to children aged 6–14, the leak undermines the broader constitutional guarantee of fair and equitable access to education under **Article 21 (Right to Life and Personal Liberty)**, as interpreted by the Supreme Court in *Union of India v. Students of NEET (2024)*.

Historical Context

- **2024 NEET-UG Controversy** – Allegations of grace marks, question paper leaks, and inflated scores led to a partial re-examination for 1,563 candidates. The Supreme Court eventually upheld the exam but flagged systemic weaknesses.
- **2015 Vyapam Scam** – A massive admission and recruitment racket in Madhya Pradesh involving impersonation and paper leaks, which prompted the creation of NTA to centralise exam conduct and reduce state-level vulnerabilities.

Economy & Finance

Union Cabinet Approves ECLGS 5.0 What's the News?

The Union Cabinet has approved the **Emergency Credit Line Guarantee Scheme (ECLGS) 5.0** with an outlay of **₹18,100 crore** to provide liquidity support to businesses affected by the ongoing **West Asia conflict**. The scheme aims to facilitate additional credit flow of up to **₹2.55 lakh crore**, including a dedicated **₹5,000 crore for the airline sector**. The decision was part of a broader set of cabinet approvals that also included major initiatives in semiconductors, cotton productivity, and sugarcane pricing.

ECLGS 5.0: Key Provisions

- **Beneficiaries:**
 - Micro, Small and Medium Enterprises (**MSMEs**) with existing working capital limits.
 - Non-MSME businesses meeting specified criteria.
 - Scheduled passenger airlines with standard credit accounts as on March 31, 2026.
- **Credit Guarantee Coverage:**
 - **100% guarantee** for loans to MSMEs.
 - **90% guarantee** for loans to non-MSMEs and airlines.
 - Guarantees will be provided through the **National Credit Guarantee Trustee Company Limited (NCGTC)**.
- **Lending Terms:**
 - Additional credit eligibility: Up to **20% of peak working capital** utilized in Q4 FY26, with a cap of **₹100 crore** per borrower.
 - Airlines can avail up to **₹1,500 crore per borrower**.
 - **No guarantee fee** for borrowers.
 - Loan tenure: **5 years** (with 1-year moratorium) for MSMEs and non-MSMEs; **7 years** (with 2-year moratorium) for airlines.
- **Operational Window:** The scheme will remain open for sanctions until **March 31, 2027**.

Rationale and Objectives

- The primary trigger is the **West Asia crisis**, which has caused financial stress, supply chain disruptions, and liquidity challenges for Indian businesses.
- The scheme is designed to ensure **operational continuity**, protect **employment**, and maintain **domestic production** capacity.
- By absorbing a significant portion of default risk, the government aims to incentivize banks and financial institutions to extend crucial working capital credit.

Additional Cabinet Decisions

The ECLGS 5.0 approval was announced alongside other key decisions:

- **Semiconductor Mission Expansion:** Two new projects approved under the **India Semiconductor Mission (ISM)** in Gujarat with a combined investment of **₹3,936 crore**, taking total ISM projects to 12 and cumulative investments to **₹1.64 lakh crore**.

- **Sugarcane FRP: A Fair and Remunerative Price (FRP)** of **₹365 per quintal** was fixed for sugarcane for the 2026-27 season.
- **Cotton Productivity Mission:** A new mission was launched to enhance cotton yield and exports.
- **Ship Repair Facility:** Approval for a ship repair facility at **Vadinar, Gujarat** to bolster maritime infrastructure.

Additional Info

- **Evolution of ECLGS:**
 - The scheme was first introduced in **2020** as a pandemic-era measure to provide **collateral-free additional credit** to stressed MSMEs and other businesses.
 - It has since been extended in multiple iterations to address various economic disruptions, with ECLGS 5.0 being the latest version.
- **Institutional Framework:**
 - The scheme is operationalized through **NCGTC**, which provides the sovereign guarantee on loans.
 - The **Union Cabinet** is the apex decision-making body for such policy-level credit support interventions.
- **Significance of Credit Guarantee Schemes:**
 - They act as a risk mitigation tool for lenders, encouraging credit flow to sectors perceived as high-risk.
 - Such schemes are a critical component of India's financial inclusion and MSME support architecture.

Critical Mineral Recycling Incentive Scheme

What's the News?

- The **Ministry of Mines** has approved **58 companies** for participation under the **Incentive Scheme for Promotion of Critical Mineral Recycling**.
- The selected companies have pledged a combined recycling capacity of approximately **850 kilo tonnes per annum (KTPA)** and an investment of nearly **₹5,000 crore**, signaling strong industry response.
- The approval is a major milestone under the **National Critical Mineral Mission (NCMM)** to strengthen India's critical mineral security by promoting a circular economy.

Incentive Scheme for Promotion of Critical Mineral Recycling

- **Overview:** A dedicated financial intervention under the **National Critical Mineral Mission (NCMM)** designed to develop domestic capacity for extracting critical minerals from secondary sources.
- **Total Financial Outlay:** **₹1,500 crore**.
- **Operational Tenure:** Six years, from **FY 2025–26 to FY 2030–31**.
- **Nodal Ministry:** **Ministry of Mines**, Government of India.

- **Project Management Agency:** Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDDC).
- **Targeted Waste Streams:** Focuses on **Urban Mining** from:
 - Electronic waste (e-waste)
 - Spent **Lithium-ion batteries (LIBs)**
 - Permanent magnets
 - Catalytic converters
 - Industrial scrap
- **Key Features:**
 - **Incentive Structure:** A hybrid model combining Capital Expenditure (Capex) and Operational Expenditure (Opex) support.
 - **Capex Subsidy:** Provides a 20% subsidy on eligible capital expenditure for projects starting production on time. Rates decrease to 17% or 14% for delayed projects.
 - **Opex Subsidy:** Linked to incremental sales over the base year. Disbursed in stages: 40% in Year 2 and 60% in Year 5, based on revenue thresholds.
 - **Hybrid Option:** Beneficiaries can combine both Capex and Opex support within prescribed ceilings.
 - **Beneficiary Categories:**
 - **Group A:** Large entities (Global Manufacturing Revenue $\geq$ ₹200 crore) — Total ceiling of ₹50 crore.
 - **Group B:** Smaller entities (GMR $<$ ₹200 crore) — Total ceiling of ₹25 crore.
 - **Eligibility:** Open to registered Indian recyclers for both new (**Greenfield**) and modernization (**Brownfield**) projects.
 - **Value Chain Focus:** The incentive is strictly for entities involved in the actual extraction of critical minerals, excluding entities engaged only in **black mass** production.
- **Significance and Strategic Context:**
 - **Import Dependence:** India currently imports **100% of its lithium, cobalt, and nickel** requirements and over 80% of its overall critical mineral needs. This heavy reliance exposes key sectors to geopolitical supply chain vulnerabilities, particularly due to China's dominance in global processing.
 - **Supply Chain Concentration:** China controls over **75% of global refining capacity** for several critical minerals, including rare earth elements, gallium, and graphite.
 - **Economic Security:** Aims to curb an annual foreign exchange outflow exceeding **₹80,000 crore** spent on critical mineral imports.
 - **Circular Economy:** Taps into secondary sources, with India generating an estimated **1.75 million tonnes of e-waste** and nearly **60 kilotonnes of spent LIBs** annually.

National Critical Mineral Mission (NCMM)

- **Launched:** Approved by the Union Cabinet in January 2025.
- **Mission Period:** FY 2024–25 to FY 2030–31.
- **Financial Commitment:** Total outlay of **₹16,300 crore**, with an expected additional investment of **₹18,000 crore** by Public Sector Undertakings (PSUs).
- **Core Objectives:**
 - Enhance domestic exploration and mining of critical minerals.
 - Reduce import dependency through a whole-of-government approach.
 - Promote recycling and a circular economy for critical minerals.
 - Encourage overseas acquisition of critical mineral assets by Indian companies.
 - **Target:** Auction more than 100 critical mineral blocks, expand exploration to offshore regions for polymetallic nodules.
 - **Implementing Body:** **Geological Survey of India (GSI)** tasked with 1,200 exploration projects during the mission period.

Additional Information

- **Critical Minerals in India**
 - The Ministry of Mines has identified a list of **30 critical minerals** essential for economic development and national security.
 - Key examples include: **Antimony, Beryllium, Bismuth, Cobalt, Copper, Gallium, Germanium, Graphite, Hafnium, Indium, Lithium, Molybdenum, Niobium, Nickel, Platinum Group Elements (PGE), Phosphorous, Potash, Rare Earth Elements (REE), Rhenium, Silicon, Strontium, Tantalum, Tellurium, Tin, Titanium, Tungsten, Vanadium, Zirconium, Selenium, and Cadmium.**
- **Global and Domestic Context**
 - **Strategic Importance:** Critical minerals are the building blocks for **clean energy technologies** (EV batteries, solar panels, wind turbines), **advanced manufacturing, electronics, defense** applications, and **semiconductors**. Securing their supply chains is integral to achieving **Atmanirbhar Bharat** and **Viksit Bharat @2047** goals.
 - **Global Cooperation:** India is actively pursuing international partnerships for critical mineral supply chain diversification. For instance, India and the **European Union (EU)** have launched a **€15.2 million (approx. ₹169 crore)** joint initiative to support EV battery recycling technologies.

India Raises Gold and Silver Import Tariffs to 15% to Curb Imports and Support Rupee

What's the News?

The Government of India has sharply increased the effective import tariff on **gold** and **silver** from **6% to 15%**, and on **platinum** from **6.4% to 15.4%**. This policy move is primarily aimed at curbing non-essential imports to protect foreign exchange reserves, support the depreciating rupee, and ensure macroeconomic stability amid global uncertainties, including the **West Asia crisis**. Gold imports surged by over **24%** to a record **\$71.98 billion** in FY 2025-26, making it the second-largest import item after crude oil.

Revised Tariff Structure

- **New Duty Components:** The effective tariff is a combination of a **10% Basic Customs Duty (BCD)** and a **5% Agriculture Infrastructure and Development Cess (AIDC)**.
- **Platinum:** The effective import duty on platinum has been raised to **15.4%** (10% BCD + 5.4% AIDC).
- **Coverage:** The revised rates apply to various forms of gold and silver, including:
 - Gold bars and silver bars
 - **Dore** (semi-pure alloy)
 - Coins
 - Jewellery findings and precious metal-related industrial imports.
- **Trade Agreements:** The revised duties also apply to gold imported from the **United Arab Emirates (UAE)** under the fixed-quantity quota system outlined in the India-UAE Comprehensive Economic Partnership Agreement (CEPA).

Rationale Behind the Hike

- **Taming Non-Essential Imports:** Gold and silver are classified as non-essential imports. The surge in gold import value, driven by soaring global prices, exerts significant pressure on India's import bill and current account deficit (CAD).
- **Foreign Exchange Conservation:** The primary goal is to moderate demand and conserve foreign exchange reserves at a time when external vulnerabilities are elevated.
- **Currency Stabilization:** Reducing the dollar demand for gold imports is intended to ease pressure on the Indian rupee, which has been one of Asia's weaker-performing currencies.
- **Geopolitical Context:** The policy is a direct response to global economic uncertainty and supply chain disruptions stemming from the ongoing **West Asia conflict**, which has kept crude oil prices high and supply chains unstable.

Implications and Concerns

- **Trade Deficit:** The move is expected to help narrow the trade deficit by reducing the value of precious metal imports.
- **Demand & Prices:** Higher import costs will increase domestic gold and silver prices. Market estimates suggest import volumes could fall by **10-15%**, while gold and silver prices on Indian exchanges (MCX) are likely to rise.

- **Smuggling Risk:** A significant concern is a potential resurgence in **gold smuggling**, which had reduced after tariffs were lowered in mid-2024. Higher duty differentials create illicit profit margins for smugglers.
- **Duration:** Government sources indicate the elevated duty is a temporary measure, likely to remain until the West Asia crisis de-escalates and crude oil supply chains stabilize, potentially for up to one year.

Additional Info

- **Background: A Timeline of Gold Import Duties**
 - **2012:** India raised gold import duty to a peak of **10%** to control a ballooning current account deficit.
 - **Mid-2024:** The government significantly reduced customs duty on gold and silver to **6%** to disincentivize smuggling, which had become rampant.
 - **May 13, 2026:** Import duty hiked back to **15%** amid fresh external sector pressures.
- **Key Concepts & Terms**
 - **Basic Customs Duty (BCD):** A tax levied on goods imported into India, calculated as a percentage of the assessable value.
 - **Agriculture Infrastructure and Development Cess (AIDC):** A surcharge levied on certain imported goods (including gold and silver) to finance agriculture infrastructure projects. While collected as part of customs duties, it is earmarked for specific purposes.
 - **Current Account Deficit (CAD):** A measurement of a country's trade where the value of goods and services it imports exceeds the value of goods and services it exports. Gold is a major contributor to India's CAD.
 - **Gold Dore:** A semi-pure alloy of gold and silver, imported for refining into pure gold.

Government Cuts Royalty Rates for Oil and Gas Production to Boost Domestic Output

What's the News?

The **Ministry of Petroleum and Natural Gas** notified revised royalty rates for crude oil and natural gas production on May 8, 2026. The revision significantly lowers the royalty burden on producers across onshore, offshore, deepwater, and ultra-deepwater fields. The move aims to incentivize domestic exploration and production (E&P), attract investment into capital-intensive fields, and reduce India's heavy dependence on imported crude oil and natural gas.

Revised Royalty Structure

- **Crude Oil:**
 - **Onshore:** Effective royalty reduced to **10%** (from 16.66% for nominated blocks). For nominated blocks of ONGC and Oil India, the rate was reduced from 20% to 12.5% on an ad valorem basis calculated on the well-head price.
 - **Offshore:** Reduced to **8%** (from 9.09%).
- **Natural Gas:**

- Effective royalty rate reduced to **8%** (from 10%).
- A new flat deduction formula introduced for calculating the **well-head price**: a fixed deduction of **20%** of the sale price for nomination regime blocks, and **15%** for all other regimes, towards post-well-head costs.
- **Deepwater & Ultra-Deepwater Fields** (awarded under DSF Policy and HELP):
 - **First 7 years** of commercial production: **Zero royalty** for crude oil, condensate, and natural gas.
 - **From 8th year onwards**:
 - Deepwater blocks: **5%** royalty.
 - Ultra-deepwater blocks: **2%** royalty.
- **HELP Blocks (Onshore & Shallow Water)**:
 - Onshore HELP blocks: Royalty rates vary by basin category (e.g., 11.25%, 10%, 8.75% for Category-I, II, III basins respectively).
 - Shallow-water HELP blocks: Royalty fixed at **7.5%**.

Significance

- **Energy Security**: India imports over **85%** of its crude oil requirements. In FY25, import dependency was **88.3%**, with a crude import bill of approximately **\$137 billion**. Boosting domestic production is critical to mitigating external vulnerabilities.
- **Attracting Investment**: Lower royalty rates directly improve the profitability and cash flows of upstream companies like **ONGC**, **Oil India Limited (OIL)**, and private players like **Vedanta**. Analysts estimate the move could increase the fair value of ONGC by **7%-9%** and Oil India by **9%-11%**.
- **Making Challenging Fields Viable**: Deepwater and ultra-deepwater projects are highly capital-intensive. The concessional royalty regime (zero royalty for the first 7 years) makes these projects financially viable, encouraging exploration in frontier areas.
- **Reducing Import Bill**: Increased domestic output will help lower the oil import bill, easing pressure on the **Current Account Deficit (CAD)** and supporting the Indian Rupee.

Additional Info

- **Concepts**
 - **Royalty**: A statutory payment made to the government (or mineral rights owner) for the extraction of natural resources from a licensed area. In India's oil and gas sector, it is calculated on production or the well-head value as prescribed under the applicable policy regime.
 - **Well-Head Price**: The value of crude oil or natural gas at the production point, before transportation, processing, and marketing costs are added. The new flat deduction formula simplifies its calculation for royalty purposes.
- **Policies and Frameworks**
 - **Hydrocarbon Exploration and Licensing Policy (HELP)**: Launched in 2016, HELP is a key policy governing the exploration and

production of hydrocarbons in India. It features a **Revenue Sharing Model**, uniform licensing, reduced royalty rates, and no oil cess.

- **Discovered Small Field (DSF) Policy**: Launched in 2016, it covers the monetisation of discovered but undeveloped hydrocarbon fields. Offers liberalised terms, including marketing and pricing freedom and lower taxes, to attract investment.
- **Nominated Blocks**: Fields awarded to state-owned companies (ONGC, OIL) on a nomination basis, prior to the introduction of competitive bidding under the New Exploration Licensing Policy (NELP).
- **Major Upstream Companies**:
 - **Oil and Natural Gas Corporation (ONGC)**: India's largest crude oil and natural gas producer, a Maharatna PSU under the Ministry of Petroleum and Natural Gas.
 - **Oil India Limited (OIL)**: A Navratna PSU engaged in exploration, development, and production of crude oil and natural gas.

Cabinet Approves ₹37,500 Crore Scheme for Coal and Lignite Gasification Projects

What's the News?

The **Union Cabinet**, chaired by the Prime Minister, approved the **Scheme for Promotion of Surface Coal/Lignite Gasification Projects** with a financial outlay of **₹37,500 crore**. The initiative aims to accelerate India's coal gasification programme, supporting the national target of gasifying **100 million tonnes (MT) of coal by 2030** to strengthen energy security and reduce import dependence.

Scheme for Promotion of Surface Coal/Lignite Gasification Projects

- **Objective**: To incentivize new surface coal and lignite gasification projects for the production of synthesis gas (syngas) and its downstream products, targeting the gasification of approximately **75 MT of coal/lignite**.
- **Financial Outlay & Incentives**:
 - Total scheme outlay is **₹37,500 crore**.
 - Financial incentive capped at **20% of the plant and machinery cost**.
 - Incentive limits: **₹5,000 crore per project**, **₹9,000 crore per product** (excluding synthetic natural gas and urea), and **₹12,000 crore per entity group**.
 - Incentives are **milestone-linked**, disbursed in four equal installments.
- **Project Selection**: Projects will be selected through a **competitive bidding process**, with evaluation benchmarks on project cost, coal input, and syngas output.
- **Policy Framework**:
 - The scheme is **technology-agnostic** but encourages **indigenous technologies**.
 - Coal linkage tenure for this sub-sector has been extended to **30 years** under the Non-

Regulated Sector (NRS) linkage auction framework.

- **Expected Benefits:**

- Mobilization of investments worth **₹2.5 lakh crore to ₹3 lakh crore**.
- Generation of approximately **50,000 direct and indirect jobs** across 25 projects in coal-bearing regions.
- Annual revenue of approximately **₹6,300 crore** from utilizing 75 MT of coal/lignite, plus GST and other levies.

Additional Info

- **Coal Gasification:** A thermo-chemical process converting solid coal or lignite into synthesis gas (syngas), a mixture primarily of carbon monoxide and hydrogen. Syngas serves as a versatile intermediate for producing chemicals, fertilizers (urea), fuels, and industrial gases.
- **India's Coal Reserves:** India possesses one of the world's largest coal reserves (~**401 billion tonnes**) and lignite reserves (~**47 billion tonnes**). Coal accounts for over 55% of the country's energy mix.
- **National Coal Gasification Mission:** Launched in 2021, the mission set the **100 MT coal gasification target by 2030**. This new scheme builds upon an earlier ₹8,500 crore scheme approved in January 2024, under which eight projects are already under implementation.

7th Edition of LEADS 2025 Report Released

What's the News?

The **Department for Promotion of Industry and Internal Trade (DPIIT)**, Ministry of Commerce & Industry, has released the **7th edition of the Logistics Ease Across Different States (LEADS) 2025** report. Union Minister **Piyush Goyal** unveiled the report and also felicitated winners of the **LEAPS 2025** (Logistics Excellence, Advancement and Performance Shield) awards. The report serves as India's flagship annual benchmarking tool to assess and improve the logistics ecosystem across all States and Union Territories (UTs).

LEADS 2025

- **Methodological Evolution:** LEADS 2025 features a more rigorous methodology, transitioning from a 3-tier to a new **4-tier performance framework**.
 - The new categories are: **Exemplars, High Performers, Accelerators, and Growth Seekers**.
 - This change aims to better reflect the maturity and diversity of different logistics ecosystems.
- **Top Performers:** The report identified the following leaders across the new categories:
 - **Exemplars (Gold Standard):** **Tamil Nadu, Uttar Pradesh, Mizoram, and Delhi** were recognized as the top performers, demonstrating sustained excellence across policy, infrastructure, and regulatory dimensions.
 - **High Performers:** **Gujarat, Kerala, Maharashtra, and Telangana** were

acknowledged for strong and consistent outcomes across most indicators. Notably, **Telangana** was ranked as a 'High Performer' among landlocked states, and **Jammu and Kashmir** also achieved this status.

- **Accelerators:** **Andhra Pradesh, Odisha, Punjab, and Karnataka** were identified for their notable improvement momentum and reform-oriented trajectory.
- **Growth Seekers:** **West Bengal, Rajasthan, and Sikkim** are in the foundational stage of logistics system development.

- **Enhanced Objectivity:** A significant methodological shift is the increased emphasis on measurable data. Nearly **59% weightage** is now assigned to **objective indicators**, reducing reliance on perception-based surveys.

- **Assessment Parameters:** States and UTs are evaluated across four key pillars:

- **Policy and Institutional Framework**
- **Infrastructure Quality** (covering Road, Rail, and Warehouse facilities)
- **Reliability of Services**
- **Operating Environment** (including Safety and Ease of Entry)

India's Logistics Sector: Context & Challenges

- **High Logistics Cost:** India's logistics cost is estimated at around **~8% of GDP** (2023-24), which is higher than that of many developed economies. A DPIIT and NCAER assessment pegged this cost at **7.97% of GDP** in late 2025. The government aims to reduce this to bring it in line with global benchmarks.
- **Infrastructure Gaps:** Key issues include poor road quality, port congestion, and weak multimodal connectivity, which increase transit times and costs.
- **Modal Imbalance:** Over **60% of freight movement** in India is by road, leading to higher fuel consumption and congestion, as opposed to more cost-effective rail and waterways.

Additional Info

- **About LEADS:**

- Conceived in **2018** on the lines of the World Bank's **Logistics Performance Index (LPI)**.
- It is a key initiative to promote **competitive and cooperative federalism** among Indian states.

- **About LEAPS 2025:**

- The **Logistics Excellence, Advancement and Performance Shield (LEAPS)** awards were given across **13 categories**, recognizing excellence in Core Logistics, MSMEs, Startups, and more.

India Launches Mega Offshore Hydrocarbon Survey in Bay of Bengal

What's the News?

- India has initiated a **massive multi-basin offshore survey** to explore untapped oil and natural gas reserves across the **Bay of Bengal** and adjoining eastern offshore regions.
- The **Directorate General of Hydrocarbons (DGH)** is leading the programme, involving **2D broadband marine seismic and gravity-magnetic data acquisition** over **1.6 lakh line kilometres**.
- The initiative aims to identify **commercially viable hydrocarbon traps** in underexplored deepwater and frontier basins, supporting India's goal of reducing import dependence and strengthening **energy security**.

Survey Scope & Implementation

- Geographical Coverage:** The survey spans five key offshore sedimentary basins:
 - Bengal-Purnea Basin:** ~45,000 line km
 - Mahanadi Basin:** Included in eastern offshore coverage
 - Krishna-Godavari (KG) Basin:** ~43,000 line km
 - Cauvery Basin:** ~30,000 line km
 - Andaman Basin:** ~43,000 line km (frontier area with geological links to Myanmar/Indonesia gas fields)
- Technical Approach:**
 - Specialised vessels will tow **streamer cables** to emit sound waves and record subsurface echoes.
 - Data processing will generate high-resolution **3D subsurface images** to map potential hydrocarbon-bearing structures.
- Timeline & Agencies:**
 - Survey execution expected over **nearly two years**.
 - Oil and Natural Gas Corporation (ONGC)** and **Oil India Ltd** plan complementary **stratigraphic drilling** campaigns to validate seismic findings.

Policy Framework & Strategic Significance

- Licensing Mechanism:**
 - Survey data will feed into the **Open Acreage Licensing Programme (OALP)** under the **Hydrocarbon Exploration and Licensing Policy (HELP)**.
 - Recent **OALP Bid Round-X** offered 25 offshore blocks; bid deadlines were extended to encourage investor participation.
- Energy Security Imperative:**
 - India imports **~85% of its crude oil** and a significant share of natural gas, making the economy vulnerable to global price volatility.
 - Enhancing domestic production aligns with the target to raise **crude output to 100 MMT** and increase gas production by 2030.

- The government aims to attract **\$100 billion in oil and gas exploration investments** by 2030 as part of a broader \$500 billion energy sector push.

Frontier Basin Focus:

- The **Andaman Basin**, opened for exploration in 2022 after being a "No-Go" area, holds promise due to geological similarities with proven gas fields in Southeast Asia.

Additional Info

Key Institutional Roles:

- Directorate General of Hydrocarbons (DGH):** Technical regulator under the **Ministry of Petroleum and Natural Gas**; mandates sound resource management with environmental safeguards.
- ONGC & Oil India:** Public Sector Undertakings executing exploration and drilling operations.

Related Policy Initiatives:

- HELP (2016):** Introduced revenue-sharing contracts, marketing freedom, and a single licence for all hydrocarbons.
- National Monetisation Pipeline:** Includes brownfield hydrocarbon assets to unlock capital for new exploration.

Constitutional & Governance Context:

- Entry 53, Union List (Seventh Schedule):** Grants Parliament exclusive power to regulate oilfields and mineral resources.
- Sagarmala Programme:** Complements offshore exploration by enhancing port-led infrastructure for logistics support.

RBI Discontinues Investment Fluctuation Reserve Requirement for Commercial Banks to Unlock Capital

What's the News?

- The **Reserve Bank of India (RBI)** has officially discontinued the mandatory requirement for commercial banks to maintain an **Investment Fluctuation Reserve (IFR)**.
- This regulatory change takes effect under the **Reserve Bank of India (Commercial Banks - Classification, Valuation, and Operation of Investment Portfolio) Second Amendment Directions**.
- The policy intervention shifts existing IFR balances into core capital, streamlining capital frameworks and releasing trapped systemic liquidity.

The Discontinuation of Investment Fluctuation Reserve (IFR)

- The Core Mechanism:** The IFR was an additional countercyclical safety buffer that banks were mandated to build out of profits earned from investment portfolio gains. Its primary purpose was to absorb accounting shocks arising from interest-rate volatility and price fluctuations (market risk) in a bank's investment portfolio, particularly government bonds.
- Why it Was Scrapped:** The RBI determined that separate IFR provisioning has become redundant. Modern accounting structures, standard mark-to-

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market (MTM) requirements, and updated Basel III prudential norms for **Capital Charge for Market Risk** already provide robust safeguards against portfolio depreciation.

- **Treatment of Existing Balances:**
 - Commercial banks are instructed to transfer outstanding IFR balances "below the line" to either the **Statutory Reserve, General Reserve**, or the **Balance of Profit and Loss Account**.
 - By reversing these balances into core reserves, the accumulated funds are reclassified into **Common Equity Tier 1 (CET1)** capital—the highest quality of core banking capital.
- **Differentiated Banking Treatment:**
 - While the requirement is fully withdrawn for scheduled commercial banks, the framework has been eased rather than scrapped for **Urban Co-operative Banks (UCBs)**, **Small Finance Banks (SFBs)**, **Payments Banks (PBs)**, and **Regional Rural Banks (RRBs)**.
 - For these entities, compliance has been simplified: minimum IFR targets will now be assessed only on financial balance-sheet dates rather than continuously on an ongoing basis.

Macroeconomic & Banking Impact

- **Capital Efficiency:** The rule removal is projected to immediately unlock a massive trapped corpus of approximately **₹35,000 crore to ₹40,000 crore** across the Indian banking system.
- **Capital Adequacy Boost:** Financial analysts estimate that shifting these funds into core Tier 1 capital will boost the **Capital Adequacy Ratio (CAR)** of individual commercial banks by roughly **20 to 30 basis points** (0.2% to 0.3%).
- **Enhanced Lending Capacity:** By converting a secondary provisioning buffer into core equity, banks gain substantial balance-sheet flexibility to expand corporate and retail credit operations without needing to raise immediate fresh equity.

Additional Info

- **Key Banking Indicators:**
 - **Tier 1 Capital:** The core capital held by a bank, consisting primarily of stock issues and disclosed reserves (such as statutory reserves), used to measure a bank's financial strength.
 - **Capital to Risk-weighted Assets Ratio (CRAR):** A metric used to protect depositors and promote stability and efficiency in financial systems globally. Concurrently, the RBI eased CRAR norms by allowing banks to include quarterly net profits in capital calculations irrespective of provisioning fluctuations.
 - **Investment Depreciation Reserve (IDR):** A distinct provision maintained by banks against specific, actual depreciation in the value of investments, which remains unaffected by the IFR scrap.

- **Prudential Frameworks & Global Alignment:**
 - The deletion of the IFR aligns India's domestic macroprudential governance more tightly with standard **Basel III international banking accords**, reducing overlapping provisioning layers.

NCDEX Launches India's First Weather Derivative Contract

What's the News?

- The **National Commodities and Derivatives Exchange (NCDEX)** has launched **RAINMUMBAI**, India's first **SEBI-approved** exchange-traded weather derivative contract.
- The product enables market participants to hedge financial risks arising from **monsoon rainfall variability** using a cash-settled futures instrument linked to Mumbai's rainfall data.
- Developed in collaboration with **IIT Bombay** and based on official data from the **India Meteorological Department (IMD)**, the contract transforms weather uncertainty into a measurable, tradable risk within a regulated framework.

RAINMUMBAI: Contract Structure & Features

- **Underlying Index:** Measures deviation of actual rainfall from the **Long Period Average (LPA)** for Mumbai during monsoon months (June–September).
- **Settlement Mechanism:** Purely **cash-settled** based on observed IMD rainfall data; no physical delivery or loss assessment required.
- **Key Specifications:**
 - Tick Size: **1 mm**
 - Lot Multiplier: **₹50 per mm**
 - Maximum Order Size: **50 lots**
 - Daily Price Limit: Initial **6%**, enhanced **3%**, aggregate **9%**
- **Data Source:** IMD's surface rainfall and Automatic Weather Stations at **Santacruz** and **Colaba** observatories.
- **Target Users:** Farmers, construction firms, power utilities, logistics operators, banks with agricultural loan portfolios, and FMCG distributors.

Additional Info

- **Regulatory & Institutional Framework**
 - **SEBI:** Regulates exchange-traded derivatives under the **Securities Contracts (Regulation) Act, 1956**.
 - **NCDEX:** Leading agricultural commodity derivatives exchange; operates under SEBI oversight.
 - **India Meteorological Department (IMD):** Apex agency under the **Ministry of Earth Sciences** for weather forecasting and climatological data.
- **Key Technical Concepts**
 - **Weather Derivatives:** Financial contracts whose payoff is linked to weather variables (rainfall, temperature); used to hedge revenue risks from climate variability.

- **Parametric Settlement:** Payouts triggered when a predefined index threshold is crossed, eliminating subjective loss assessment.
- **Long Period Average (LPA):** 30-year climatological benchmark (1991–2020) used to normalise rainfall data for anomaly detection.
- **Global Context & Future Scope**
 - Weather derivatives are widely used in the US, Europe, and Japan by agriculture, energy, and tourism sectors.
 - NCDEX plans to expand the framework to other geographies (e.g., agricultural belts) and variables (e.g., temperature-based indices for heatwave risk).
 - Potential integration with **PMFBY (Pradhan Mantri Fasal Bima Yojana)** could strengthen India's agricultural risk ecosystem.

Should the Rupee Be Left to Depreciate? Policy Debate & Economic Implications

What's the News?

- Intensifying debate on whether the **Reserve Bank of India (RBI)** should intervene to stabilise the **Indian Rupee (INR)** or allow market forces to determine its value amid global volatility.
- Proponents of non-intervention (including economists like **Gita Gopinath**) argue that a market-determined exchange rate enables automatic correction of **current account deficits** through improved export competitiveness and reduced import demand.
- Critics warn that unchecked depreciation—especially when driven by **speculative capital outflows**—can trigger imported inflation, hurt household purchasing power, and destabilise financial markets without delivering immediate export gains.
- **RBI's calibrated approach:** Active but selective intervention using forex reserves, forward markets, and monetary tools to curb excessive volatility while allowing gradual market adjustment.

Arguments for Limited Intervention (Market-Led Approach)

- **External Sector Adjustment:** A weaker rupee makes Indian exports cheaper and imports costlier, theoretically narrowing the trade deficit over time.
- **Reserve Conservation:** Reduced intervention preserves **foreign exchange reserves** (~\$650 billion as of recent data) for genuine emergencies.
- **Market Efficiency:** Freely floating rates reflect underlying economic fundamentals, reducing distortions from artificial price signals.
- **Export Competitiveness:** Moderate, sustained depreciation can boost sectors like textiles, IT services, and pharmaceuticals in global markets.

Arguments for Active Intervention (Stability-First Approach)

- **Imported Inflation Risk:** India imports ~85% of its crude oil; a falling rupee raises fuel prices, feeding into transport, food, and core inflation—disproportionately affecting low-income households.
- **Weak vs. Falling Rupee Distinction:**
 - A *structurally weak* rupee (stable at lower value) can aid exports.
 - A *rapidly falling* rupee (volatile decline) triggers panic import front-loading and delays export orders as buyers await further price drops.
- **Speculative Capital Dominance:** Short-term **Foreign Institutional Investor (FII)** flows—driven by global interest rate differentials or risk sentiment—can decouple currency movements from real economic fundamentals.
- **Financial Stability:** Disorderly depreciation can erode investor confidence, increase external debt servicing costs, and trigger capital flight.

RBI's Toolkit for Currency Management

- **Spot Market Operations:** Direct sale of **USD** from forex reserves to absorb excess rupee liquidity during sharp intraday volatility.
- **Forward & Swap Interventions:** Managing future dollar liquidity expectations without immediate reserve depletion.
- **Moral Suasion:** Advising public sector banks and large importers to hedge foreign exchange exposures promptly.
- **Monetary Policy Coordination:** **Monetary Policy Committee (MPC)** may adjust repo rates to influence capital flows and inflation expectations.
- **Fiscal-Monetary Synergy:** Coordination with Finance Ministry on measures like adjusting import duties on non-essential goods (e.g., gold) to moderate dollar outflows.

Additional Info

- **Legal & Institutional Framework:**
 - **RBI Act, 1934:** Empowers RBI to manage foreign exchange reserves and intervene in forex markets under Section 40.
 - **Foreign Exchange Management Act (FEMA), 1999:** Governs external sector transactions; facilitates current account convertibility while regulating capital flows.
 - **Constitutional Context:** **Article 246** (Union List Entry 36) empowers Parliament on currency and foreign exchange; **Article 284** governs custody of public funds including reserves.
- **Macroeconomic Indicators for Exams:**
 - **Current Account Deficit (CAD):** Widening CAD increases pressure on INR; sustainable threshold often cited at ~2.5% of GDP.
 - **Forex Reserves Coverage:** India's reserves cover ~10 months of imports (well above IMF's 3-month benchmark).
 - **Real Effective Exchange Rate (REER):** RBI monitors REER (trade-weighted, inflation-

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adjusted) to assess rupee's true competitiveness.

- **Global Precedents:**
 - **Japan (2024):** Finance Ministry signalled "decisive action" to curb excessive yen depreciation.
 - **Emerging Markets:** Most adopt "managed float" regimes—allowing market determination while intervening against disorderly moves.
- **Policy Linkages:**
 - **PLI Schemes:** Boost domestic manufacturing to reduce import dependence and strengthen export capacity—structural solution to external vulnerability.
 - **Mission LiFE & Energy Transition:** Reducing fossil fuel imports via renewables enhances rupee stability long-term.
 - **SDG 8 (Decent Work) & SDG 12 (Responsible Consumption):** Import rationalisation aligns with sustainable production-consumption goals.

DPIIT Releases Operational Guidelines for BHAVYA Scheme to Develop 100 Industrial Smart Cities

What's the News?

The **Department for Promotion of Industry and Internal Trade (DPIIT)**, under the **Ministry of Commerce & Industry**, has released the operational guidelines for the **Bharat Audyogik Vikas Yojna (BHAVYA)** scheme. This **Central Sector Scheme** aims to establish **100 world-class, investment-ready industrial smart cities** across India with a total financial outlay of **₹33,660 crore** over six years (FY 2026-27 to FY 2031-32). The guidelines were unveiled by **Union Commerce and Industry Minister Piyush Goyal**. The scheme is designed to accelerate the '**Make in India**' and '**Aatmanirbhar Bharat**' (Self-Reliant India) initiatives by providing plug-and-play infrastructure, streamlining regulatory approvals, and ensuring multi-modal logistics connectivity for global and domestic manufacturers.

BHAVYA Scheme: A Central Sector Push for Manufacturing

- **Nodal Ministry & Implementation:** The **Department for Promotion of Industry and Internal Trade (DPIIT)** is the nodal agency. The **National Industrial Corridor Development Corporation (NICDC)** is designated as the Project Management Agency (PMA).
- **Objective:** To eliminate entry barriers for manufacturers by providing ready-built infrastructure, thereby building a competitive, manufacturing-led economy and strengthening domestic supply chains.
- **Nature of Scheme:** It is a **Central Sector Scheme**, which means it is 100% funded by the central government.
- **Alignment with Existing Missions:** The initiative is strategically aligned with broader national objectives, including **Make in India**, the **PM Gati Shakti National**

Master Plan, and the goal of positioning India as a globally competitive manufacturing destination.

What Are the Operational Guidelines?

The comprehensive framework details every aspect of the scheme's implementation:

- **Phased Development:** The scheme targets the development of 100 parks. In the first phase, **50 industrial parks** will be selected through a **challenge-based competitive process** among states and union territories.
- **Selection Criteria:** Proposals will be evaluated on a matrix of objective indices, including multimodal connectivity, site suitability, quality of infrastructure, industrial ecosystem strength, policy facilitation, digital governance readiness, and long-term sustainability.
- **Land Requirements:** Prescribes a minimum land area of **100 acres for non-hilly states** and **25 acres for hilly states, northeastern states, UTs, and smaller states**. Parks up to **1,000 acres** are also permitted.
- **Development Model:** Projects will be executed through **Special Purpose Vehicles (SPVs)** incorporated under the **Companies Act, 2013**. The government's financial assistance is structured as equity contributions tied to state land transfers and project milestones.
- **Multi-Tier Infrastructure & Financial Support:**
 - **Financial Subsidy:** Provides financial assistance of **up to ₹1 crore per acre** for core infrastructure like roads, underground utilities, drainage, and Common Effluent Treatment Plants (CETPs).
 - **External Infrastructure:** Funds up to **25% of the cost** for external infrastructure to ensure seamless last-mile connectivity to national freight grids.
 - **Holistic Development:** The framework supports **greenfield and eligible brownfield** projects, covering value-added infrastructure (factory sheds, labs, warehousing) and social infrastructure (worker housing, amenities).
- **Monitoring & Transparency:** The framework mandates **GIS-based monitoring systems**, periodic progress reporting, audit mechanisms, and oversight by a **National Level Steering Committee** chaired by the Secretary of DPIIT.

India Ranks Second in APAC Data Centre Capacity

What's the News?

India has emerged as the **second-largest data centre market in the Asia-Pacific (APAC)** region, with an operational capacity of **1.6 GW**, according to the Cushman & Wakefield Global Data Center Market Comparison 2026 report. The country also ranks among the **top three globally** by development pipeline, with **3.1 GW** of capacity under construction and planned. India's growth is driven by accelerating **artificial intelligence (AI) adoption, hyperscale cloud expansion**, and rising **enterprise demand**.

India's Data Centre Market

- **Operational Capacity:** India has **1.6 GW** of live data centre capacity, placing it second in APAC. The market remains underpenetrated with a density of **~943,000 people per MW**, indicating significant room for growth.
- **Development Pipeline:** **3.1 GW** is under construction or planned. Additionally, over **10.5 GW** of capacity is in the land acquisition stage, reflecting strong long-term potential.
- **Key Hubs:**
 - **Mumbai:** Primary market, expected to cross **1 GW** operational capacity by end-2026.
 - **Hyderabad:** Top secondary market in APAC, ranked **9th globally**.
 - **Chennai, Delhi NCR, Pune:** Other key secondary markets witnessing rising investment.
 - **Bengaluru:** Categorized as a tertiary market.
- **Vacancy Trends:** Vacancy levels declined to **12.9%** in Q4 2025, signalling strong absorption of new supply.

Drivers of Growth

- **AI & Hyperscale Cloud:** AI workloads and large-scale cloud deployments are reshaping capacity expansion strategies, especially in Mumbai, Hyderabad, and Pune.
- **Enterprise Digitalisation:** Rising data consumption, 5G rollout, and digital transformation across sectors are fuelling demand.
- **Emerging Locations:** Vizag (Visakhapatnam) is positioning itself as a future AI hub, with plans to scale digital capacity to **6.5 GW**.

Policy & Infrastructure Context

- **Draft National Data Centre Policy 2025:** Proposes tax exemptions of up to **20 years** and **GST input tax credits** on capital expenditure to incentivise investments.
- **Power Infrastructure:** India ranked **fourth globally** in electricity production growth (2022–2025), but **transmission losses** remain high at **14.2%**.
- **TRAI Recommendations:** Released recommendations on a regulatory framework for data centres, content delivery networks, and interconnect exchanges to promote the data economy.

Challenges & Opportunities

- **Underpenetration:** With **1 MW per million internet users** (vs. 4 MW in China, 51 MW in the US), India has immense growth headroom.
- **Power Availability:** Access to reliable, cost-effective power and execution capability are becoming critical differentiators for market competitiveness.
- **Investment Potential:** India's data centre sector is projected to attract **\$20–25 billion** in investments by 2030, with capacity expected to surpass **4.5 GW**.

Additional Information

- **Data Centre Capacity Measurement:** 1 GW = 1,000 MW; India's operational capacity grew from **~375 MW in 2020** to **1.6 GW in 2026**.
- **Global Context:** Dallas ranked as the world's top primary market; in APAC, only **Johor** and **Sydney** featured in the global top 10.
- **Related Initiatives:**

- **National e-Governance Division (NeGD)** under MeitY is spearheading the National Data Centre Policy consultation.
- **Data Protection Board of India** established under the **Digital Personal Data Protection Act, 2023** to oversee compliance.

Supreme Court Upholds 28% GST on Online Gaming

What's the News?

- The **Supreme Court** has upheld the **28% GST levy** on **online gaming platforms**, validating its **retrospective application** to transactions prior to the 2023 amendment.
- The bench ruled that platforms involving **staking on uncertain outcomes** constitute **betting and gambling** under the **GST framework**, making them taxable on the **full face value of bets**, not just platform fees.
- The judgment also affirms **state governments' power** to ban online money gaming, reinforcing regulatory clarity but raising compliance burdens for the sector.

Constitutional Validity & Legal Framework

- **Constitutional Basis:** The levy was upheld as valid under **Articles 366(12) and 366(12A)**, with **Article 246A** empowering Parliament and State legislatures to legislate on **GST**.
- **Actionable Claims:** Online gaming activities are classified as **actionable claims** under the **CGST Act, 2017**, bringing them within the ambit of taxable supplies.
- **Skill vs. Chance:** The Court held that once monetary stakes are involved, even **games of skill** assume the character of **betting/gambling** for GST purposes, overriding earlier distinctions.
- **Intermediary Status Rejected:** Platforms cannot claim exemption as mere facilitators; they are treated as **suppliers** liable for GST compliance.

Financial & Sectoral Impact

- **Tax Liability:** The retrospective levy exposes the sector to an estimated **₹1.5–2.5 lakh crore** in pending GST demands, significantly impacting company balance sheets.
- **Affected Entities:** Major petitioners including **Gameskraft, Games24x7, Head Digital Works**, and the **E-Gaming Federation** face reinstated tax notices, with one demand alone exceeding **₹21,000 crore**.
- **Compliance Shift:** Tax calculation now applies to the **total bet value** rather than **Gross Gaming Revenue (GGR)**, altering revenue models and pricing strategies for real-money gaming firms.

Regulatory & Federal Dimensions

- **State Bans Upheld:** The Court validated laws enacted by **Tamil Nadu** and **Karnataka** prohibiting online games involving stakes, reinforcing **state legislative competence** under the **Concurrent List**.
- **GST Council Clarification:** The August 2023 clarification treating the 28% levy as **clarificatory** (not

amendatory) enabled retrospective enforcement, aligning with the principle of **fiscal continuity**.

- **Overseas Entity Registration:** Amendments mandating **foreign gaming companies** to register in India from October 2023 strengthen **tax sovereignty** and curb cross-border evasion.

Additional Info

- **Constitutional & Legal Provisions:**
 - **Article 246A:** Grants exclusive power to Parliament (and States for intra-state supplies) to legislate on GST.
 - **CGST Act, 2017:** Defines "actionable claims" (Schedule III) and governs taxability of services, including gambling/betting.
 - **GST Council:** Constitutional body under **Article 279A** responsible for rate recommendations and policy clarifications.
- **Policy Context:**
 - **GST Rate Structure:** Online gaming, casinos, and horse racing placed in the **28% slab** (highest tier) alongside sin goods, reflecting policy intent to discourage speculative activities.
 - **Digital India & Regulation:** The verdict intersects with ongoing efforts to balance **digital innovation** with **consumer protection** and **revenue integrity**.
- **Relevant Metrics:**
 - **GST Implementation Date:** 1 July 2017.
 - **GST Slabs:** 5%, 12%, 18%, 28% (plus cess on select items).
 - **Actionable Claim:** A claim to an unsecured debt or beneficial interest in movable property, transferable under the **Transfer of Property Act, 1882**.

Science & Technology

BIS Notifies Six New Standards for Assistive Technologies

What's the News?

The **Bureau of Indian Standards (BIS)**, under the aegis of the **Ministry of Consumer Affairs, Food and Public Distribution**, has published **six new standards for assistive products**. These standards, developed in consultation with technical experts and aligned with international benchmarks like ISO, aim to enhance the quality, safety, and accessibility of assistive technologies for persons with disabilities and the elderly.

BIS Standards for Assistive Products

- **Overall Framework:** The standards were formulated by BIS's **Technical Committee on Assistive Products**, which includes experts from industry, academia, and government bodies such as the **Indian Council of Medical Research (ICMR)**, **Artificial Limbs Manufacturing Corporation of India (ALIMCO)**, and **AIIMS New Delhi**. They are part of the **National List of Essential Assistive Products (NLEAP)** initiative by ICMR.
- **Mobility Aids:**
 - **Elbow Crutches (IS 18558 (Part 1): 2025):** Aligned with **ISO 11334-1**, it specifies requirements and test methods focusing on handgrips and tips, covering safety, ergonomics, performance, and mandatory manufacturer information.
 - **Walking Sticks:**
 - **IS 5145: 2026:** An indigenous standard prescribing material, shape, dimensions, workmanship, finish, and performance for sticks made of wood, cane, aluminium, plastic, and rubber.
 - **IS 18558 (Part 4): 2025:** Aligned with **ISO 11334-4**, this covers walking sticks with three or more legs, setting requirements for handles and tips.
- **Accessible Design:**
 - **Tactile Guide Maps (IS 19189: 2025):** Aligned with **ISO 19028**, it details the necessary information on tactile maps and their design/display to help visually impaired individuals navigate public spaces independently.
 - **Braille Signage (IS 19190: 2025):** Aligned with **ISO 17049**, this standard sets dimensional parameters for Braille characters, material characteristics, and implementation guidelines for signage on equipment and appliances.
 - **Portable Ramps: Standard IS 19631: 2026** is an indigenous standard for portable ramps used by wheelchair users, individuals pushing strollers, and others with mobility challenges, covering safety and performance across home, workplace, and community settings.

Additional Info

- **National List of Essential Assistive Products (NLEAP):**
 - Launched by ICMR, NLEAP is a list of **21 essential assistive products and technologies** deemed crucial for individuals with functional impairments.
 - The list includes visual aids, hearing aids, wheelchairs, walkers, and canes, among others.
 - Its primary objective is to serve as a guideline for policymakers and healthcare providers for the provision of assistive products and to support the development of assistive technologies across the country.
- **Accessible India Campaign (Sugamya Bharat Abhiyan):**
 - Launched by the **Department of Empowerment of Persons with Disabilities (DEPwD)**.
 - **Vision:** To create a barrier-free environment for the independent, safe, and dignified living of Persons with Disabilities (PwDs).
 - **Core Targets:** Making public buildings, transport networks (buses, trains), and digital platforms (websites, audiovisual media) universally accessible.
 - **Constitutional and Legal Framework for Disability Rights:**
 - **Constitutional Provisions:** The rights to equality, dignity, and non-discrimination for persons with disabilities are guaranteed under **Articles 14, 19, and 21** of the Constitution.
- **Rights of Persons with Disabilities (RPwD) Act, 2016:**
 - This Act expands the definition of disability to 21 categories and mandates accessibility in physical infrastructure, transport, and ICT.
 - The Act places the onus on the owner of a building or service provider to make it accessible (**Section 45**).
 - The **RPwD Rules, 2017** provide specific guidelines on accessibility, including for ICT.
- **Commitment to UNCRPD:** The campaign is derived from the **United Nations Convention on the Rights of Persons with Disabilities (UNCRPD)**, 2007, to which India is a signatory.

Cell Broadcast System

What's the News?

The Ministry of Communications has launched the indigenous **Cell Broadcast System (CBS)**, marking a transformative shift in India's disaster management from a reactive to a proactive framework. Communications Minister **Jyotiraditya Scindia** inaugurated the system alongside a successful nationwide test, during which emergency alert messages with a distinct siren tone were broadcast to mobile phones across the country. Union

Home Secretary **Govind Mohan** and Telecom Secretary **Amit Agrawal** were also present.

About Cell Broadcast System (CBS)

- **What it is:** A telecom-enabled public warning technology that broadcasts simultaneous, geo-targeted emergency alerts to all mobile devices within a defined geographic area.
- **Developed By:** Centre for Development of Telematics (C-DOT) under the Department of Telecommunications (DoT), in collaboration with the **National Disaster Management Authority (NDMA)** and the Ministry of Home Affairs (MHA).
- **Integration:** Works with the **Common Alerting Protocol (CAP)**-based **SACHET** platform (India's Integrated Alert System/National Disaster Alert Platform).

Features

- **One-to-Many Broadcasting:** Unlike SMS, CBS is a one-to-many service that sends messages simultaneously to millions of devices within seconds, without queuing delays.
- **Network Independent:** Functions without internet connectivity or individual phone numbers; works across 2G to 5G networks.
- **Precise Geo-Targeting:** Alerts can be disseminated at the level of individual cell towers, clusters, or entire states.
- **Unmissable Alerts:** Messages override silent/do-not-disturb modes and appear as pop-up notifications accompanied by a distinct loud siren tone and vibration.
- **Multilingual & Accessible:** Supports English, Hindi, and regional languages; includes a read-aloud capability for visually impaired individuals.
- **No Registration Required:** Users receive alerts automatically; no app download or subscription needed.

Why It Matters

- **Proactive Disaster Management:** Provides critical lead time for protective action during emergencies such as flash floods, cyclones, earthquakes, gas leaks, and tsunamis.
- **Overcomes SMS Limitations:** Unlike the existing SMS-based alert system (operational across all 36 states/UTs), CBS is unaffected by network congestion and ensures last-mile coverage, including roaming users.
- **Strengthens National Security:** Establishes a direct, official channel for government-to-citizen communication during crises.
- **Global Alignment:** Supports the United Nations "Early Warnings for All" initiative. India joins over 30 countries with similar systems, including Japan (J-Alert, first to adopt in 2007) and the USA (Wireless Emergency Alerts).
- **International Demonstration:** C-DOT has already demonstrated CBS in Mauritius, Cambodia, El Salvador, and Sri Lanka.

Additional Info

- **Cell Broadcast System (CBS) History:**

- Developed in the early 1990s by the **European Telecommunications Standards Institute (ETSI)**.
- First demonstrated in **Paris in 1997** before becoming a global standard for disaster mitigation.
- **C-DOT (Centre for Development of Telematics):**
 - An autonomous telecom R&D centre under the **Department of Telecommunications (DoT)**.
 - Established in **1984**; instrumental in developing indigenous telecom technologies.
- **National Disaster Management Authority (NDMA):**
 - Apex body for disaster management in India, established under the **Disaster Management Act, 2005**.
 - Headed by the **Prime Minister**; responsible for laying down policies, plans, and guidelines for disaster management.
- **SACHET Platform:**
 - Stands for **Severe Adverse Condition Handling & Early Threat (SACHET)**.
 - India's Integrated Alert System for real-time dissemination of disaster and emergency warnings.
 - Based on the **Common Alerting Protocol (CAP)**, an international standard for emergency alerting.
- **Related Constitutional Provisions:**
 - **Article 21:** Right to life and personal liberty (interpreted to include the right to a safe environment and disaster preparedness).
 - **Disaster Management Act, 2005:** Provides the legal framework for disaster management in India, establishing the NDMA and State Disaster Management Authorities (SDMAs).

GalaxEye Launches 'Mission Drishti' – World's First OptoSAR Satellite

What's the News?

Bengaluru-based space-tech startup **GalaxEye** has successfully launched '**Mission Drishti**', the world's first **OptoSAR** (Optical + Synthetic Aperture Radar) satellite, aboard a **SpaceX Falcon 9** rocket from Vandenberg, California, USA. This marks a significant milestone for India's private space sector as the satellite is also the country's largest privately developed Earth Observation (EO) satellite, weighing **190 kg**. Prime Minister Narendra Modi hailed the launch as a "major achievement" in India's space journey.

What is Mission Drishti?

- **Mission Drishti** is a dual-use Earth observation satellite that uniquely integrates two sensor technologies on a single platform.
- **Objective:** To provide all-weather, day-and-night, high-clarity imagery by overcoming the limitations of traditional optical satellites that are hindered by cloud cover.

- **Orbit:** Placed in a **Sun-synchronous Low Earth Orbit (LEO)** at an altitude of approximately **500 km**.
- **Revisit Frequency:** The satellite is designed to revisit the same spot every **4 days**, enabling high-frequency monitoring.

Features & Significance

- **OptoSAR Technology:**
 - **Electro-Optical (EO) Sensor:** Provides intuitive, high-resolution visual detail during daylight and clear weather.
 - **Synthetic Aperture Radar (SAR):** Uses radar pulses to "see" through clouds, smoke, and darkness, ensuring imaging in all weather conditions.
 - **SyncFused Data Output:** The satellite delivers inherently aligned, fused imagery that is analysis-ready, reducing the need for complex post-processing.
- **Spatial Resolution:** Offers a resolution of **1.2 – 3.6 metres**, the highest among Indian private players.
- **Spectral Bands:** Operates across multiple bands including **X-Band (SAR), PAN, RGB, NIR, Coastal Blue, and Red Edge**.
- **Strategic Importance:**
 - **Tropical Relevance:** Addresses the critical cloud-cover limitation for regions like India, where **70% of the landmass** is often under cloud cover, making it invaluable for continuous monitoring.
 - **Dual-Use Applications:** Supports critical sectors including **defence, maritime monitoring, disaster management, agriculture, and infrastructure planning**.
 - **Reducing Dependence:** Enhances sovereign capabilities for accessing critical geospatial intelligence, reducing reliance on foreign commercial satellite data.

Private Space Sector & IN-SPACe

- **Facilitation:** The mission was facilitated by **IN-SPACe** (Indian National Space Promotion and Authorization Center), the single-window nodal agency established to promote, handhold, and authorize private sector space activities in India.
- **Future Plans:** GalaxEye aims to scale the mission into a **constellation of 10 satellites by 2030**, indicating the growing maturity and ambition of India's private space ecosystem.

Additional Info

- **OptoSAR:** A fusion of optical and radar imaging technologies on one satellite. This allows for high-detail visual images when the sky is clear and reliable radar images through clouds or at night, providing consistent monitoring.
- **Synthetic Aperture Radar (SAR):**
 - A form of radar used to create two-dimensional images or three-dimensional reconstructions of objects, such as landscapes.
 - SAR uses the motion of the radar antenna over a target region to provide finer spatial resolution than conventional beam-scanning radars.

IN-SPACe:

- An autonomous agency under the **Department of Space (DOS)**.
- Acts as a bridge between **ISRO** and private entities, enabling them to use ISRO's facilities and expertise.

Hidden Microbial Oasis Discovered Two Metres Beneath the Atacama Desert

What's the News?

An international team of scientists has discovered a metabolically active microbial ecosystem thriving two metres below the surface of Chile's **Atacama Desert**, the driest hot desert on Earth. The finding, published in the journal **PNAS Nexus**, reveals that life can persist in extreme environments without any connection to surface atmosphere or rainfall, challenging our understanding of habitable limits on Earth and potentially guiding the search for life on Mars.

Findings of the Study

- **Subsurface Oasis:** A diverse community of microorganisms, predominantly **Actinobacteriota bacteria**, was found living in permanent darkness approx. two metres underground in the Yungay Valley, the Atacama's most hyper-arid region.
- **Mineral-Bound Water:** The microbes survive by extracting moisture from **vesicular gypsum**, a mineral whose microscopic pores can trap and store minute amounts of water.
- **Active Ecosystem:** Advanced DNA sequencing confirmed the bacteria are not merely dormant spores but form a metabolically active community. They are **extremotolerant taxa** that have adapted to severe aridity and nutrient scarcity over geological timescales.
- **No Surface Connection:** Geochemical analysis of salts and the age of trapped water confirmed that the microbes have been present in the soil for geological timescales, independent of current surface climate conditions and rare rainfall events.

The Atacama Desert: A Mars Analogue

- **Location:** Northern Chile, stretching over **1,000 km**.
- **Climate:** Receives **less than 1 mm** of rainfall annually in some areas, with high solar radiation and low organic content.
- **Astrobiology Significance:** The desert's dry soil, salt deposits, and high UV radiation levels closely mimic conditions on Mars, making it one of the most studied terrestrial analogues for the Red Planet.

Implications for Astrobiology & Planetary Exploration

- **Paradigm Shift for Mars:** Mars also has harsh surface conditions with deadly radiation and freezing temperatures. This discovery suggests any martian life would likely exist below the surface.
- **Subsurface Sampling:** The findings make a strong case for future planetary missions to prioritise **subsurface sampling**—drilling at least two metres below the surface—to search for biosignatures.
- **Expanding Habitable Criteria:** The study provides a framework for identifying potential extraterrestrial

habitats by showing that life can thrive in environments entirely disconnected from surface processes.

Additional Info

- **PNAS Nexus:** A peer-reviewed, open-access scientific journal publishing multidisciplinary research, closely associated with the Proceedings of the National Academy of Sciences (PNAS).
- **Actinobacteria:** A major phylum of bacteria commonly found in soil and extreme environments, known for their ability to produce a wide range of bioactive compounds.
- **Gypsum:** A soft sulphate mineral (calcium sulphate dihydrate) that can form in evaporite settings and has been detected on Mars by various rovers.
- **Related Concept – Extremophiles:** Organisms that thrive in physically or geochemically extreme conditions detrimental to most life on Earth (e.g., high radiation, extreme dryness, high salinity). This discovery expands the known habitats of extremophiles.

India Assumes Chair of Common Criteria Development Board (CCDB)

What's the News?

- India has been nominated as the **Chair of the Common Criteria Development Board (CCDB)** for a two-year term (April 2026 to April 2028).
- The decision was confirmed during the 1st Quarter Meeting of the **Common Criteria Recognition Arrangement (CCRA)** held in Tokyo, Japan.
- This leadership role positions India at the forefront of defining global standards for IT security evaluation.

Common Criteria Development Board (CCDB)?

- **Overview:** The CCDB is the technical core of the **Common Criteria Recognition Arrangement (CCRA)**, an international treaty for the mutual recognition of IT security certificates.
- **Parent Body:** Operates under the CCRA, which comprises **20 Certificate-Authorising Nations** and **18 Certificate-Consuming Nations**.
- **Indian Nodal Agencies:** The **Ministry of Electronics and Information Technology (MeitY)** and the **Standardisation Testing and Quality Certification (STQC) Directorate** serve as the official Certification Body for IT security evaluations in India.
- **Functions:**
 - **Technical Management:** Manages the international work program for developing and maintaining the **Common Criteria (CC)** (ISO/IEC 15408) and the **Common Methodology for Information Technology Security Evaluation (CEM)**.
 - **Standardization:** Defines the technical evaluation criteria that determine the security level of global IT products (e.g., firewalls, operating systems, smart cards).
 - **Portal Management:** Maintains the integrity of the **Common Criteria Portal**, the "single source of truth" and authoritative global repository for certified secure IT products.

- **Mutual Recognition Framework:** Ensures that a security certificate issued in one member country is valid across all member nations without re-testing, facilitating seamless international trade.
- **Technical Working Groups:** Coordinates groups to address security requirements for emerging technologies.

Additional Info

- **Common Criteria Recognition Arrangement (CCRA)**
 - A foundational international treaty enabling mutual recognition of IT security certificates across borders without re-certification.
 - Ensures that certificates issued by recognized national schemes are mutually accepted by all member countries, building global trust in secure IT products.
 - India has been a **Certificate Authorising Nation** under the CCRA since September 2013.
- **Indian Common Criteria Certification Scheme (IC3S)**
 - The national scheme for evaluating and certifying IT security products and protection profiles against Common Criteria standards (ISO/IEC 15408).
 - Operated by the **STQC Directorate**, Ministry of Electronics and IT.
 - Certificates issued under IC3S are internationally recognized through the CCRA, eliminating the need for re-testing in member countries.
 - The scheme supports evaluation up to **Evaluation Assurance Level 2 (EAL2)**.
- **Relevant Standards**
 - **ISO/IEC 15408 (Common Criteria):** International standard for computer security certification, providing a framework for specifying security requirements and evaluating IT products.
 - The standard defines seven evaluation assurance levels (EAL1 to EAL7), with EAL1 being the most basic and EAL7 the most stringent.

SMILE Mission: Joint ESA-CAS Satellite to Study Earth's Magnetosphere and Space Weather

- The **European Space Agency (ESA)** and **Chinese Academy of Sciences (CAS)** successfully launched the **Solar wind Magnetosphere Ionosphere Link Explorer (SMILE)** mission aboard a **Vega-C rocket** from French Guiana
- SMILE is the **first fully joint space mission** between ESA and CAS, designed to capture the **first-ever global X-ray and ultraviolet images** of Earth's magnetosphere interacting with solar wind
- The **2,600 kg spacecraft** will operate from a **Highly Elliptical Orbit (~1.21 lakh km above Earth's North Pole)** for a baseline mission life of **three years**

Mission Objectives and Technology?

- **Core Scientific Goal:** Study the dynamic coupling between **solar wind** and Earth's **magnetosphere-ionosphere system** to understand space weather triggers
- **Four Scientific Payloads** (total 70 kg):
 - **Soft X-ray Imager (SXI)** – ESA-developed; visualises magnetosphere boundaries via X-ray emissions from solar wind-atmosphere collisions
 - **Ultraviolet Aurora Imager (UVI)** – CAS-developed; maps polar auroral ovals at high resolution
 - **Light Ion Analyser (LIA)** – CAS-developed; measures solar wind ion density, velocity, and temperature *in situ*
 - **Magnetometer (MAG)** – CAS-developed; tracks real-time magnetic field variations
- **Innovation:** First space-borne instrument to provide **continuous, global-scale imaging** of magnetospheric dynamics instead of point-based observations

Significance for Space Weather Forecasting

- **Early Warning Capability:** Enables improved prediction of **geomagnetic storms, solar flares, and Coronal Mass Ejections (CMEs)**
- **Infrastructure Protection:** Critical for safeguarding:
 - **Space-based assets:** Satellites, GPS, navigation systems, communication networks
 - **Ground infrastructure:** Power grids, aviation routes, undersea cables
 - **Human safety:** Astronaut exposure, high-altitude flight operations
- **Scientific Advancement:** Provides holistic data to refine models of solar-terrestrial physics and magnetospheric response mechanisms

Additional Info

- **Governance & Institutional Framework:**
 - **International Cooperation:** SMILE exemplifies multi-polar space diplomacy; India engages similarly via **BRICS Space Cooperation, ISA**, and bilateral MoUs
 - **ISRO's Space Weather Programme:** Operates **Aditya-L1** (solar observatory), **NAVIC** (navigation), and ground-based magnetometer networks for regional monitoring
 - **National Disaster Management Authority (NDMA):** Integrates space weather alerts into cyclone, communication blackout, and grid failure response protocols
- **Constitutional & Legal Context:**
 - **Article 51(c) (DPSP):** Mandates fostering respect for international law – underpins India's participation in global space science initiatives
 - **Space Activities Bill (proposed):** Aims to regulate private sector participation while ensuring alignment with national security and international obligations
- **Related Initiatives:**

- **Aditya-L1 Mission:** India's first dedicated solar observatory at Lagrange Point 1; studies solar corona, CMEs, and space weather drivers
- **One Sun One World One Grid (OSOWOG):** Global renewable energy grid concept; space weather resilience is critical for transcontinental power transmission
- **G20 Disaster Risk Reduction Working Group:** India's presidency emphasized early warning systems for climate and space weather hazards

India Semiconductor Mission 2.0

What's the News?

- The **Union Budget 2026–27** announced **India Semiconductor Mission (ISM) 2.0**, marking a strategic shift from ecosystem creation to **consolidation, technological depth, and global integration**.
- A budgetary provision of **₹1,000 crore** has been allocated for FY 2026–27 to support indigenous manufacturing of semiconductor equipment, full-stack **Indian semiconductor IP development**, and industry-led research centres.
- ISM 2.0 builds on the foundation of ISM 1.0 (approved in 2021 with **₹76,000 crore** outlay), under which **10 projects** worth **₹1.60 lakh crore** have been approved across six states.

Mission Framework & Key Focus Areas

- **Nodal Agency:** India Semiconductor Mission (ISM), under the **Ministry of Electronics & Information Technology (MeitY)**.
- **Core Objectives:**
 - **Indigenous Manufacturing:** Local production of semiconductor equipment, chemicals, gases, and materials to reduce import dependence.
 - **Full-Stack IP Development:** Promotion of end-to-end Indian semiconductor intellectual property for secure, globally competitive chip solutions.
 - **Research & Skills:** Establishment of industry-led research and training centres to support applied R&D and advanced manufacturing skills.
 - **Supply Chain Resilience:** Strengthening domestic and global semiconductor value chains amid geopolitical uncertainties.
- **Financial Architecture:**
 - **ISM 2.0 Allocation:** ₹1,000 crore (FY 2026–27).
 - **Modified Programme for Semiconductor & Display Manufacturing:** ₹8,000 crore total outlay for 2026–27.
 - **Projected Annual Targets:**
 - Semiconductor fabs: ₹4,000 crore investment; 1,500 jobs.
 - ATMP/OSAT units: ₹11,000 crore investment; 3,000 jobs.
 - Design Linked Incentive (DLI) Scheme: 10 IP cores; 200 design engineers.

Strategic Context & Market Outlook

- **Market Growth Trajectory:**
 - Indian semiconductor market: **\$38 billion (2023) → \$45–50 billion (2024–25) → \$100–110 billion (projected by 2030).**
 - Target: **70–75% self-sufficiency** in domestic chip demand by **2029**; **3nm and 2nm technology nodes** capability by **2035**.
- **Global Positioning:**
 - India aims to become a **trusted, reliable partner** in global semiconductor supply chains, reducing concentration risks (Taiwan produces ~90% of advanced chips).
 - Aligns with global re-shoring trends: **US CHIPS Act**, **EU Chips Act**, and Japan's semiconductor revival initiatives.
- **Policy Evolution:**
 - **ISM 1.0 (2021):** Focused on attracting fabs, ATMP/OSAT units, and design companies via fiscal incentives (up to 50% support).
 - **ISM 2.0 (2026):** Emphasises **technology depth, indigenous IP, equipment localisation**, and **talent pipeline development**.

Design Ecosystem & Indigenous Innovation

- **Design Linked Incentive (DLI) Scheme Achievements** (as of Jan 2026):
 - 24 semiconductor design startups supported; **₹430 crore** venture capital attracted.
 - **2.25 crore tool hours** logged on national EDA platform; 67,000 students trained.
 - 122 academic tape-outs; 56 chips fabricated at 180nm; 6 chips at advanced nodes (up to 12nm).
 - 85 patents filed (75 academic, 10 startup).
- **Indigenous Microprocessors:**
 - **DHRUV64:** Fully indigenous 64-bit processor by **C-DAC** under **Microprocessor Development Programme**.
 - **RISC-V Portfolio:** SHAKTI, AJIT, VIKRAM, THEJAS processors developed under **Digital India RISC-V (DIR-V)** programme—eliminating licence costs via open-source architecture.
- **Talent Development Initiatives:**
 - **Chips to Startup Programme:** EDA tool access across 397 universities/startups.
 - **SMART Lab (NIELIT Calicut):** Targeting 1 lakh engineers; 62,000+ already trained.
 - **FutureSkills PRIME:** MeitY-NASSCOM joint initiative for semiconductor skilling/reskilling.

Additional Info

- **Historical Background:**
 - **Semiconductor Policy Evolution:** From **Modified Special Incentive Package Scheme (M-SIPS, 2012)** → **Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECs, 2020)** → **India Semiconductor Mission (2021).**

- **Key Milestones:** Micron's \$2.75 billion ATMP facility (Gujarat, 2023); Tata-PSMC fab project (₹91,000 crore, Assam, 2024).
- **Related Initiatives & Organisations:**
 - **Semiconductor Laboratory (SCL), Mohali:** India's only pilot semiconductor fabrication facility.
 - **Centre for Development of Advanced Computing (C-DAC):** Nodal agency for indigenous processor development.
 - **Electronic Development Fund (EDF):** Supports innovation in electronics system design and manufacturing.
- **Constitutional & Policy Linkages:**
 - Supports **Article 51A(h)** (Fundamental Duty: develop scientific temper) and **Article 47** (public health via technology-enabled services).
 - Aligns with **National Electronics Policy 2019**, **National Strategy for Artificial Intelligence**, and **Panchamrit** climate commitments (energy-efficient chips).
 - Advances **SDG 9** (Industry, Innovation, Infrastructure), **SDG 8** (Decent Work), and **SDG 17** (Partnerships for Goals).

Microbes Found Beneath Ross Ice Shelf: Life in Extreme Darkness

What's the News?

- Researchers have identified **thriving microbial communities** hundreds of metres beneath **Antarctica's Ross Ice Shelf**, the world's largest ice shelf.
- The discovery, published in **Nature Communications**, reveals a **functional ecosystem** operating independently of sunlight, sustained by **chemosynthesis** rather than photosynthesis.
- Using **metagenomics** and **metatranscriptomics**, scientists detected diverse microbes obtaining energy from chemical compounds like **ammonium, nitrite, and sulfur** in the cold, dark, low-energy sub-ice environment.
- The findings reshape understanding of **life's resilience** in extreme habitats and offer insights for **astrobiology**, climate science, and carbon cycling in polar regions.

Microbial Diversity & Energy Mechanisms

- **Dominant Groups:** Aerobic **lithoautotrophic archaea** and **bacteria** capable of chemosynthesis, alongside **heterotrophic microbes** that recycle organic carbon.
- **Chemosynthesis vs. Photosynthesis:**
 - **Chemosynthesis:** Converts chemical energy (from ammonium, nitrite, sulfur compounds) into biological energy—no sunlight required.
 - **Photosynthesis:** Relies on solar energy; impossible beneath thick ice where light cannot penetrate.
- **Viral Role:** Viruses were detected actively infecting ammonium- and sulfur-oxidising microbes, suggesting

they regulate **population dynamics** and **nutrient cycling** in this closed ecosystem.

- **Functional Diversity:** Microbes exhibit distinct taxonomic and metabolic profiles compared to open-ocean communities, indicating adaptation to prolonged isolation.

Scientific Methods & Research Significance

- **Multi-Omics Approach:**
 - **Metagenomics:** Analyses genetic material directly from environmental samples to identify microbial composition.
 - **Metatranscriptomics:** Examines RNA transcripts to determine which genes are actively expressed.
- **Sampling Challenge:** Accessing the sub-ice cavity required drilling through **~500m of ice**, using sterile techniques to avoid contamination.
- **Key Findings:**
 - Ammonium oxidation rates in sub-ice waters are comparable to those in the winter Antarctic Ocean.
 - The ecosystem includes both **primary producers** (chemoautotrophs) and **decomposers**, forming a self-sustaining nutrient loop.

Scientists Detect 10-Billion-Year-Old Fast Radio Burst

What's the News?

- Scientists have detected **FRB 20240304B**, a **Fast Radio Burst** that traveled approximately **10 billion years** before reaching Earth, offering a rare glimpse into the early universe.
- The signal was first captured by the **MeerKAT radio telescope** in South Africa and later localized using the **James Webb Space Telescope (JWST)** to a small, star-forming dwarf galaxy.
- The discovery doubles the **redshift reach of localized FRBs**, enabling astronomers to study the universe during "**Cosmic Noon**"—the era of peak star formation—and probe the distribution of matter in intergalactic space.

Understanding Fast Radio Bursts (FRBs)

- **Definition:** FRBs are intense, millisecond-duration pulses of radio waves from distant cosmic sources; their exact origins remain an active area of research.
- **Key Metrics for Study:**
 - **Dispersion Measure:** Indicates the amount of ionized material the signal crossed, helping estimate distance.
 - **Redshift:** FRB 20240304B has a redshift of **~2.15**, meaning it originated when the universe was only **~3 billion years old**.
 - **Host Galaxy Localization:** Critical for linking bursts to astrophysical environments; JWST's infrared capability enabled precise identification here.

- **Leading Hypothesis:** Many FRBs, including this one, may originate from **magnetars**—young, highly magnetized neutron stars formed in supernovae.

Scientific Significance & Research Applications

- **Probing "Cosmic Noon":**
 - The burst provides data from the universe's most active star-forming epoch, helping trace galaxy evolution and chemical enrichment.
 - Host galaxy characteristics (low mass, high star-formation rate) support models linking FRBs to young stellar populations.
- **Mapping the Intergalactic Medium:**
 - FRBs act as cosmic backlights; their dispersion helps measure **baryonic matter** in the "cosmic web," addressing the **missing baryon problem**.
 - Validates the **Macquart relation** (distance-dispersion correlation) at higher redshifts, improving cosmological models.
- **Magnetic Field Studies:**
 - The signal showed **~49% linear polarization** with low Faraday rotation, suggesting complex, tangled magnetic fields along its path or near the source.

Global Collaboration & Technology

- **MeerKAT Telescope:** South Africa-based array of 64 dishes; part of the pathfinder for the **Square Kilometre Array (SKA)**.
- **James Webb Space Telescope:** NASA/ESA/CSA mission providing infrared spectroscopy for faint galaxy confirmation.
- **LOFAR Network:** European low-frequency radio array contributing complementary observations for deep-space radio astronomy.
- **India's Relevance:**
 - **ISRO's Space Science Missions:** **Astrosat** (India's first multi-wavelength space observatory) and upcoming **XPoSat** (X-ray polarimetry) align with global efforts in high-energy astrophysics.
 - **SKA Partnership:** India is a key member of the **Square Kilometre Array Observatory**, which will revolutionize radio astronomy; FRB research is a priority science goal.
 - **Capacity Building:** Institutions like **NCRA-TIFR**, **RRI**, and **IIA** contribute to FRB theory, data analysis, and telescope instrumentation.

Additional Info

- **Constitutional & Policy Linkages:**
 - **Article 51A(h)** (Fundamental Duties): Citizens to develop scientific temper, humanism, and spirit of inquiry—supporting public engagement with space science.
 - **SDG 9** (Industry, Innovation & Infrastructure): Advanced telescopes and data infrastructure exemplify global R&D collaboration.
 - **SDG 13** (Climate Action): Understanding cosmic evolution informs broader perspectives on planetary systems and sustainability.
- **Related Initiatives:**

- **National Space Science Agenda:** ISRO's focus on fundamental research complements global discoveries; potential for Indian-led FRB follow-ups with future missions.
- **Digital India & Big Data:** FRB research generates massive datasets; India's expertise in data science and AI can contribute to signal processing and pattern recognition.
- **Facts:**
 - FRBs are **not continuous sources**; they are transient, millisecond-scale events.
 - **Redshift >2** indicates observation of the universe less than ~3.5 billion years after the Big Bang.
 - **Magnetars** are neutron stars with magnetic fields $\sim 10^{14}$ – 10^{15} Gauss (Earth's field: ~ 0.5 Gauss).

India Tests Cyber Defences Against Anthropic's Mythos AI What's the News?

- India has initiated **proactive cybersecurity assessments** of critical financial and government software to evaluate vulnerabilities linked to **Anthropic's Mythos AI**, a next-generation model capable of autonomously identifying software flaws.
- Key agencies including **CERT-In** and major IT firms like **Infosys** and **TCS** are conducting tests in secure environments to identify and patch potential weaknesses before the model becomes widely accessible.
- The initiative reflects a **precautionary governance approach**, balancing innovation adoption with national security preparedness amid global concerns over AI-enabled cyber threats.

Testing Framework & Stakeholders

- **Agencies Involved:**
 - **CERT-In:** Testing critical digital infrastructure including **Aadhaar systems**, government login portals, and public service platforms.
 - **Ministry of Electronics and IT (MeitY):** Coordinating policy response and inter-ministerial consultations on AI risk mitigation.
 - **Reserve Bank of India (RBI):** Engaging banks to assess exposure in financial transaction systems and payment gateways.
- **Private Sector Participation:**
 - **Infosys:** Evaluating vulnerabilities in **Finacle**, its globally deployed banking software suite, and developing corresponding security patches.
 - **TCS:** Assessing risks in government-facing systems including passport services and tax administration platforms.
- **Testing Methodology:** Firms are using **Anthropic's Claude Opus 4.7** (publicly available) as a proxy to simulate Mythos-level threat detection in isolated, secure environments.

Mythos AI: Capabilities & Global Context

- **Technical Profile:** Mythos is Anthropic's most advanced large language model, designed to autonomously scan codebases and identify **zero-day vulnerabilities** across operating systems, browsers, and enterprise software.
- **Project Glasswing:** A **\$100 million initiative** by Anthropic providing early access to 40 global firms (primarily US-based) for defensive security testing; **no Indian entity is currently listed** among participants.
- **Dual-Use Concern:** While Mythos can strengthen cyber defences, its ability to rapidly uncover hidden flaws raises risks of misuse by malicious actors if access is not strictly governed.

Additional Info

- **Constitutional & Legal Provisions:**
 - **Article 246A:** Empowers Parliament to legislate on cybersecurity matters intersecting with digital infrastructure.
 - **Information Technology Act, 2000 (amended 2008):** Provides legal framework for cyber incident response, data protection, and critical information infrastructure protection.
 - **CERT-In Directions, 2022:** Mandates reporting of cybersecurity incidents within 6 hours and strengthens incident response protocols.
- **Relevant Initiatives & Frameworks:**
 - **IndiaAI Mission:** Supports responsible AI development, including safety testing and ethical deployment guidelines.
 - **National Critical Information Infrastructure Protection Centre (NCIIPC):** Designated authority for protecting strategic assets like power grids, banking systems, and identity platforms.
 - **Digital India:** Emphasises secure digital service delivery; cybersecurity resilience is integral to its implementation.
- **Relevant Metrics:**
 - **Zero-day vulnerability:** A software flaw unknown to the vendor, exploitable before a patch is available.
 - **Critical Information Infrastructure (CII):** Defined under **Section 70 of IT Act, 2000**; includes systems whose compromise could impact national security, economy, or public health.
 - **Global AI Safety Index:** India ranks among emerging economies actively developing AI governance frameworks; collaboration with **Global Partnership on AI (GPAI)** supports knowledge exchange.

India's First Indigenous Hydrogen Train Approved for Operations

What's the News?

- **Indian Railways** has approved the country's first **indigenous hydrogen fuel cell-based trainset** for

operations on the **Jind–Sonipat** section under the **Northern Railway** in Haryana.

- The train consists of **10 coaches** and is powered by a **1200 kW hydrogen fuel cell propulsion system**.
- It is designed to run at a maximum speed of **75 kmph** and marks a major step towards **green and sustainable transportation**.

Hydrogen Fuel Cell Train

- A hydrogen train generates electricity through a **chemical reaction between hydrogen and oxygen** inside a fuel cell.
- The process produces:
 - Electricity for propulsion.
 - **Water vapour as the only emission**, making it a zero-emission transport technology.
- Unlike diesel locomotives, hydrogen-powered trains:
 - Do not emit carbon dioxide or particulate pollutants.
 - Reduce dependence on fossil fuels.
 - Support cleaner mobility solutions.

Key Features of the Project

- **Route:** Jind–Sonipat section, Haryana.
- **Train Configuration:** 10-coach trainset.
- **Power System:** 1200 kW hydrogen fuel cell propulsion.
- **Maximum Speed:** 75 kmph.
- **Pilot Project:** The Jind–Sonipat route has been selected as the demonstration corridor for hydrogen rail technology in India.

Safety and Infrastructure Measures

- An indigenous **hydrogen storage and refuelling facility** has been established at **Jind**.
- The **Petroleum and Explosives Safety Organisation (PESO)** has granted the required licence for storage and dispensing of compressed hydrogen gas.
- Safety provisions include:
 - Hydrogen leak detectors.
 - Flame detection systems.
 - Standard operating procedures for maintenance.
 - 24×7 monitoring of refuelling infrastructure.
 - Deployment of trained and certified personnel.

Additional Info

Hydrogen Fuel Cell Technology

- Converts chemical energy directly into electrical energy.
- Higher efficiency compared to conventional combustion engines.
- Suitable for rail routes where complete electrification may be difficult or costly.

Petroleum and Explosives Safety Organisation (PESO)

- A statutory authority under the **Department for Promotion of Industry and Internal Trade (DPIIT)**, Ministry of Commerce and Industry.
- Regulates safety in handling, storage, transport, and use of hazardous substances such as petroleum, explosives, and compressed gases.

Research Designs and Standards Organisation (RDSO)

- Technical body of **Indian Railways** headquartered in **Lucknow**.
- Responsible for research, design, standardisation, testing, and approval of railway technologies and equipment.

Indian Railways and Green Mobility

- Indian Railways has achieved near-complete electrification of its broad-gauge network.
- Hydrogen-powered trains represent the next phase of decarbonisation in the railway sector.
- Supports national initiatives related to:
 - **National Green Hydrogen Mission**
 - Clean Energy Transition
 - Sustainable Transportation

ISRO Detects Possible Subsurface Ice Beneath the Moon Using Chandrayaan-2 Data

What's the News?

- Scientists from **ISRO** have identified evidence suggesting the presence of **possible subsurface water ice beneath the Moon's polar regions** using data from the **Chandrayaan-2 mission**.
- The findings are based on observations from the **Dual Frequency Synthetic Aperture Radar (DFSAR)** onboard the **Chandrayaan-2 Orbiter**.
- The discovery could improve understanding of lunar water resources and support future long-duration human and robotic missions to the Moon.

What Has ISRO Found?

- Radar observations indicate the possibility of **water ice deposits beneath the lunar surface**, particularly in permanently shadowed regions near the poles.
- These regions receive little or no sunlight, allowing extremely low temperatures that can preserve ice over long periods.
- The radar signatures suggest that ice may exist:
 - Mixed with lunar soil (regolith).
 - In buried layers below the surface.
- The findings strengthen earlier evidence regarding the existence of water on the Moon.

Role of Chandrayaan-2

- **Chandrayaan-2** was India's second lunar exploration mission.
- It consisted of:
 - Orbiter.
 - Lander (**Vikram**).
 - Rover (**Pragyan**).
- While the lander experienced a hard landing, the orbiter continues scientific observations around the Moon.
- The orbiter carries multiple scientific instruments for:
 - Surface mapping.
 - Mineral studies.
 - Exosphere analysis.
 - Water and ice detection.

Dual Frequency Synthetic Aperture Radar (DFSAR)

- DFSAR is one of the key payloads onboard the Chandrayaan-2 Orbiter.
- It operates using radar waves that can penetrate the lunar surface.
- The instrument helps:
 - Detect subsurface structures.
 - Study lunar regolith properties.
 - Identify possible ice deposits hidden beneath surface layers.
- Dual-frequency observations improve the accuracy of distinguishing ice from rocky material.

Why is Lunar Ice Important?

- Water ice is considered a critical resource for future lunar exploration.
- Potential uses include:
 - Drinking water for astronauts.
 - Production of oxygen for life support.
 - Generation of hydrogen-based rocket fuel.
- Availability of local resources can reduce the cost of transporting supplies from Earth.
- Ice deposits could support the development of permanent lunar research stations.

Additional Info

Water on the Moon

- Earlier missions had already indicated the presence of water molecules and hydroxyl compounds on the lunar surface.
- Important missions contributing to water detection include:
 - Chandrayaan-1
 - NASA's Lunar Reconnaissance Orbiter (LRO)
 - LCROSS Mission
- Chandrayaan-1's **Moon Mineralogy Mapper (M3)** provided major evidence of lunar water.

Permanently Shadowed Regions (PSRs)

- Located mainly near the lunar poles.
- Receive little or no direct sunlight due to the Moon's axial tilt.
- Temperatures can remain below **-200°C**, creating conditions suitable for preserving water ice.

Chandrayaan Programme

- **Chandrayaan-1 (2008)**
 - First Indian lunar mission.
 - Confirmed presence of water molecules on the Moon.
- **Chandrayaan-2 (2019)**
 - Orbiter continues scientific observations.
- **Chandrayaan-3 (2023)**
 - Achieved successful soft landing near the Moon's south polar region.
 - Made India the first country to land near the lunar south pole.

ISRO

- **Indian Space Research Organisation (ISRO)** is India's national space agency.
- Functions under the **Department of Space**.
- Headquarters: **Bengaluru**.
- Responsible for:
 - Satellite development.

- Launch vehicle programmes.
- Planetary exploration missions.
- Space-based applications for national development.

India Ranks 4th in AI Performance, 5th in Global Digital Economy

What's the News?

- India has been ranked **4th globally in Artificial Intelligence (AI) performance** and **5th in the global digital economy rankings**, according to the **SIDE 2026 Report**.
- The rankings reflect India's rapid progress in digital infrastructure, AI adoption, innovation ecosystems, and digital public services.
- The report highlights India's growing role as a major technology-driven economy and an emerging global AI hub.

SIDE 2026 Report

What is the SIDE Report?

- **SIDE (Sustainable and Inclusive Digital Economy) Report** evaluates countries on:
 - Digital economy performance.
 - AI capabilities and adoption.
 - Digital infrastructure.
 - Innovation ecosystems.
 - Inclusiveness of digital transformation.
- It assesses how economies leverage digital technologies for growth, governance, and social development.

India's Performance

- **5th globally** in overall digital economy rankings.
- **4th globally** in AI performance indicators.
- Ranked behind leading digital economies but ahead of several advanced nations in digital transformation metrics.

Drivers Behind India's Rise Digital Public Infrastructure (DPI)

- India's digital ecosystem is supported by large-scale public platforms such as:
 - **Aadhaar**
 - **Unified Payments Interface (UPI)**
 - **DigiLocker**
 - **CoWIN**
 - **Account Aggregator Framework**
- These platforms have improved service delivery, financial inclusion, and digital access.

AI Ecosystem Growth

- Expansion of:
 - AI startups.
 - Research and development activities.
 - Skilled technology workforce.
 - AI-based public service applications.
- India has emerged as one of the world's largest AI talent pools.

Digital Adoption

- Rapid increase in:
 - Internet penetration.
 - Smartphone usage.
 - Digital payments.

- E-governance services.
- Growth in digital transactions has strengthened India's position in the global digital economy.

Artificial Intelligence in India

Government Initiatives

- **IndiaAI Mission**
 - Supports AI innovation, compute infrastructure, datasets, and startup ecosystems.
- **Digital India Programme**
 - Promotes digital governance and digital inclusion.
- **National Strategy for Artificial Intelligence**
 - Developed by **NITI Aayog**.
 - Focuses on responsible and inclusive AI development.

Priority Sectors for AI

- Healthcare.
- Agriculture.
- Education.
- Smart mobility.
- Financial services.
- Governance and public administration.

Additional Info

India's Global AI Standing

- India has consistently improved its position in major global AI assessments.
- According to recent international AI indices:
 - India ranks among the leading countries in AI talent availability.
 - AI skill penetration in India is significantly above the global average.

Digital Economy

- Refers to economic activities enabled through:
 - Digital technologies.
 - Data-driven services.
 - E-commerce.
 - Digital finance.
 - Platform-based innovation.
- Digital economies increasingly contribute to productivity, employment generation, and global competitiveness.

Agriculture

ICMR and ICAR Launch SEHAT Mission

What's the News?

The Indian Council of Medical Research (ICMR) and the Indian Council of Agricultural Research (ICAR) jointly launched the 'SEHAT Mission' (Science Excellence for Health through Agricultural Transformation) in New Delhi. The launch was presided over by Union Health Minister J P Nadda and Union Agriculture Minister Shivraj Singh Chouhan. This marks India's first formal convergence of its agriculture and health research systems through a national program to tackle malnutrition and the rising burden of non-communicable diseases (NCDs).

The SEHAT Mission?

- **Full Form:** Science Excellence for Health through Agricultural Transformation.
- **Nature:** A national, mission-mode program that creates a scientific bridge between farming, nutrition, and public health outcomes.
- **Core Philosophy:** Shifts India's healthcare strategy from a reactive (treatment) model to a proactive (prevention through proper nutrition) model. The mission aims to align agricultural production with the nation's nutritional needs, encapsulated in the principle: "What the country should grow, based on what people should eat."
- **Implementing Bodies:**
 - **ICMR:** Under the Ministry of Health and Family Welfare.
 - **ICAR:** Under the Ministry of Agriculture and Farmers' Welfare.

Focus Areas & Objectives

- **Bio-fortification & Clinical Validation:**
 - Focus on developing and promoting crop varieties naturally enriched with essential micronutrients like zinc and iron.
 - ICAR has already developed **203 biofortified crop varieties** that will now undergo clinical trial validation with ICMR's involvement to scientifically establish their health benefits.
- **Promotion of Climate-Resilient Nutri-Cereals:** Re-emphasizing the consumption of traditional and nutrient-dense millets such as **Kodo, Kutki, Ragi, Jowar, and Bajra**.
- **Integrated Farming Systems (IFS):** Encouraging rural families to combine crop cultivation with animal husbandry, fisheries, and beekeeping to ensure diverse and balanced household nutrition.
- **Addressing the Dual Disease Burden:**
 - Directly targets persistent **malnutrition** and micronutrient deficiencies.
 - Aims to mitigate the rising prevalence of **Non-Communicable Diseases (NCDs)** like diabetes, hypertension, and cancer through dietary interventions.
- **Farmer Health & Safety:** Implementing scientific interventions and awareness programs to protect farmers from occupational hazards, particularly pesticide exposure and hazardous chemicals.

- **'One Health' Approach:** Operationalizing the interconnected health of people, animals, and the environment through joint planning between medical and agricultural scientists.
- **Science-Based Policy Support:** Creating real-time dashboards and research databases to align agricultural policy with national nutrition strategies, promoting organic and sustainable farming practices.

Additional Info

- **One Health Concept**
 - **Definition:** An integrated, unifying approach that aims to sustainably balance and optimize the health of people, animals, and ecosystems.
 - **Relevance:** It recognizes that human health, animal health, and the environment are closely linked and interdependent.
- **Bio-fortification**
 - **Definition:** The process of increasing the density of vitamins and minerals in a crop through plant breeding, transgenic techniques, or agronomic practices.
 - **Purpose:** To improve the micronutrient content of staple foods and address "hidden hunger" (micronutrient deficiencies).
- **Organisations Involved**
 - **Indian Council of Medical Research (ICMR):** Apex body in India for the formulation, coordination, and promotion of biomedical research.
 - **Indian Council of Agricultural Research (ICAR):** An autonomous body responsible for co-ordinating agricultural education and research in India.

Maize Emerges as India's Single-Largest Ethanol Feedstock, Surpassing Sugarcane

What's the News?

According to data from the **All India Distillers' Association (AIDA)**, maize has overtaken sugarcane-based sources to become India's largest feedstock for ethanol production. In the first half of the **Ethanol Supply Year (ESY) 2025-26** (November 2025 to April 2026), cumulative ethanol supplies crossed **515 crore litres**, with maize alone contributing **182 crore litres**. This marks a significant structural shift in the country's biofuel landscape, driven by supportive government policies and the crop's inherent advantages.

What is the Feedstock Shift?

- **Dominance of Maize:** Maize-based ethanol, at **182 crore litres**, surpassed the **182 crore litres** supplied by all sugarcane-based distilleries combined (which includes sugarcane juice, B-heavy, and C-heavy molasses).
- **Grain-Based Growth Engine:** Overall, grain-based distilleries contributed approximately **333 crore litres**, with damaged food grains (DFG) and surplus rice also playing a role.

- **Performance Against Targets:** The total supply of 515 crore litres represents nearly **49%** of the total contracted volume of **1,059 crore litres** for the full ESY, achieved within the first six months.

Why the Shift to Maize?

- **Water Efficiency:** A key driver is maize's significantly lower water requirement compared to sugarcane, making it a more sustainable option for water-stressed regions.
- **Year-Round Availability:** Unlike sugarcane, which is a seasonal crop, maize can be cultivated across multiple seasons in various parts of India, ensuring a steadier supply for distilleries.
- **Policy Push:** The shift was accelerated around 2023 when the government, responding to lower sugarcane output, restricted the use of sugarcane for ethanol and actively encouraged maize-based production. This was complemented by Oil Marketing Companies (OMCs) increasing procurement prices for maize-based ethanol.

Ethanol Blending Programme (EBP) & E20 Target

- **Objective:** The Ethanol Blended Petrol (EBP) Programme aims to blend ethanol with petrol to reduce India's crude oil import dependence, lower carbon emissions, and support the agricultural sector.
- **E20 Target:** The government has advanced its target of achieving **20% ethanol blending (E20)** in petrol to **2025-26**.
- **Energy Security:** Achieving higher blending rates diversifies the fuel mix and insulates the economy from global oil price volatility. The programme is recognized as one of the fastest-growing biofuel success stories globally.

Additional Info

- **Ethanol Supply Year (ESY):** In India, the ESY runs from **November to October**, aligned with the sugar crushing season and crop cycles.
- **Key Feedstocks:**
 - **Sugarcane-based:** Includes **Sugarcane Juice (SCJ)**, **B-heavy Molasses (BHM)**, and **C-heavy Molasses (CHM)**.
 - **Grain-based:** Primarily **maize**, **damaged food grains (DFG)**, and **surplus rice (SFG)**.
- **All India Distillers' Association (AIDA):** The apex industry body representing ethanol producers and distillers in India, which compiles and releases supply data.
- **State-Level Initiatives:** To meet the growing demand from the ethanol industry, the **Uttar Pradesh government** has set an ambitious target to expand maize cultivation to **11.3 lakh hectares** in the 2026-27 season.
- **Next-Generation Biofuels:** The ethanol sector is looking beyond petrol blending towards future applications, including **flex-fuel vehicles (FFVs)**, **Sustainable Aviation Fuel (SAF)**, and ethanol use as a diesel substitute, requiring continued policy support.

India Bans Sugar Exports to Curb Domestic Price Rise

What's the News?

- The Government of India has prohibited the export of **raw, white, and refined sugar** with immediate effect until **September 30, 2026**.
- The **Directorate General of Foreign Trade (DGFT)** amended the export policy from "restricted" to "prohibited" via a notification under the **Foreign Trade (Development and Regulation) Act, 1992**.
- This policy reversal aims to stabilize domestic sugar prices and ensure adequate local supply amid concerns over weakening cane yields and potential monsoon disruptions.

Sugar Export Ban

- **Scope of the Ban:** Applies to all commercial grades including raw, white, and refined sugar under specific ITC (HS) codes.
- **Exemptions to the Ban:**
 - Exports to the **European Union (EU)** and the **United States (USA)** under **CXL (Codex Maximum Residue Limit)** and **Tariff Rate Quota (TRQ)** arrangements.
 - Shipments under the **Advance Authorisation Scheme**.
 - **Government-to-government** exports.
 - Consignments that were already in the physical export pipeline (e.g., loading commenced, shipping bill filed, vessel berthed, or cargo handed to customs before the notification date).

Why Was the Ban Imposed?

- **Rising Domestic Prices:** Domestic sugar prices saw a 4% year-on-year increase between October 2025 and April 2026, with expectations of a ~5% rise for the 2026 season.
- **Production Shortfall:** India's sugar output is expected to lag consumption for the second consecutive year due to weakening cane yields in major producing states like **Maharashtra and Karnataka**.
- **El Niño Threat:** Apprehensions of El Niño weather patterns disrupting the upcoming monsoon and the next sugar season have raised supply concerns.
- **Policy Reversal:** The ban marks a major shift; the government had previously permitted mills to export **1.59 million metric tonnes**, betting on comfortable production. Of this, contracts for about 800,000 tonnes were signed, and over 600,000 tonnes have been shipped.

Additional Info

- **Directorate General of Foreign Trade (DGFT)**
 - An attached office of the Ministry of Commerce and Industry, DGFT is responsible for formulating and implementing the Foreign Trade Policy.
 - It regulates exports and imports through notifications under the Foreign Trade (Development and Regulation) Act, 1992.
- **Tariff Rate Quota (TRQ)**

- A trade mechanism that allows the import or export of a specified quantity of a product at a concessional or zero duty rate.
 - **India's Global Standing in Sugar**
 - India ranks **second** globally in sugar production, after Brazil.
 - In FY25, India exported **\$1.9 billion** worth of raw, white, and refined sugar, with top destinations including Sudan, Libya, Bangladesh, and Sri Lanka.
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Important Days

International Labour Day 2026

What's the News?

International Labour Day, also known as May Day or International Workers' Day, is being observed across India and over 80 countries on May 1st. The day serves as a global commemoration of the historic struggle for workers' rights, particularly the fight for an eight-hour workday, and remains a platform to advocate for fair wages, safe working conditions, and social security in the modern evolving economy. In India, it is celebrated as Antarrashtriya Shramik Diwas.

Why is International Labour Day Celebrated on May 1?

- **Historical Origins:** The date traces back to the late 19th-century labour movement in the United States, specifically the **Haymarket Affair** in Chicago in 1886.
- **The Demand:** During the Industrial Revolution, workers often endured 14-16 hour workdays, six days a week, in hazardous conditions. The central demand was for an **"8-8-8" schedule**: 8 hours for work, 8 hours for rest, and 8 hours for personal life.
- **The Catalyst:** On May 1, 1886, hundreds of thousands of American workers went on a nationwide strike. The protests in Chicago turned violent after a bomb was thrown at police, leading to casualties and the subsequent execution of several labour leaders, now remembered as the **Haymarket Martyrs**.
- **Global Recognition:** In 1889, the **Second International**, a global federation of socialist and labour parties, officially declared May 1 as an annual international day of workers' solidarity to honour the Haymarket martyrs and their sacrifice.

The Central Theme of Labour Day 2026

- The broad global and national theme for Labour Day 2026 centres on **"dignity of labour, inclusive growth, and workers' well-being in a changing economy"**.
- With the rapid rise of **automation, the gig economy, and remote employment**, the focus has shifted towards adapting labour protections to modern, non-traditional workplaces.
- In India, the day highlights the urgent need to strengthen **social security nets** and formally recognise the contribution of both **organised and unorganised workers**.
- The conversation has also expanded to encompass **work-life balance, mental health in the workplace, and fair opportunities in digital economies**.

India's Connection to Labour Day

- **First Celebration:** India's first Labour Day celebration took place on **May 1, 1923, in Chennai (then Madras)**.
- **Key Figure:** It was organised by the **Labour Kisan Party of Hindustan**, led by freedom fighter and social reformer **Comrade Malayapuram Singaravelu Chettiar**. This event marked the first time the red flag, a symbol of the labour movement, was raised on Indian soil.
- **Colonial Context:** The celebration was an act of defiance against colonial rule, as Indian workers in

mills, mines, and railways faced severe exploitation bordering on servitude.

- **State Celebrations:** Today, it is a public holiday in most Indian states and holds special significance in **Maharashtra and Gujarat**, which both celebrate their state formation day (established in 1960 after the Samyukta Maharashtra Movement) on May 1.

National Technology Day 2026

What's the News?

- India observes **National Technology Day** every year on **11 May** to mark the anniversary of the **1998 Pokhran-II nuclear tests**, codenamed **Operation Shakti**.
- The day also honours Indian scientists, engineers, and technologists who have strengthened the country's strategic and civilian technological capabilities.
- The **2026 theme** is **"Responsible Innovation for Inclusive Growth"**, reflecting a focus on sustainable, equitable, and ethical technological progress.
- Prime Minister **Narendra Modi**, in a recent address, recalled the tests as a demonstration of India's unwavering political will and scientific prowess, emphasizing that no external pressure could force India to compromise its national security.

Operation Shakti: The Nuclear Tests

- A series of five underground nuclear explosions conducted at the **Pokhran Test Range** in Rajasthan.
- Three devices were detonated on **11 May 1998**:
 - **Shakti I** – a two-stage thermonuclear device (fusion bomb) with a controlled yield of **45 kilotons (kt)**.
 - **Shakti II** – a **15 kt** fission device, a weaponised version of the 1974 design.
 - **Shakti III** – a **0.2 kt** sub-kiloton experimental device.
- Two additional sub-kiloton tests (Shakti IV & V) were carried out on **13 May 1998** to gather data for computer-simulated validation of advanced weapon concepts.
- Key scientific leaders:
 - **Dr. A. P. J. Abdul Kalam** – Scientific Adviser to the Prime Minister and Chief Coordinator.
 - **Dr. R. Chidambaram** – Chairman, Atomic Energy Commission; primary architect of the devices.
 - **Dr. Anil Kakodkar** – Director, Bhabha Atomic Research Centre (BARC).
 - **K. Santhanam** – Director, Test Site Preparations.
- The tests were conducted under total secrecy to evade foreign surveillance satellites and validated India's ability to design nuclear weapons across a wide yield spectrum.

India's Nuclear Triad: A Full-Spectrum Deterrent

- Since 1998, India has built a complete **nuclear triad** — the capability to deliver nuclear weapons from **land, air, and sea**.

- **Land-based leg:** Agni series of ballistic missiles.
 - **Agni-I** (700 km) to **Agni-5** (5,000 km+), with newer variants (**Agni-6**) expected to have ranges beyond 10,000 km.
- **Air-based leg:** Fighter aircraft of the Indian Air Force — **Jaguar, Mirage-2000, and Rafale** — are certified for nuclear strike roles.
- **Sea-based leg:** Nuclear-powered ballistic missile submarines (SSBNs).
 - **INS Arihant** (commissioned 2016)
 - **INS Arighat** (commissioned 2024)
 - **INS Aridhaman** (commissioned 2026) — can carry the **K-4** submarine-launched ballistic missile with a **3,500 km** range.
- According to the **Arms Control Association**, India possesses an estimated **172 nuclear warheads**, all under the purview of the **Strategic Forces Command**.
- India's **No-First-Use (NFU)** doctrine makes the sea-based leg especially critical; submarines are the most survivable platform, ensuring credible second-strike capability.

Additional Information

- **Historical context:**
 - India's nuclear programme began in the 1940s under Dr. Homi J. Bhabha.
 - First nuclear test, **Operation Smiling Buddha**, was conducted on 18 May 1974 — a “peaceful nuclear explosion”.
 - The 1998 tests were prompted by the security environment following China's 1964 nuclear test and Pakistan's covert nuclear programme.
- **Nuclear doctrine & command structure:**
 - India's nuclear policy is governed by **Cabinet Committee on Security (CCS)** decisions.
 - **Nuclear Command Authority (NCA)** comprises the **Political Council** (chaired by PM) and the **Executive Council** (chaired by National Security Adviser).
 - **Strategic Forces Command (SFC)** manages the nuclear arsenal.
- **Key agencies involved:**
 - **Department of Atomic Energy (DAE)**
 - **Defence Research and Development Organisation (DRDO)**
 - **Bhabha Atomic Research Centre (BARC)**
 - **Atomic Energy Regulatory Board (AERB)**
- **Relevant constitutional & legal framework:**
 - India is **not a signatory** to the Nuclear Non-Proliferation Treaty (NPT) but maintains a strong non-proliferation record.
 - The **Atomic Energy Act, 1962** provides the statutory basis for all nuclear activities.
 - India has entered into **Civil Nuclear Cooperation Agreements** with several countries (e.g., US, Russia, France) after the 2008 NSG waiver.

National Endangered Species Day 2026

What's the News?

- **National Endangered Species Day 2026** was observed on **May 15, 2026** (the third Friday of May), marking the **21st annual global conservation event**.
- The **2026 theme** is “**Celebrating America's Wildlife Comeback Stories. Championing the Endangered Species Act.**”.
- In India, the observance coincides with several major conservation milestones, including the **first-ever satellite tagging of a Ganges softshell turtle** and a series of events leading up to the inaugural **International Big Cat Alliance (IBCA) Summit 2026**.

India's Conservation Landscape: A Dual Narrative

- **Success Stories:**
 - **Project Tiger (launched 1973):** India hosts over **70% of the world's wild tiger population**, making it a global conservation leader.
 - **Asiatic Lion:** Populations are showing recovery in Gujarat's Gir landscape.
 - **Snow Leopard: The Snow Leopard Population Assessment in India (SPAII)** released in January 2025 estimated about **718 snow leopards** in the trans-Himalayan region.
 - **Cheetah Reintroduction:** The program at **Kuno National Park** in Madhya Pradesh has seen the cheetah population rise to approximately **57 individuals** (including cubs), following recent births and the addition of cheetahs from Botswana.
- **Persistent Challenges & Threatened Species:**
 - The **Royal Bengal Tiger** and **Asian Elephant** continue to be listed as **Endangered** on the **IUCN Red List**, facing threats from habitat fragmentation due to linear infrastructure projects.
 - The **Ganges River Dolphin** (India's National Aquatic Animal) faces severe decline due to river pollution, dam construction, and reduced water flow.
 - Other critically endangered fauna include the **Great Indian Bustard**, **Dugong**, **Nilgiri Tahr**, and various species of **vultures**.
 - **IUCN Red List (2025 update):** India has **479 species of animals**, **286 species of plants**, and **2 species of fungi** listed as endangered.

Conservation Developments in 2026

- **First Satellite-Tagged Ganges Softshell Turtle:** On Endangered Species Day, India's first satellite-tagged Ganges softshell turtle (*Nilssonina gangetica*) was released at **Kaziranga National Park** to aid in studying its habitat utilization and movement patterns.
- **Precursor to IBCA Summit:** The **Ministry of Environment, Forest and Climate Change (MoEFCC)** is organizing **five thematic Big Cat**

Conservation Events across India, covering tigers, Asiatic lions, leopards, snow leopards, and cheetahs.

- **International Big Cat Alliance (IBCA) Summit 2026:** Scheduled for **June 1-2, 2026**, in New Delhi, chaired by Prime Minister Modi. Themed “**Save Big Cats, Save Humanity, Save Ecosystem**,” it aims to bring together Heads of State, policymakers, and over 400 global stakeholders to create a unified protection framework for seven big cat species.

Legal & Institutional Framework in India

- **Wildlife (Protection) Act, 1972:**
 - Provides the legal framework for the protection of wild animals, birds, and plants.
 - Species facing the highest risk are listed in **Schedule I**, affording them the maximum degree of legal protection (e.g., Tiger, Snow Leopard, Great Indian Bustard, Gangetic Dolphin).
 - The Act also facilitates the declaration of Protected Areas like National Parks, Wildlife Sanctuaries, Conservation Reserves, and Community Reserves.
- **Project Tiger (1973):** A Centrally Sponsored Scheme for the conservation of tigers and their habitats, managed by the **National Tiger Conservation Authority (NTCA)**. The 2026 Union Budget saw a significant increase in allocation for Project Tiger and Project Elephant to **₹290 crore** (from ₹153.04 crore in the previous revised allocation).
- **Project Cheetah (2022):** An initiative to reintroduce cheetahs to their historical range in India. The founding population was translocated from Namibia and South Africa to Kuno National Park, with subsequent additions from Botswana.
- **Project Snow Leopard (2009):** Launched to conserve the vulnerable snow leopard and its high-altitude Himalayan ecosystem.

World Bee Day 2026

What's the News?

- **World Bee Day** is observed annually on **20 May** to recognise the critical role of bees and other pollinators in agriculture, biodiversity, and ecosystem stability.
- The **2026 theme**, “*Bee Together for People and the Planet*”, emphasises collaborative action to protect pollinators as essential partners in food security and sustainable development.
- Verified global reports highlight accelerating bee decline due to **habitat loss, pesticide exposure, climate stress, and disease**, with US commercial beekeepers reporting a record **62% colony loss** (2024–25).
- India has emerged as the **world's second-largest honey exporter** (up from ninth in five years), yet faces a paradox: rising exports alongside declining native pollinator populations.

India's Honey Economy: Growth vs. Ecological Sustainability

- **Export Performance:**

- India exported over **1 lakh metric tonnes** of honey in the last fiscal year.
- **Minimum Export Price (MEP):** Anchored at **US\$ 1,400 per metric tonne** to ensure fair returns.
- **Annual Production Growth:** ~5%, driven by the **National Beekeeping & Honey Mission (NBHM)** with **₹500 crore** investment.

Native vs. Commercial Species:

- **Native Species:** **Apis dorsata** (rock bee), **Apis cerana indica** (Indian honey bee), and stingless bees—critical for forest and crop pollination but lower-yielding.
- **Commercial Species:** **Apis mellifera** (European honey bee)—higher honey yield but less adapted to local ecosystems and less effective for native plant pollination.

- **Domestic Price Disparity:** Premium native honeys (e.g., Jamun, Himalayan White) retail at **US\$ 4,500–6,000/tonne** domestically, far above the export MEP, indicating value retention challenges.

Threats to Pollinators: Policy and Environmental Challenges

Pesticide Exposure:

- **Neonicotinoids** and systemic insecticides used in mustard, sunflower, and litchi belts impair bee navigation, foraging, and reproduction.
- **Regulatory Gap:** Unlike the **EU's 2018 ban** on three major neonicotinoids, India lacks mandatory restrictions on pesticide use during flowering seasons in key beekeeping zones.

Climate Change Impacts:

- Erratic monsoons, shortened flowering windows, and extreme heat disrupt synchrony between bee activity and plant blooming cycles.
- Increased frequency of droughts and unseasonal rainfall reduces nectar availability and hive stability.

Habitat Fragmentation:

- Urban expansion, monoculture farming, and loss of wild flowering patches reduce nesting sites and continuous forage for wild pollinators.

Disease and Parasites:

- Varroa mite infestations and colony collapse disorders affect managed hives, especially under high-density beekeeping practices.

Additional Info

Historical & Legal Context:

- **World Bee Day:** Established by **UN General Assembly (2017)**; date aligns with birthday of **Anton Janša**, pioneer of modern beekeeping.
- **Constitutional Linkages:** Supports **Article 48A** (environment protection) and **Article 51A(g)** (fundamental duty to protect wildlife).
- **International Commitments:** Aligns with **CBD (Convention on Biological**

Diversity), IPBES assessments, and SDG 2 (Zero Hunger), SDG 15 (Life on Land).

- **Related Initiatives & Organisations:**

- **Krishi Vigyan Kendras (KVKs):** Provide extension services on pollinator-friendly farming and pesticide management.
- **Centre for Bee Development:** NGO working with tribal communities on sustainable wild honey harvesting and conservation of **Apis dorsata**.
- **Global Biofuels Alliance & IORA:** Indirectly support pollinator health through sustainable land-use and agro-ecological practices.

International Day for Biological Diversity 2026: "Acting Locally for Global Impact"

What's the News?

- **International Day for Biological Diversity (IDB)** observed annually on May 22 under the **Convention on Biological Diversity (CBD)**.
- **2026 Theme: "Acting locally for global impact"**—emphasising that community-level conservation efforts create cumulative global outcomes for halting biodiversity loss.
- Coordinated globally by the **Secretariat of the CBD**, with participation encouraged from governments, civil society, educational institutions, and citizens.
- Campaign structured around three pillars: **Look and Learn** (explore local biodiversity), **Connect and Act** (join collective efforts), and **Share** (amplify actions via #BiodiversityDay).
- Aligned with the **Kunming-Montreal Global Biodiversity Framework (KMGBF)** and its **23 action-oriented targets** for 2030.

Why Biodiversity Matters: Governance & Development Linkages

- **Ecosystem Services:** Biodiversity underpins clean water, food security, medicinal resources, climate regulation, pollination, and soil fertility—critical for sustainable development.
- **India's Stake:** Home to **4 of 36 global biodiversity hotspots**; supports **~7-8% of recorded species** despite having **2.4% of world's land area**.
- **Livelihood Dependency:** Over **70% of India's rural population** relies directly on natural resources for subsistence, making conservation a socio-economic imperative.
- **Climate Resilience:** Diverse ecosystems enhance adaptive capacity to extreme weather; biodiversity loss amplifies vulnerability to climate shocks.

India's Local Actions with Global Relevance

- **Community Seed Banks:** Tribal communities in **Odisha's Eastern Ghats (Kondh, Paraja)** preserve indigenous millet, paddy, and pulse varieties through women-led seed custodianship—safeguarding agro-biodiversity and climate-resilient crops.
- **Millet Revival:** Traditional small-seeded cereals (**finger millet, pearl millet, sorghum**) require less water, suit rainfed agriculture, and support nutritional

security; aligned with **International Year of Millets 2023** legacy.

- **Institutional Support:**

- **DIVERSIFARM-India** (Fridtjof Nansen Institute + M.S. Swaminathan Research Foundation): Strengthens community seed systems for smallholder livelihoods.
- **WASSAN & Shree Anna Abhiyan:** Conducted 253 participatory varietal trials across 30 Odisha districts (2018-2024) to scale climate-adapted seeds.

- **Policy Integration:** Biodiversity conservation embedded in **National Biodiversity Action Plan (NBAP)**, **Mission LiFE**, and state-level **Biodiversity Management Committees (BMCs)** under the **Biological Diversity Act, 2002**.

Additional Info

- **Legal & Institutional Framework:**

- **Biological Diversity Act, 2002:** Implements CBD obligations; establishes **National Biodiversity Authority (NBA)**, State Biodiversity Boards, and BMCs for access-and-benefit-sharing (ABS) mechanisms.
- **Environment (Protection) Act, 1986:** Provides overarching legal basis for ecosystem conservation.
- **Constitutional Provisions: Article 48A** (State duty to protect environment) and **Article 51A(g)** (Citizen duty) reinforce biodiversity governance.

- **Global Commitments:**

- **Kunming-Montreal Global Biodiversity Framework (2022):** Landmark agreement with 4 goals and 23 targets, including "30x30" (protect 30% of land/oceans by 2030).
- **SDG 14 (Life Below Water) & SDG 15 (Life on Land):** Directly link biodiversity conservation to sustainable development metrics.
- **Paris Agreement Synergy:** Nature-based solutions (NbS) recognised as critical for climate mitigation and adaptation.

- **Important Metrics:**

- **Aichi Targets (2011-2020):** 20 global biodiversity goals; only 6 partially achieved—underscoring need for accelerated action under KMGBF.
- **India's Biodiversity Coverage:** ~24% of geographical area under forest/tree cover (ISFR 2023); 18 Biosphere Reserves, 106 National Parks, 573 Wildlife Sanctuaries.
- **Access and Benefit Sharing (ABS):** Over ₹10 crore disbursed to local communities via NBA for traditional knowledge utilisation (as of 2025).

World Football Day 2026

What's the News?

The **United Nations (UN)** marked the annual **World Football Day** with a special event at the **UN General Assembly Hall in New York**, co-organized by **Bahrain, Libya, and Tajikistan**, focusing on football's power to advance peace, social inclusion, and youth empowerment.

The observance featured **FIFA President Gianni Infantino**, who described football as a universal source of “happiness, hope, and unity”, and **UNGA President Annalena Baerbock**, who emphasized that the sport demonstrates how collective effort and adherence to shared rules are essential for global cooperation and fairness. A key outcome was **Indonesia’s** presentation of its **UniLeague** university football program as a model for using sport to promote youth-driven development, mental health awareness, and peacebuilding. The ceremony concluded with a mini-football tournament on the UN’s North Lawn involving diplomats and local children.

World Football Day: A UN Observance for Sustainable Development

- **Annual Observance:** Celebrated each year on **25 May**.
- **Historical Significance:** The date commemorates the **100th anniversary** of the first international football tournament with representation from all regions, held during the **1924 Summer Olympic Games in Paris**. This tournament laid the foundation for football as a global phenomenon.
- **UN Establishment:** The **UN General Assembly** adopted **Resolution A/RES/78/281** on **7 May 2024**, officially proclaiming 25 May as World Football Day. The resolution was proposed by **Bahrain, Libya, and Tajikistan**.
- **Core Purpose:** The resolution acknowledges football’s global reach and its impact in various spheres, including **commerce, peace, diplomacy, and international cooperation**. It recognizes that the sport creates a vital “space for cooperation” and encourages all nations to support football as a tool to promote **peace, development, and the empowerment of women and girls**.

Themes and Global Initiatives in 2026

- **Youth Empowerment and Peacebuilding:**
 - The 2026 observance placed a strong emphasis on **youth empowerment**. **Indonesia’s UniLeague initiative**, presented at the UN event, aims to empower university students through football, teaching **leadership, self-development, mental resilience, teamwork, empathy, and mutual respect**.
 - The program is designed to help young people become “agents of peace” in their communities and supports the **#Football4MentalHealth** campaign of the **UN Youth Office**.
- **FIFA’s World Football Week and “Be Active” Campaign:**
 - **FIFA** organized a “World Football Week” from **21-25 May 2026**, coinciding with the countdown to the **FIFA World Cup 2026™** in Canada, Mexico, and the USA.
 - A central campaign is “**Be Active**,” a joint initiative between FIFA and the **World Health Organization (WHO)**. It encourages children to engage in at least **60 minutes of daily physical activity** to support healthier, happier lives.
- **UEFA’s Social and Environmental Commitment:**

- The **Union of European Football Associations (UEFA)** reaffirmed its role as a founding member of the UN’s **Football for the Goals** initiative, which engages the global football community in advocating for the **Sustainable Development Goals (SDGs)**.
- UEFA highlighted its updated “**Strength Through Unity**” sustainability strategy, which provides a framework for national associations, leagues, and clubs to advance sustainability activities.
- Social inclusion programs include the **Unity EURO Cup**, organized with **UNHCR**, which brings together teams of refugees and host community players, and the **Walking Football EURO Cup** for older players.
- The **Take Care programme** helps young people adopt healthier habits across six areas: **physical activity, nutrition, mental health, digital addiction, substance awareness, and road safety**.

UNHCR’s “Gamechanging Team”:

- The **UN Refugee Agency (UNHCR)** unveiled a “Gamechanging Team” comprising **11 players** whose lives were shaped by displacement, war, and persecution, but who found hope and resilience through football.

Additional Info: Sport as an Enabler for the 2030 Agenda

- **UN’s Broader Framework on Sport for Development:**
 - The UN recognizes sport as an “important enabler” for achieving the **2030 Agenda for Sustainable Development**.
 - Football, as the world’s most popular sport with an estimated **4 billion fans** and **over 265 million players** globally, is seen as a uniquely powerful tool.
 - The sport contributes to multiple **SDGs**, including:
 - **SDG 3 (Good Health and Well-being):** By promoting physical activity.
 - **SDG 5 (Gender Equality):** By empowering women and girls both on and off the field.
 - **SDG 10 (Reduced Inequalities):** By serving as a catalyst for social inclusion, breaking down barriers between diverse communities.
 - **SDG 16 (Peace, Justice and Strong Institutions):** By fostering mutual understanding, tolerance, respect, and solidarity.
- **Football for the Goals Initiative:**
 - Launched by the UN, this initiative provides a platform for the global football community—including clubs, federations, players, and media—to engage with and advocate for the **SDGs**.
 - **UEFA** is a founding member of this initiative.
- **Relevance to India:**
 - India is a signatory to the **2030 Agenda for Sustainable Development** and has robust

national programs like **Khelo India** and the **Fit India Movement**, which align with the principles of using sport for mass participation, health, and youth development.

- The themes of World Football Day directly support the objectives of these national initiatives by highlighting the role of sports in building a healthier and more inclusive society.



State Affairs

Odisha CM Launches ShaktiShree App and Internship Guidelines

What's the News?

Odisha Chief Minister Mohan Charan Majhi launched the **ShaktiShree** mobile application and an **Internship Guidelines Book** during a two-day national workshop on the National Education Policy (NEP) 2020 in Bhubaneswar. The app enables female students in higher education institutions (HEIs) to register complaints and access safety resources, while the guidelines aim to integrate academic learning with real-world industry exposure. Union Education Minister Dharmendra Pradhan and State Higher Education Minister Suryabanshi Suraj were present.

ShaktiShree Mobile Application

- **Purpose:** Strengthen support systems for female students by enhancing safety, accessibility, and empowerment on college and university campuses.
- **Key Features:**
 - 24/7 SOS alerts.
 - Anonymous reporting of harassment.
 - Mental health support services.
 - Connectivity with institutional Internal Complaints Committees (ICCs).
- **Background:** The app was announced under the state government's broader ShaktiShree initiative to empower female students in higher education.
- **Relevance:** Aligns with the **NEP 2020** emphasis on creating safe, inclusive campuses and promotes gender-sensitive infrastructure in higher education.

Internship Guidelines Book

- **Purpose:** Integrate classroom learning with hands-on, real-world exposure to make students industry-ready.
- **Alignment with NEP 2020:** Promotes internships, community engagement, and skill-based learning as key components of higher education reforms.
- **Target Outcome:** Equip students—particularly young women—with confidence, practical skills, and exposure to a globally competitive environment.

Additional Information

- **NEP 2020 Highlights Mentioned:**
 - Described as a "national mission" to position India as a global knowledge capital.
 - Focus on multidisciplinary education, skill development, and industry-academia collaboration.
- **Data Points from the Workshop:**
 - Odisha allocated **₹41,273 crore** for the education sector in the 2025-26 budget.
 - **Godabarisha Mishra Adarsha Vidyalaya scheme:** Aims to establish modern schools in all 6,794 gram panchayats at an estimated cost of **₹12,000 crore**.
 - Odisha's Gross Enrolment Ratio (GER) in higher education is currently **23%**, below the national average of **29%**; stakeholders urged to surpass the national average by **2036**.
 - Nearly **70%** of Odisha's population is below the age of 44, presenting a demographic dividend.

- State secured grants worth over **₹700 crore** under the **PM-USHA** scheme and appointed new vice-chancellors in 14 universities.

Internal Complaints Committee (ICC):

- Mandated under the **Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013**.
- HEIs must establish ICCs to address complaints of harassment and ensure a safe environment for female students and staff.

Odisha Emerges as Top Performer in PMAY-U 2.0 Housing Completions Nationwide

What's the News?

- Odisha has emerged as the **top-performing state** in India for house completions under the **Pradhan Mantri Awas Yojana-Urban (PMAY-U) 2.0**.
- The state consistently held the **first rank** in house completion performance from **March 2025 to March 2026**.
- Housing and Urban Development Minister **Krushna Chandra Mahapatra** has directed officials to further expedite construction while adhering to quality standards for timely beneficiary delivery.

PMAY-U 2.0: Scheme Overview

- **PMAY-U 2.0**, the urban housing phase, was launched in **September 2024** as a **Central Sector Scheme**.
- **Objective:** To provide **pucca houses** to eligible urban poor and middle-income families, aligned with the vision of "**Housing for All**".
- **Technology-Driven Monitoring:** The scheme leverages **geo-tagging** to record construction site locations, **foundation tracking**, and **completion monitoring** for field-level implementation.
- **Implementing Agencies:** The **Housing and Urban Development Department** and **Urban Local Bodies (ULBs)** are the primary agencies executing urban housing projects.

Odisha's Performance

- **Total Houses Sanctioned:** **24,625 units** under PMAY-U 2.0 in Odisha.
- **Geo-tagged Sites:** **23,464 proposed sites** geo-tagged as of May 2026, ensuring transparent beneficiary and location tracking.
- **Foundation Work Initiated:** **3,134 houses** had foundation work started by May 5, 2026.
- **Houses Completed:** **2,008 houses** were fully completed by the same date, with remaining units at various construction stages.
- The state's performance is attributed to effective **coordination between the Housing and Urban Development Department and urban local bodies**, coupled with rigorous field-level implementation monitoring.

Additional Info

- **Pradhan Mantri Awas Yojana (PMAY):**

- **PMAY-Urban (PMAY-U):** Launched in 2015, the original scheme aimed to construct over 1 crore houses. PMAY-U 2.0 continues this mission with enhanced mechanisms.
- **PMAY-Gramin (PMAY-G):** The rural counterpart aimed at replacing kutcha houses with pucca dwellings.
- **Central Sector Scheme vs. Centrally Sponsored Scheme:**
 - A **Central Sector Scheme** is 100% funded by the Union Government, while a **Centrally Sponsored Scheme** involves a cost-sharing formula between the Centre and States.
- **Technology in Governance:**
 - **Geo-tagging** is widely used in government schemes (e.g., MGNREGA, PMAY-G) to verify asset creation, ensure transparency, and prevent leakages.
- **Urban Local Bodies (ULBs):**
 - Function as the grassroots implementing agencies for urban schemes under the **74th Constitutional Amendment Act, 1992**, which provides for the constitution of Municipalities.

Odisha Mandates Electric Vehicles for Government Use

What's the News?

- **Odisha government** has mandated compulsory procurement of **electric vehicles (EVs)** for all state departments effective **June 1**, as part of an **eight-point austerity plan** to reduce fuel consumption amid global crude oil volatility.
- The directive applies to all new **two-wheelers and four-wheelers** purchased for official use; rented four-wheelers must also be EVs unless special exemptions are granted.
- **Virtual governance** institutionalised: All official meetings, reviews, and training programmes to be conducted online unless physical presence is essential.
- Senior officials allotted government vehicles must **carpool**, with fuel allocation reduced by **50%**; all departments directed to cut monthly petrol/diesel consumption by at least **10%**.
- **Finance Department** tasked with framing guidelines within 15 days on vehicle eligibility and use of privately-owned EVs for official work.

Policy Provisions & Implementation Framework

- **Scope:** Covers all government departments, public sector undertakings, autonomous institutions, universities, and societies under the state government.
- **Procurement Rules:**
 - Mandatory EV purchase for new government two-wheelers/four-wheelers.
 - Petrol/diesel vehicles permitted only under documented special requirements.
 - Hiring of EVs for official four-wheeler needs made compulsory.
- **Operational Measures:**

- Preference for **public transport** (buses, trains) for long-distance official travel.
- Introduction of **electric bus/minibus services** for employee commuting in urban clusters.
- Strict monitoring of fuel usage with **10% reduction target** as baseline metric.
- **Governance Shift:** Emphasis on **digital administration** to minimise travel-related emissions and operational costs.

Additional Info

- **Central Schemes & Policies:**
 - **FAME India Scheme** (Faster Adoption and Manufacturing of Electric Vehicles): Provides demand incentives for EV adoption; Phase-II focuses on public transport and fleet electrification.
 - **National Electric Mobility Mission Plan (NEMMP) 2020:** Aims for 30% EV penetration in new vehicle sales by 2030.
 - **Production Linked Incentive (PLI) Scheme for Advanced Chemistry Cell (ACC) Battery Storage:** Supports domestic battery manufacturing to reduce EV costs.
- **Constitutional & Legal Context:**
 - **Article 48A** (Directive Principle): State shall endeavour to protect and improve the environment.
 - **Article 51A(g)** (Fundamental Duty): Citizens to protect and improve the natural environment.
 - **Disaster Management Act, 2005:** Energy security and climate resilience increasingly integrated into state disaster planning.
- **Global Frameworks:**
 - **SDG 11** (Sustainable Cities and Communities) & **SDG 13** (Climate Action): EV adoption in public fleets directly advances low-carbon urban mobility targets.
 - **COP28 Outcomes:** Global pledge to transition away from fossil fuels in transport sectors.

Assam Assembly Passes Uniform Civil Code Bill

What's the News?

- The **Assam Legislative Assembly** has passed the **Uniform Civil Code (UCC) Bill, 2026**, making Assam the **third state** after **Uttarakhand** and **Gujarat** to enact such legislation.
- The Bill establishes a **common legal framework** for marriage, divorce, succession, and live-in relationships applicable to all citizens **irrespective of religion**, while exempting **Scheduled Tribes** residing in Assam.
- Key provisions include a **ban on polygamy**, **mandatory registration** of marriages/divorces and live-in relationships, and punitive measures for non-compliance.

Legal Framework

- **Scope of Application:**

- Covers **marriage, divorce, inheritance, and live-in relationships** for all citizens in Assam, regardless of religious affiliation.
- **Scheduled Tribes exemption:** Persons belonging to ST communities residing in Assam are excluded from the Bill's purview to protect customary practices.
- **Mandatory Registration:**
 - **Marriages and divorces** must be registered within **60 days**; deliberate non-registration attracts a penalty of **₹10,000**.
 - **Live-in relationships** must be registered within **one month**; failure invites imprisonment up to **3 months** or fine up to **₹10,000**.
- **Prohibitions & Penalties:**
 - **Polygamy/Bigamy:** Punishable with imprisonment up to **7 years**.
 - **Child marriage:** Addressed under the **Prohibition of Child Marriage Act, 2006**, with penalties up to **2 years** imprisonment.
 - **Fraudulent marriages:** Concealment, coercion, or deception in marriage attracts imprisonment up to **7 years** plus fine.
 - **False documentation:** Submitting forged documents during registration invites imprisonment up to **3 months** or fine up to **₹25,000**.

Legislative Context & Federal Dynamics

- **State-Level Precedents:**
 - **Uttarakhand** and **Gujarat** previously enacted UCC legislation, creating a template for personal law reform.
 - **Goa** retains a common civil code inherited from Portuguese colonial administration, often cited as a historical precedent.
- **Repeal of Prior Laws:** The Bill proposes to repeal the **Assam Compulsory Registration of Muslim Marriages and Divorces Act, 2024**, subsuming its provisions under the unified framework.
- **Parliamentary Process:** Passed by **voice vote** amid Opposition protests demanding referral to a Select Committee; the Bill now awaits **Presidential assent** under **Article 200** of the Constitution.

Additional Info

- **Constitutional & Legal Provisions:**
 - **Article 44:** Directive Principle urging the State to endeavour to secure a Uniform Civil Code.
 - **Article 246 + Seventh Schedule:** Personal laws fall under the **Concurrent List (Entry 5)**, enabling both Parliament and State legislatures to legislate.
 - **Article 13:** Laws inconsistent with Fundamental Rights are void; UCC provisions must align with **Articles 14–15** (equality, non-discrimination).
 - **Article 25–28:** Freedom of religion subject to public order, morality, and health; UCC must balance religious liberty with reform objectives.
- **Relevant Policies & Initiatives:**

- **National Population Register (NPR):** UCC registration data may interface with citizenship documentation frameworks.
- **Digital India:** Supports digitisation of civil records for efficient administration and grievance redressal.
- **Beti Bachao Beti Padhao:** UCC's gender-just provisions align with broader women's empowerment initiatives.
- **Relevant Context:**
 - **Directive Principles vs. Fundamental Rights:** Article 44 is non-justiciable; implementation depends on political will and judicial interpretation.
 - **Shah Bano Case (1985):** Landmark judgment highlighting tensions between personal laws and gender justice; catalysed national UCC debate.
 - **ST Exemption Rationale:** Recognises **Article 366(25)** definition of Scheduled Tribes and protects customary practices under **Sixth Schedule** areas.

Odisha Signs Semiconductor MoU with Intel and 3DGS

What's the News?

- The **Government of Odisha**, **Intel Corporation**, and **3D Glass Solutions (3DGS), USA** have signed a Memorandum of Understanding (MoU) to establish an **Advanced Packaging Glass Core Substrate Manufacturing Facility** in Odisha.
- The proposed project involves an investment of around **\$3.3 billion**, making it one of India's largest high-technology manufacturing investments.
- The facility is planned in the **Bhubaneswar-Khurda region** and is expected to strengthen India's semiconductor manufacturing ecosystem.

Semiconductor Substrate Manufacturing Facility Features

- Focus on manufacturing:
 - **Advanced Packaging Glass Core Substrates**
 - **High-Density Interconnect (HDI) Substrates**
 - Associated semiconductor packaging technologies.
- Intel will provide:
 - Technology know-how.
 - Process expertise.
 - Advanced manufacturing support.
- The project will be implemented in phases over **5–6 years**.

Employment Generation

- Expected to create:
 - More than **1,800 direct high-skilled jobs**.
 - Significant indirect employment across electronics, manufacturing, logistics, and allied sectors.

What are Semiconductor Substrates?

- Semiconductor substrates are foundational layers on which electronic circuits and chip components are built.

- They:
 - Provide mechanical support to chips.
 - Enable electrical interconnections.
 - Help in heat management and signal transmission.
- Advanced substrates are critical for:
 - Artificial Intelligence (AI) chips.
 - High-performance computing.
 - Data centres.
 - Advanced communication systems.

Glass Core Substrates

- Emerging technology replacing traditional organic substrates.
- Advantages:
 - Better power efficiency.
 - Improved performance.
 - Higher transistor density.
 - Enhanced thermal stability.
- Considered important for next-generation semiconductor packaging.

Significance for India

Strengthening Semiconductor Ecosystem

- Expands India's semiconductor value chain beyond:
 - Chip design.
 - Assembly and testing.
- Promotes domestic capability in advanced semiconductor packaging technologies.

Supply Chain Diversification

- Supports global efforts to diversify semiconductor supply chains beyond traditional manufacturing hubs.
- Enhances India's role in global electronics manufacturing networks.

Boost to Odisha

- Positions Odisha as an emerging:
 - Electronics manufacturing hub.
 - Semiconductor investment destination.
 - High-technology industrial centre.
- Expected to attract ancillary industries and research investments.

India Semiconductor Mission (ISM)

About

- Launched to build a comprehensive semiconductor and display manufacturing ecosystem in India.
- Implemented under the **Ministry of Electronics and Information Technology (MeitY)**.
- Provides fiscal support and policy incentives for semiconductor projects.

Objectives

- Develop domestic semiconductor manufacturing capabilities.
- Reduce import dependence.
- Strengthen semiconductor design and innovation ecosystem.
- Create a resilient electronics supply chain.

Recent Developments

- India has approved multiple semiconductor and advanced packaging projects under ISM.

- The government aims to position India among the leading semiconductor nations over the coming decades.

Additional Info

3D Glass Solutions (3DGS)

- US-based semiconductor technology company.
- Specializes in:
 - Glass-based semiconductor substrates.
 - Advanced packaging technologies.
 - High-frequency electronic applications.

Semiconductor Value Chain

- Key segments include:
 - Design.
 - Fabrication (Fab).
 - Packaging.
 - Testing.
 - Assembly.
 - Materials and equipment manufacturing.

Strategic Importance of Semiconductors

- Essential for:
 - Consumer electronics.
 - Defence systems.
 - Telecommunications.
 - Electric vehicles.
 - Artificial Intelligence applications.
 - Space and strategic technologies.

Defence

Operation White Strike

What's the News?

The **Narcotics Control Bureau (NCB)** has conducted **Operation White Strike**, a major anti-narcotics operation resulting in the seizure of **349 kg of high-grade cocaine** valued at approximately **₹1,745 crore** in the illicit market. The operation targeted a transnational drug trafficking syndicate operating through India's logistics corridors, marking one of the largest single cocaine seizures in the country's history.

Operation White Strike?

- **Objective:**
 - To dismantle organized narcotics supply chains and disrupt transnational drug networks.
 - To implement India's **zero-tolerance policy** against drug trafficking through intelligence-driven enforcement.
- **Key Features:**
 - **Two-Stage Coordinated Raids:** The operation involved an initial interception in **Kalamboli (Navi Mumbai)** followed by a second major seizure in **Bhiwandi (Thane)**, both critical nodes in the Mumbai logistics corridor.
 - **Bottom-to-Top Intelligence Approach:** A smaller consignment was tracked, leading investigators to uncover a large-scale international syndicate.
 - **Advanced Concealment Detection:** Cocaine was hidden in imported machinery cavities and cricket gear (pads and gloves), with multi-layer packaging indicating high sophistication. Each packet was wrapped in nine layers of polythene, including a layer coated with a black greasy substance to evade detection.
- **Significance:**
 - The seizure of **349 kg exceeds India's annual average cocaine recovery**, which typically ranges between **200-300 kg**.
 - It highlights the improved inter-agency intelligence, surveillance, and enforcement capability of Indian agencies.
 - Union Home Minister **Amit Shah** lauded the operation as a "trailblazing example of a bottom-to-top approach" and reiterated the government's resolve to "ruthlessly crush the narcotics cartel."

Additional Info

- **Narcotics Control Bureau (NCB):**
 - **Established:** 1986 under the **Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985**.
 - **Parent Ministry:** Ministry of Home Affairs (MHA).
 - **Mandate:** To coordinate and enforce drug law enforcement at the national level, combat trafficking, and liaise with international agencies.
- **India's Zero-Tolerance Policy on Drugs:**

- Guided by a **3-pillar doctrine**: Supply reduction, demand reduction, and harm reduction.
- The **Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985** is the primary legislation, prohibiting cultivation, production, possession, sale, purchase, and transport of narcotic and psychotropic substances.
- **Darknet and Cryptocurrency:**
 - Drug syndicates increasingly use the darknet and cryptocurrencies to evade traditional law enforcement, posing new challenges for agencies.
- **International Cooperation:**
 - The NCB coordinates with international organizations such as the **UN Office on Drugs and Crime (UNODC)** and the **International Narcotics Control Board (INCB)** to combat cross-border trafficking.

India-Cambodia Joint Military Exercise CINBAX-II Commences in Kampong Speu

What's the News?

The Indian Army contingent has departed for Cambodia to participate in the 2nd edition of the bilateral military exercise **CINBAX-II**. The exercise is being conducted at the **Techo Sen Phnom Thom Mreas Provincial Royal Cambodian Air Force Training Centre (Camp Basil)** in Kampong Speu Province, Cambodia. The drill focuses on company-level joint training for operations in sub-conventional environments under the framework of **Chapter VII of the United Nations Mandate**.

Exercise CINBAX-II: Key Highlights

- **Participating Forces:**
 - **Indian Army:** 120 personnel, primarily from a battalion of the **Maratha Light Infantry Regiment**.
 - **Cambodian Army:** 160 personnel from the **Royal Cambodian Army**.
- **Aim:** Enhance **interoperability**, coordination, and operational synergy between the two armies, aligned with current counter-terrorism dynamics typical of **UN peacekeeping operations**.
- **Training Focus:**
 - Counter-terrorism and counter-insurgency operations in **semi-urban and jungle terrain**.
 - Modern combat skills: **drone operations, mortar handling, and sniper tactics**.
 - Sharing of operational experiences and best practices.
- **Structure:** The exercise includes tactical drills, practical discussions, and culminates in a comprehensive **validation exercise** to test joint operational efficiency.

India-Cambodia Defence Cooperation: A Growing Partnership

- **Historical Linkages:** India's defence ties with Cambodia date back to the early 1990s, when India

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provided a contingent of **2,250 personnel** (military and non-military) for the **UNTAC-sponsored elections in 1993**. India also contributed to **UN de-mining operations** in Cambodia.

- **Institutional Framework:** A bilateral **Agreement on Defence Cooperation** has been in place since **2007**. The **Terms of Reference (ToR)** for army-to-army cooperation were signed in **February 2023** during the visit of then Lt. General Hun Manet (now Prime Minister) to India.
- **Act East Policy:** Cambodia is regarded as a key partner under India's **Act East Policy**, with frequent high-level defence exchanges and ongoing capacity-building support, including **ITEC courses** for Cambodian forces.
- **Recent Developments:** In March 2025, India proposed establishing a dedicated **Defence Office** within its embassy in Phnom Penh to further strengthen military cooperation.

Evolution of CINBAX: From CINBAX-I to CINBAX-II

Feature	CINBAX-I	CINBAX-II
Year & Location	December 2024, Foreign Training Node, Pune, India	May 2026, Kampong Speu Province, Cambodia
Type of Exercise	Joint Table Top Exercise (planning/wargaming)	Field Training Exercise (practical + validation)
Troop Strength	20 personnel each side (40 total)	120 Indian + 160 Cambodian (280 total)
Focus Areas	CT operations, planning, ISR, cyber & hybrid warfare, HADR	CT operations, drone/sniper/mortar skills, semi-urban warfare
Scope	Tabletop discussions and wargaming	Company-level joint training with live validation exercise

Additional Information

- **United Nations Charter, Chapter VII (Articles 39-51):** Empowers the **UN Security Council** to determine threats to peace and take measures—including economic sanctions (Article 41) and military action (Article 42)—to maintain or restore international peace and security. Exercises under this framework prepare forces for robust UN peacekeeping mandates.
- **India's Contribution to UN Peacekeeping:**
 - One of the largest troop contributors to UN peacekeeping missions globally.
 - India has participated in **over 50 UN peacekeeping missions** and contributed nearly **2,75,000 troops** since inception.
 - India promotes the **"UNITE AWARE"** platform for enhancing peacekeeper safety using technology.

DRDO and IAF Successfully Conduct Maiden Flight Trial of TARA Glide Weapon

What's the News?

- The **Defence Research and Development Organisation (DRDO)** and the **Indian Air Force (IAF)** successfully conducted the maiden flight trial of the **Tactical Advanced Range Augmentation (TARA)** weapon system.
- The trial took place off the coast of Odisha, deploying the weapon from a **Jaguar combat aircraft**.
- TARA is **India's first indigenous glide weapon system**, marking a milestone towards indigenization under the **Atmanirbhar Bharat** initiative.

TARA Weapon System

- **What is TARA?**
 - It is a **modular range extension kit** designed to be fitted onto existing **unguided warheads**, transforming them into **advanced precision-guided munitions**.
 - As a **glide weapon**, it uses aerodynamic lift to extend its range significantly after being released from an aircraft, allowing it to function as a **stand-off weapon**.
- **Developed By:**
 - **Research Centre Imarat (RCI), Hyderabad**, in collaboration with other DRDO laboratories and Indian industry partners under the **Development cum Production Partners (DcPP)** model.
- **Primary Objectives:**
 - To provide a **low-cost solution** for enhancing the lethality and accuracy of existing unguided munitions against ground-based targets.
 - To enable precise strikes while **reducing collateral damage** and improving mission success rates.
- **Features:**
 - **Indigenous Glide System:** The first weapon system of its kind developed entirely within India.
 - **Modular Design:** The kit can be easily integrated with a variety of unguided warheads.
 - **Precision Guidance:** Utilizes state-of-the-art guidance, navigation, and control architecture for accurate target acquisition after release.
 - **Cost-Effectiveness:** Built using low-cost systems to enable the deployment of advanced precision capabilities at scale without prohibitive expenses.
- **Trial Validations:**
 - Successfully validated the **aerodynamic performance** of the winged glide configuration.
 - Confirmed the weapon's **navigation, guidance, and control architecture** during the flight.
 - Production activities for the system have already commenced.

Additional Info

- **Defence Research and Development Organisation (DRDO):**
 - Established in **1958**, headquartered in New Delhi.
 - Functions under the **Ministry of Defence**.
 - Mandated to design and develop leading-edge defence technology and systems for the Indian Armed Forces.
- **Related Organisations & Platforms:**
 - **Research Centre Imarat (RCI), Hyderabad:** A premier DRDO laboratory involved in the development of advanced missile systems, avionics, and navigation technologies.
 - **Development cum Production Partners (DcPP):** A DRDO model where development partners are selected early to engage in the production process, facilitating a seamless transition from design to manufacturing.
 - **Jaguar Aircraft:** A twin-engine, ground-attack aircraft used by the IAF, originally of Anglo-French origin, and now a mainstay for deep penetration strike missions.

India Successfully Conducts Maiden Test of Nuclear-Capable Intercontinental Ballistic Missile (ICBM)

What's the News?

- India successfully conducted the maiden flight test of a **nuclear-capable Intercontinental Ballistic Missile (ICBM)**.
- The test was carried out by the **Defence Research and Development Organisation (DRDO)**.
- The launch took place from **Abdul Kalam Island**, a missile test facility off the coast of Odisha.
- This test marks a pivotal advancement in India's strategic defense capabilities, potentially positioning it among an elite group of nations with long-range strike abilities.

Intercontinental Ballistic Missile (ICBM)

- **Definition:** An ICBM is a long-range ballistic missile with a minimum range exceeding **5,500 km**, designed primarily to deliver nuclear warheads over intercontinental distances.
- **Technology:** ICBM technology represents the pinnacle of missile engineering, demonstrating a nation's mastery over complex **rocket propulsion**, advanced **guidance systems**, and reliable **re-entry vehicle technology** to deliver a payload precisely from space to its terrestrial target.
- **Classification:** Ballistic missiles are classified by their range:
 - Short-Range Ballistic Missile (SRBM)
 - Medium-Range Ballistic Missile (MRBM)
 - Intermediate-Range Ballistic Missile (IRBM)
 - **Intercontinental Ballistic Missile (ICBM):** Range > 5,500 km.

Details of the Test

- **Location & Date:** The missile was launched from **Abdul Kalam Island** (formerly Wheeler Island) on the Odisha coast.
- **Test Corridor:** The launch involved a notified danger corridor spanning approximately **3,560 km** over the Bay of Bengal.
- **Safety Measures:** A **Notice to Airmen (NOTAM)** was issued for the Bay of Bengal region prior to the launch, restricting airspace temporarily to ensure safety.
- **Missile Identity:** While the missile tested is confirmed to be in the ICBM class, DRDO has not officially named the specific system. Sources indicate the configuration tested is distinct from the much-discussed **Agni-6** missile, though it belongs to the same strategic category.

India's Indigenous Missile Programme

- **Agni Missile Series:** India's strategic missile program is built around the **Agni series** of ballistic missiles, developed indigenously by DRDO.
 - **Agni-I:** SRBM, range ~700 km.
 - **Agni-II:** MRBM, range ~2,000 km.
 - **Agni-III:** IRBM, range ~3,500 km.
 - **Agni-IV:** IRBM, range ~4,000 km.
 - **Agni-V:** ICBM, range ~5,500 km.
 - **Agni-6:** Under development, expected range >10,000 km, expected to feature **Multiple Independently Targetable Re-entry Vehicle (MIRV)** technology.
- **DRDO's Readiness:** DRDO Chairman **Samir V Kamath** previously stated that all technical preparations for an Agni-6 class missile are complete, and the organization is ready to proceed as soon as government approval is given.

Additional Info

- **Agni-6 Anticipated Capabilities:** The Agni-6 is expected to be a next-generation ICBM with a strike range of over **10,000 km** and the capability to carry **MIRV** warheads, allowing a single missile to engage multiple targets independently.
- **Nuclear Command Authority (NCA):** India's nuclear arsenal is governed by the NCA, which comprises a Political Council and an Executive Council. It is the sole body responsible for authorizing a nuclear strike.
- **Integrated Test Range (ITR):** Abdul Kalam Island serves as the primary test facility for India's missile launches, managed by DRDO.
- **Related Development:** The ICBM test closely follows another significant DRDO achievement—the maiden flight trial of the **Tactical Advanced Range Augmentation (TARA)** glide weapon system, successfully tested on the day prior, highlighting a sustained push for indigenous defense innovation.

US Clears \$428 Million Support Packages for India's Apache Helicopters and M777 Howitzers

What's the News?

- The **US State Department** approved two **Foreign Military Sales (FMS)** packages for India worth a combined **\$428.2 million** to provide long-term

sustainment support for **AH-64E Apache attack helicopters** and **M777A2 Ultra-Light Howitzers**

- **Apache package (\$198.2 million):** Covers engineering, technical/logistics support, training, spare parts, and programme management; principal contractors: **Boeing** and **Lockheed Martin**
- **M777 package (\$230 million):** Includes ancillary items, repair services, depot-level maintenance, field representatives, and training; principal contractor: **BAE Systems (UK)**
- Deals aim to enhance **operational readiness**, strengthen **US-India strategic partnership**, and support regional stability in the **Indo-Pacific**

Foreign Military Sales (FMS) Framework?

- **FMS mechanism:** US government-to-government defence sales channel administered by **Defense Security Cooperation Agency (DSCA)**
- Process involves **Congressional notification** for deals above threshold values before final approval
- Advantages for partner nations:
 - Access to US-origin equipment with assured interoperability
 - Integrated logistics support and training ecosystems
 - Alignment with US security cooperation objectives
- Strategic rationale cited by US: India as a **major defence partner** contributing to political stability, peace, and economic progress in South Asia and Indo-Pacific

Apache & M777: Capability and Deployment Context

- **AH-64E Apache:**
 - Advanced multi-role attack helicopter with precision strike, surveillance, and network-centric warfare capabilities
 - **Indian inventory:** 22 operated by **Indian Air Force**; 6 inducted by **Indian Army** (first batch delivered recently)
 - Deployed in high-altitude sectors including **Ladakh** for fire-support and reconnaissance missions
- **M777A2 Ultra-Light Howitzer:**
 - 155 mm/39-calibre towed artillery system; lightweight (~4.2 tonnes) enables rapid deployment in mountainous terrain
 - Critical asset for **Indian Army** along **China and Pakistan borders**
 - Proven effectiveness with **Excalibur precision-guided ammunition** in counter-terrorism operations (e.g., **Operation Sindoor**)

Additional Info

- **Policy & Institutional Framework:**
 - **Defence Acquisition Procedure (DAP) 2020:** Prioritises 'Make in India', co-production, and strategic partnerships with friendly foreign nations
 - **Major Defence Partner Status (2016):** India designated as such by US, enabling access to

advanced technologies and streamlined export controls

- **Foundational Agreements:**
 - **LEMOA (2016):** Logistics exchange for mutual military support
 - **COMCASA (2018):** Secure communications interoperability
 - **BECA (2020):** Geospatial intelligence sharing for precision targeting

Constitutional & Governance Context:

- **Article 53:** Executive power of Union vested in President; defence procurement executed by **Ministry of Defence** under Cabinet/Parliamentary oversight
- **Article 246 + Seventh Schedule:** Union List Entry 1 – Defence of India is exclusive Union subject
- **Public Accounts Committee (PAC):** Parliamentary body reviewing defence expenditure for accountability

Related Initiatives:

- **Atmanirbhar Bharat in Defence:** Focus on indigenisation while leveraging strategic partnerships for critical capability gaps
- **IDEX (Innovations for Defence Excellence):** Platform fostering start-ups and MSMEs in defence tech – complements imported platforms with indigenous innovation
- **Indo-Pacific Oceans Initiative (IPOI):** India-led framework aligning with US Indo-Pacific Strategy on maritime security and capacity building

DRDO Successfully Tests Indigenous ULPGM-V3

What's the News?

- The **Defence Research & Development Organisation (DRDO)** has successfully completed final configuration trials of the **Unmanned Aerial Vehicle Launched Precision Guided Missile (ULPGM)-V3** at its Kurnool test range, Andhra Pradesh.
- The missile was tested in both **Air-to-Ground** (anti-tank) and **Air-to-Air** (counter-drone/helicopter) modes using an integrated **Ground Control System (GCS)**.
- Developed by **Research Centre Imarat (RCI), Hyderabad** as the nodal laboratory, the ULPGM-V3 is a lightweight, fire-and-forget weapon designed for integration with tactical UAVs.
- The trials confirm a **fully mature indigenous supply chain**, enabling immediate serial production under the **Aatmanirbhar Bharat** initiative.

Technical Specifications & Capabilities

- **Weight & Platform Compatibility:** Ultra-lightweight design at **12.5 kg**, enabling integration with multiple tactical and high-endurance UAV platforms.
- **Operational Range:** Extended strike range up to **10 km**; effective engagement envelope of **4 km (day)** and **2.5 km (night)**.

- **Guidance System:** Dual-channel **Imaging Infrared (IIR) seeker** with laser guidance for all-weather, day-night target acquisition.
- **Accuracy:** **Circular Error Probable (CEP) of 10 cm**, ensuring precision strikes on high-value point targets.
- **Data Link:** Two-way **S-Band digital datalink** for real-time target updates, mid-course correction, and in-flight re-targeting.
- **Propulsion:** Advanced dual-thrust, smokeless solid rocket motor for low-observable launch signature.
- **Modular Warhead Options:**
 - **Anti-Armor/EFP:** Explosively Formed Penetrator for top-attack against main battle tanks.
 - **Penetration-Cum-Blast (PCB):** Bunker-buster variant for hardened structures.
 - **Pre-Fragmented:** Area-effect warhead for anti-personnel/soft targets.

Additional Info

- **DRDO Laboratories Involved:**
 - **Research Centre Imarat (RCI), Hyderabad:** Nodal lab for missile systems and avionics.
 - **Defence Research & Development Laboratory (DRDL), Hyderabad:** Missile aerodynamics and propulsion.
 - **Terminal Ballistics Research Laboratory (TBRL), Chandigarh:** Warhead design and lethality.
 - **High Energy Materials Research Laboratory (HEMRL), Pune:** Propellant and energetic materials.
- **Related Initiatives & Policy Frameworks:**
 - **Make in India (Defence):** Promotes domestic design, development, and manufacturing of defence equipment.
 - **Innovations for Defence Excellence (iDEX):** Supports startups/MSMEs in defence innovation; several ULPGM contributors are iDEX partners.
 - **Positive Indigenisation Lists (PILs):** Ministry of Defence embargoes import of items on PILs, creating assured demand for indigenous systems like ULPGM.
- **Constitutional & Strategic Linkages:**
 - Supports **Article 51** (Directive Principle: promote international peace and security) by strengthening credible deterrence.
 - Aligns with **National Security Strategy** emphasis on technology-driven, network-centric warfare.
 - Advances **SDG 9** (Industry, Innovation, and Infrastructure) through defence-industrial ecosystem development.

India Successfully Test-Fires Agni-1 Short-Range Ballistic Missile

What's the News?

- India successfully test-fired the **Agni-1 short-range ballistic missile** from the **Integrated Test Range**

(ITR) at Chandipur, Odisha, under the aegis of the **Strategic Forces Command (SFC)**.

- The trial validated all **operational and technical parameters** of the missile system, reaffirming India's strategic deterrence readiness and indigenous defence capabilities.
- The test follows India's recent successful flight-trial of an advanced **Agni missile with MIRV (Multiple Independently Targetable Re-entry Vehicle)** technology, underscoring continuous modernization of the strategic arsenal.

Agni-1: Technical Specifications & Capabilities

- **Classification:** Short-Range Ballistic Missile (SRBM) under India's **Integrated Guided Missile Development Programme (IGMDP)**.
- **Range:** **700–900 km**, designed for tactical and theatre-level strike roles.
- **Propulsion:** Single-stage, **solid-fuelled** motor enabling quick launch readiness and enhanced mobility.
- **Payload Capacity:** Up to **1,000 kg**, capable of delivering both **conventional and nuclear warheads**.
- **Mobility:** Road-mobile launcher system for rapid deployment and survivability.
- **Guidance:** Advanced inertial navigation system ensuring high accuracy for precision strikes.

Strategic & Policy Significance

- **Nuclear Doctrine Alignment:** Agni-1 supports India's **No First Use (NFU)** policy by providing credible, survivable second-strike capability at regional level.
- **Deterrence Posture:** Regular user trials maintain operational readiness of the **nuclear triad** (land, air, sea-based delivery systems).
- **Indigenous Defence Push:** Developed by **DRDO**, the test reinforces **Atmanirbhar Bharat** in critical defence technologies, reducing import dependence.
- **Regional Security Context:** Enhances deterrence against conventional threats within South Asia, complementing longer-range Agni variants for strategic depth.
- **Technology Validation:** Successful trials feed data into next-gen systems like **Agni-P (Prime)** and MIRV-equipped platforms, advancing India's missile modernization roadmap.

Additional Info

- **Key Organizations:**
 - **Defence Research and Development Organisation (DRDO):** Primary developer of Agni series; oversees R&D, testing, and technology transfer.
 - **Strategic Forces Command (SFC):** Tri-service command managing India's nuclear arsenal; conducts operational trials and maintains readiness.
 - **Integrated Test Range (ITR), Chandipur:** Premier missile testing facility in Odisha; supports trials of surface-to-surface, air defence, and naval missile systems.
- **Agni Missile Family Overview:**

- **Agni-P (Prime):** New-generation, canister-launched SRBM (1,000–2,000 km range) with improved accuracy and mobility.
- **Agni-III:** Intermediate-range ballistic missile (3,000–3,500 km); part of operational deterrent.
- **Agni-V:** Intercontinental ballistic missile (5,000+ km); MIRV-capable, enhances strategic reach.
- **Constitutional & Policy Framework:**
 - **Entry 7, List I (Union List):** Empowers Parliament to legislate on defence and armed forces.
 - **Defence Acquisition Procedure (DAP) 2020:** Prioritizes indigenous design, development, and manufacturing under 'Buy (Indian-IDDMM)' category.
 - **Innovations for Defence Excellence (iDEX):** Supports start-ups and MSMEs in defence tech innovation, complementing DRDO's strategic projects.

Indian Army's AI Push: Launch of Kautilya and Q-FORCE Platforms

What's the News?

- The **Indian Army** has launched two indigenous AI-powered digital platforms—**Kautilya** (command intelligence) and **Q-FORCE** (logistics management)—to enhance real-time decision-making and supply chain efficiency.
- These platforms align with the Army's vision to make **2026 the year of networking and data-centricity**, with full AI integration into operations targeted by **2027**.
- Focus is on reducing decision latency, improving situational awareness, and strengthening sustainment across diverse operational terrains.

Kautilya: AI Command Intelligence Platform

- **Core Function:** AI-enabled dashboard with **Natural Language Processing (NLP)** interface for structured data generation, analytics, and decision support.
- **Key Features:**
 - Processes multi-domain inputs: personnel, equipment, training, logistics, and operational readiness.
 - Supports tablet-based data entry and functions as an **AI co-pilot** for administrative and tactical tasks.
 - Enables faster synthesis of intelligence from drones, sensors, and field reports.
- **Significance:** Enhances command-level situational awareness and supports data-driven battlefield decisions, critical for multi-front operational scenarios.

Q-FORCE: Integrated Logistics & Sustainment Application

- **Core Function:** Unified digital application for end-to-end supply chain, inventory, and transport management.

- **Key Features:**
 - Integrates multiple legacy logistics platforms into a single interoperable system.
 - Optimises resource allocation, reduces delays, and improves tracking across high-altitude, desert, and forest terrains.
 - Supports real-time visibility of stocks, movement planning, and sustainment workflows.
- **Significance:** Strengthens operational readiness by ensuring timely delivery of ammunition, fuel, rations, and medical supplies—key to prolonged deployment efficacy.

Additional Info

- **National Industrial Corridor Development Corporation (NICDC):**
 - Established in 2008 as the Delhi-Mumbai Industrial Corridor Development Corporation (DMICDC) and later renamed in 2020. It is the premier agency for developing smart, sustainable industrial cities across India's major industrial corridors.
 - NICDC is currently spearheading projects across 11 industrial corridors, with 20 greenfield industrial smart cities under development.
- **PM Gati Shakti National Master Plan:**
 - Launched in October 2021, it is a transformative digital platform that integrates the planning of 16 central ministries to ensure multi-modal connectivity and seamless movement of goods and people. It is a key enabler for the logistics backbone of BHAVYA parks.
- **Industries (Development and Regulation) Act, 1951:**
 - A foundational legislation that provides the central government with the authority to regulate and develop key industries that have a national impact. The BHAVYA scheme operates within this broader framework of industrial policy.
- **Constitutional Context:**
 - Article 301 of the Constitution guarantees the freedom of trade, commerce, and intercourse throughout India, a principle that such integrated industrial development seeks to strengthen.

International Relations

India Retained on USTR's Priority Watch List for IPR Concerns

What's the News?

The United States Trade Representative (USTR) has once again placed India on its "Priority Watch List" in the annual **Special 301 Report** for 2026, citing persistent shortcomings in the protection and enforcement of Intellectual Property (IP) rights. India is among six countries flagged in this category, alongside **China, Russia, Indonesia, Chile, and Venezuela**. The report specifically highlighted that "India remains one of the world's most challenging major economies with respect to the protection and enforcement of IP."

Understanding the Special 301 Report

- **What is it?** It's an annual review by the USTR that assesses the IP protection and enforcement regimes of over 100 US trading partners.
- **Categorization:** Countries are placed into tiers: **Priority Foreign Country** (the most severe), **Priority Watch List**, or **Watch List**.
- **Purpose:** The report serves as a key policy tool, applying pressure on nations to strengthen their legal frameworks and enforcement mechanisms related to patents, copyrights, trademarks, and trade secrets. The 2026 report evaluated over 100 trading partners to identify those not meeting US IP standards.

Why India Remains on the Priority Watch List

US concerns about India's IP regime are multifaceted and long-standing. Key issues flagged include:

- **Patent Hurdles:** The **Indian Patents Act** is frequently criticized for posing challenges to patent applications, particularly from US pharmaceutical companies, and for allowing too much flexibility to the government.
- **Data Protection:** Concerns persist over the lack of an effective system to protect against the unfair commercial use and unauthorized disclosure of test data for pharmaceuticals and agricultural chemicals.
- **Market Access & Tariffs:** High customs duties on IP-intensive products like information and communications technology (ICT), solar energy equipment, medical devices, and capital goods are a major irritant.
- **Enforcement Weakness:** The report flags weak enforcement of copyrights and trademarks, coupled with high levels of counterfeiting.
- **Inconsistent Progress:** While acknowledging India's steps to strengthen its IP regime, the USTR noted "a lack of progress" on several long-standing concerns and inconsistent implementation.

Implications for India-US Trade & Diplomacy

Placement on the Priority Watch List is a significant diplomatic signal, falling just short of immediate punitive action.

- **No Immediate Sanctions:** Being on the list does not automatically trigger sanctions.

- **Heightened Scrutiny & Negotiations:** It indicates a problem with IP protection and market access, leading to intensified bilateral engagement. The USTR stated it will engage with India, including through **Bilateral Trade Agreement negotiations**. This placement can influence trade talks and pressure India for reforms.
- **Risk of Escalation:** If concerns persist and are not resolved, it can lead to further investigations. In extreme cases, issues can escalate into trade disputes under **Section 301 of the US Trade Act of 1974**, which empowers the US to take action against unfair trade practices.
- **Tariff Context:** The report comes amid renewed US scrutiny of Indian tariffs on IP-intensive goods, aligning with broader trade friction points.

Global Context and India's Position

- Six countries are on the 2026 **Priority Watch List: Chile, China, India, Indonesia, Russia, and Venezuela**. These nations will face intensive engagement from the USTR in the coming year.
- **Vietnam** was elevated to the most severe category, **Priority Foreign Country**, for the first time in thirteen years. This triggers a 30-day period for the USTR to decide on a formal Section 301 investigation.
- **Other Movements:** **Argentina** and **Mexico** were moved off the Priority Watch List to the less severe Watch List due to improvements. The **European Union** was added to the Watch List over concerns about geographical indications and pharmaceutical legislation. The Watch List now includes 19 trading partners.

Additional Info

- **Legal & Policy Framework in India:**
 - **National IPR Policy 2016:** The primary policy aimed at promoting a "Creative India; Innovative India" by streamlining IP processes and increasing awareness.
 - **Department for Promotion of Industry and Internal Trade (DPIIT):** The nodal agency for IPR-related matters under the **Ministry of Commerce and Industry**.
 - **Cell for IPR Promotion and Management (CIPAM):** Tasked with effectively implementing the National IPR Policy.
- **Relevant Statutes:**
 - **The Patents Act, 1970:** Governs the grant and regulation of patents; amended in 2005 to include product patents for pharmaceuticals.
 - **The Copyright Act, 1957:** Protects original literary, dramatic, musical, and artistic works.
 - **The Trademarks Act, 1999:** Provides for registration and better protection of trademarks.
- **Global Context:**
 - **TRIPS Agreement:** An international legal agreement between all member nations of the WTO that sets minimum standards for many forms of intellectual property regulation.

- **WIPO:** The **World Intellectual Property Organization**, a specialized agency of the **United Nations**, which India joined in 1975.

India Urges ADB to Expand Lending and Undertake Institutional Reforms

What's the News?

At the Asian Development Bank's (ADB) annual Board of Governors meeting, India called on the multilateral lender to significantly expand its lending capacity and accelerate structural reforms. The push, led by Minister of State for Finance Pankaj Chaudhary, emphasized that existing lending limits risk becoming a binding constraint on development financing for large developing economies like India, especially amidst rising global economic uncertainty.

India's Reform Agenda

- **Capital Expansion Measures:** India urged for the continuation and expansion of capital augmentation tools.
 - Specifically called for the use of **hybrid and callable capital** to ensure that exposure limits do not constrain the borrowing programs of developing member countries.
 - The focus is on preventing lending caps from restricting growth ambitions in infrastructure, climate transition, and human capital development.
- **Transformational Approach:** The Minister stressed that the ADB needs to shift from incremental support to large, coordinated financing responses to meet the scale of current global challenges.
 - This includes a call for broader reforms across Multilateral Development Banks (MDBs) to enhance their risk appetite, optimize balance sheet use, and crowd in private capital.
- **"Billions to Trillions" Agenda:** India highlighted the urgent need to operationalize the "billions to trillions" agenda, which aims to leverage public funds to mobilize much larger pools of private investment for development projects.

ADB's \$70 Billion Regional Investment Roadmap

- In a parallel development, ADB President Masato Kanda announced a massive \$70 billion regional investment roadmap to be implemented by 2035.
 - This initiative is designed to enhance connectivity and infrastructure across Asia and the Pacific.
- **Key Components of the Plan:**
 - **Pan-Asia Power Grid Initiative:** A \$50 billion project to integrate renewable energy across borders, build transmission networks, and expand electricity access.
 - **Asia-Pacific Digital Highway:** A \$20 billion project focused on developing digital infrastructure, including fibre-optic networks,

subsea cables, and data centres to improve broadband access.

Global Economic Headwinds

- India's intervention was made against a backdrop of a deteriorating global economic outlook.
- **Growth Downgrade:** The ADB has recently cut its growth forecast for developing Asia and the Pacific to **4.7% for 2026**, a significant reduction from its earlier estimate of 5.1%.
 - The downgrade is attributed to the economic fallout from the conflict in West Asia, rising energy prices, and tightening financial conditions.
- **Inflationary Pressure:** The bank simultaneously raised its inflation projection for the region to **5.2% for 2026**, warning that a prolonged conflict could further derail growth and spike inflation.
- These projections align with warnings from other global institutions like the IMF, underscoring the widespread impact of geopolitical tensions on economic stability.

Additional Info

- **Asian Development Bank (ADB)**
 - A regional development bank established in **1966** with its headquarters in **Manila, Philippines**.
 - Comprises **69 member countries**, including 50 from Asia and the Pacific and 19 from outside the region.
 - Functions include providing loans, grants, equity investments, and guarantees for infrastructure, social sector, and climate projects.
 - Governed by a **Board of Governors** and a **Board of Directors**, with a weighted voting system based on shareholding.
 - Key financial windows include **Ordinary Capital Resources (OCR)** for middle-income countries and the concessional **Asian Development Fund (ADF)** for poorer members.
- **India and the ADB**
 - India is a **founding member** of the ADB and is currently its **fourth-largest shareholder**.
 - As of 2020, India held approximately **6.3% of total shares** in the bank.
 - ADB financing has been extensively utilized in India for projects in transport, urban development, energy, and water supply.
- **The "Billions to Trillions" Agenda**
 - A concept introduced around 2015, aimed at using scarce official development assistance (in the billions) to catalyze and de-risk private capital flows (in the trillions) for sustainable development.
 - Progress has been mixed, with a persistent gap between development needs and actual financial flows.

India and Vietnam elevate ties to Enhanced Comprehensive Strategic Partnership

What's the News?

India and Vietnam elevated their bilateral relationship to an **Enhanced Comprehensive Strategic Partnership** during Vietnamese President Tô Lâm's state visit to India. The two sides signed **13 agreements** across critical minerals, digital payments, pharmaceuticals, tourism, and education, and set a target to raise bilateral trade to **\$25 billion by 2030** (from the current ~\$16 billion). Vietnam also formally joined India's **Indo-Pacific Oceans Initiative (IPOI)**.

Enhanced Comprehensive Strategic Partnership?

- **Upgradation:** The partnership was elevated from the **Comprehensive Strategic Partnership** established in 2016.
- **Scope:** Aims to deepen cooperation in defence, trade, technology, connectivity, maritime security, and supply-chain resilience while promoting a **free, open, and rules-based Indo-Pacific order**.
- **Strategic Pillars:** Defence & security, economic & trade expansion, emerging technology & critical minerals, and Indo-Pacific/ASEAN cooperation.

Outcomes & Agreements

- **Trade & Economic Target:** Bilateral trade target set at **\$25 billion by 2030**; current trade stands at approximately **\$16 billion**. Both sides agreed to push for an early review of the **ASEAN-India Trade in Goods Agreement (AITIGA)**.
- **Critical Minerals & Rare Earths:** MoU between **IREL (India) Ltd** and Vietnam's **Institute for Technology of Radioactive and Rare Elements** to expand cooperation in rare-earth elements and related technologies.
- **Digital Payments & FinTech:**
 - **RBI and State Bank of Vietnam** signed an agreement on payment-system cooperation and digital payment innovation.
 - **NPCI International Payments Ltd** and Vietnam's **NAPAS** will develop cross-border QR-code interoperability.
- **Pharmaceuticals & Medical Products:** MoU between **Central Drugs Standard Control Organisation (CDSCO)** and Vietnam's **Drug Administration** for cooperation in medical products regulation.
- **Defence & Security:**
 - Agreement to establish a **Strategic Diplomacy-Defence Dialogue (2+2)**.
 - Continued defence cooperation through training, maritime exercises, defence financing, and transfer of assets (e.g., **INS Kirpan** in 2023).
 - Discussion on potential **BrahMos** missile transfer for capability enhancement.
- **Maritime Integration:** Vietnam joined the **Indo-Pacific Oceans Initiative (IPOI)**.
- **Other Agreements:** Cooperation in tourism, cultural exchanges (digitisation of **Cham manuscripts**),

public-sector audits, urban management, academic partnerships, and expansion of agricultural trade (Indian grapes, Vietnamese durian).

Additional Info

- **Indo-Pacific Oceans Initiative (IPOI)**
 - Launched by India at the **East Asia Summit (2019)** in Thailand.
 - A voluntary, non-treaty initiative to promote a free, open, and rules-based Indo-Pacific.
 - Pillars: Maritime ecology, maritime resources, capacity building & resource sharing, disaster risk reduction, science & technology, and trade connectivity.
- **India-Vietnam Bilateral History**
 - **2016:** Elevated to **Comprehensive Strategic Partnership**.
 - **2023:** Transfer of **INS Kirpan** (missile corvette) to Vietnam.
 - **Long-standing** defence & security cooperation rooted in the **Look East Policy** (now **Act East Policy**).
- **Key Frameworks & Policies**
 - **Act East Policy:** Focuses on India's engagement with the extended neighbourhood in the Asia-Pacific region, with ASEAN at its core.
 - **UNCLOS 1982:** Establishes the legal framework for maritime activities; both countries call for adherence to it in the South China Sea.
 - **ASEAN-India Trade in Goods Agreement (AITIGA):** Signed in 2009; review aimed at making it more trade-facilitative.

India Hosts Kimberley Process Interessional Meeting 2026 in Mumbai

What's the News?

India, as the **Chair of the Kimberley Process (KP) for 2026**, inaugurated the **KP Interessional Meeting 2026** in Mumbai. The four-day meeting brings together representatives from governments, the global diamond industry, and civil society to discuss strengthening the **Kimberley Process Certification Scheme (KPCS)** and reinforcing ethical practices in the global diamond trade.

The Kimberley Process (KP) & KPCS

- **What it is:** A **multi-stakeholder international initiative** involving governments, the diamond industry, and civil society, created to eliminate the trade in **conflict diamonds** (rough diamonds used by rebel movements to finance wars against legitimate governments).
- **Initiative Started:** **May 2000** in Kimberley, South Africa.
- **Certification Scheme (KPCS) Formalized:** Adopted in **November 2002** and launched in **January 2003**, it acts as a government-validated passport for rough diamond shipments.
- **Mandate:** Implements strict tracking and certification for all rough diamond exports and imports to ensure

they do not fund violence. It prohibits trade in rough diamonds between members and non-participants.

- **Governance & Membership:**
 - The **UN General Assembly Resolution 55/56** underpins the scheme.
 - Currently includes **60 participants representing 86 countries**, with the European Union participating as a single bloc.
 - The Chairship is rotated annually among member states.

India's 2026 Chairship & the Intersessional Meeting

- **India's Chairship:** India assumed the Chairship on **January 1, 2026**, for the **third time**, highlighting its central role in the global diamond industry.
- **2026 Theme:** The theme is the "**3Cs**" — **Credibility, Compliance, and Consumer Confidence** — aiming to modernize the scheme and enhance trust.
- **KP Intersessional Meeting 2026:**
 - **Venue & Date:** Mumbai.
 - **Key Focus Areas:** Strengthening monitoring and compliance, enhancing consumer confidence, addressing challenges in artisanal and alluvial diamond production, and improving statistical systems.
 - **Modernization Push:** Discussions include leveraging **digital, tamper-proof certificates and blockchain-based traceability** to reduce fraud in the supply chain.
 - **Stakeholders Present:** The meeting includes senior officials from the **Department of Commerce**, KP participant nations, the **World Diamond Council**, the **Civil Society Coalition**, and industry bodies like the **Gem and Jewellery Export Promotion Council (GJEPC)**.

Additional Info

- **Conflict Diamonds (or Blood Diamonds):**
 - Rough diamonds mined in a war zone and sold to finance an insurgency, an invading army's war efforts, or a warlord's activity.
 - The issue gained global prominence during the civil wars in **Sierra Leone, Angola, and the Democratic Republic of Congo** in the 1990s.
- **KPCS Core Features:**
 - **Tamper-Resistant Shipments:** Every export of rough diamonds must be in a tamper-resistant container.
 - **Government-Validated Certificate:** Accompanied by a certificate guaranteeing the diamonds are conflict-free.
 - **National Legislation:** Member countries must enact laws to implement and enforce the KPCS.

India & IFAD Launch Eight-Year COSOP (2026–2033)

What's the News?

The Government of India and the **International Fund for Agricultural Development (IFAD)** have launched a new eight-year **Country Strategic Opportunities Programme**

(**COSOP**) for the period **2026–2033**. The framework aims to enhance rural incomes, strengthen climate resilience, and scale sustainable livelihood opportunities, aligning with the **Viksit Bharat@2047** vision. The launch took place at the **IFAD–India Partnership for Rural Prosperity** event at Bharat Mandapam, New Delhi.

Country Strategic Opportunities Programme (COSOP)

What is COSOP?

- **COSOP** is a strategic investment and development framework that defines the long-term partnership between a host country and **IFAD**.
- It serves as an operational blueprint to modernize rural livelihoods, moving beyond basic poverty alleviation toward building market-oriented, climate-resilient rural systems.

Features of India's COSOP 2026–2033

- **Two Strategic Objectives:**
 1. **Enhance Resilience:** Social, economic, and climate resilience of vulnerable rural communities.
 2. **Strengthen Knowledge Systems:** Improve performance, visibility, and scalability of interventions through robust knowledge systems.
- **Core Focus Areas:**
 - **Grassroots Institutional Strengthening:** Empowering **Self-Help Groups (SHGs)**, **Farmer Producer Organisations (FPOs)**, and **cooperatives** as platforms connecting finance, technology, infrastructure, and markets.
 - **Market-Oriented Livelihoods:** Integration of rural enterprises into value chains through value addition, infrastructure support, and e-commerce integration.
 - **Financial Inclusion:** Leveraging SHGs for large-scale financial empowerment, particularly for women-led enterprises.
 - **South-South Cooperation:** Positioning India as a global knowledge leader to share expertise in digital agriculture, inclusive finance, and climate-resilient value chains with countries in Africa, Southeast Asia, and Latin America.

Strategic Implementation Partnerships

- **NABARD Collaboration:** IFAD signed a strategic partnership with the **National Bank for Agriculture and Rural Development (NABARD)** to expand rural finance and develop blended finance instruments for smallholders and agri-enterprises.

Relevance & Impact

Alignment with National Priorities

- The programme is closely integrated with India's **Viksit Bharat@2047** vision, supporting agricultural transformation, livelihood diversification, women's empowerment, and institutional strengthening.
- **Anuradha Thakur**, Secretary, Department of Economic Affairs, highlighted that the focus has evolved from basic poverty alleviation to building sustainable, market-oriented rural livelihoods resilient to climate and economic shocks.

Proven Models & Success Stories

The COSOP draws upon successful IFAD-supported models already demonstrated across Indian states:

- **Maharashtra:** Nearly **one million women** have developed financial track records through SHG federations, unlocking over **₹1,300 crore** in bank lending with repayment rates approaching **99%**.
- **Meghalaya:** Investments in cold storage infrastructure, farm equipment, and logistics have enabled smallholder farmers to access export markets, including Dubai.
- **Uttarakhand:** Women-led producer enterprises have converted locally sourced natural products into nationally recognised brands sold through e-commerce platforms.

Target Beneficiaries

- **Geographic Focus:** Poorer and climate-vulnerable Himalayan states, particularly the **10 poorest states** and **112 aspirational districts**.
- **Poverty Targeting:** Households below the poverty line, small/marginal farmers, landless people, fishers, women-headed households, youth, and persons with disabilities.
- **Social Groups:** Scheduled Castes (SCs), Scheduled Tribes (STs), pastoralists, fishers, and forest-dependent communities.

Significance for Rural Transformation

- The programme aims to move beyond isolated projects to create **scalable systems** connecting finance, institutions, infrastructure, and markets, delivering results long after any single investment ends.
- COSOP positions India as a provider of scalable rural development models for other developing countries, leveraging India's G20 Presidency experience to share cooperative governance and digital agriculture services.

Additional Info

- **About IFAD:**
 - **International Fund for Agricultural Development (IFAD)** is a specialized United Nations agency and an International Financial Institution that tackles hunger and poverty in rural communities.
 - **Established:** 1977
 - **Headquarters:** Rome, Italy
 - **Member States:** 180 (India is a founding member)
- **Poverty Context:**
 - Extreme poverty in India dropped from **40% in 2004** to **2.3% in 2022**, though **11%** of the population remains **multidimensionally poor**.

Indian Ocean Dialogue (IOD)

What's the News?

- India hosted the **10th edition of the Indian Ocean Dialogue (IOD)** in New Delhi, a premier Track 1.5 forum that brings together government officials and non-governmental experts.

- The event was organized by the **Ministry of External Affairs (MEA)** in collaboration with the **Indian Council of World Affairs (ICWA)** and the **IORA Secretariat**.
- The dialogue was held under the theme "**Indian Ocean Region in a Transforming World**" and featured six focused sessions on topics like maritime safety, blue economy, and climate change.
- This edition gains added significance as **India has assumed the Chairship of the Indian Ocean Rim Association (IORA) for the 2025-27 period**.

10th Edition of the Indian Ocean Dialogue (IOD)

Background & Format

- The IOD originated from a decision at the 13th IORA Council of Ministers meeting in Perth, Australia, in 2013.
- India hosted the inaugural IOD in Kerala in 2014, and has since hosted multiple editions, including the 6th in New Delhi (2019) and the 8th virtually (2021).
- It is a **Track 1.5 forum**, uniquely blending official (Track 1) and non-official (Track 2) participation to foster candid discussions on strategic regional issues.

Focus Areas & Participants

- The 10th IOD included six key sessions: **Maritime Safety and Security; Blue Economy; Disaster Risk Management; Economic Trade and Investment; Climate Change; and Science & Technology Development and Women Empowerment**.
- The dialogue saw broad participation from senior policymakers, diplomats, defense officials, and experts from IORA's **23 Member States and 12 Dialogue Partners** (which include the US, China, and the EU).
- Distinguished speakers included India's Union Minister for Ports, Shipping and Waterways, **Sarbananda Sonowal**, and the Minister of Foreign Affairs of Mauritius, **Dhananjay Ramful**, who collectively called for strengthened collective action to uphold a secure and rules-based maritime order.

India's Strategic Vision: From SAGAR to MAHASAGAR

- A key theme underpinning India's engagement is its maritime vision, which has evolved from **SAGAR (Security and Growth for All in the Region)** to the more expansive **MAHASAGAR (Mutual and Holistic Advancement for Security and Growth Across Regions)**.
- **Vision MAHASAGAR** expands the scope of India's maritime policy beyond immediate security, integrating **economic diplomacy, technological connectivity, and environmental sustainability**.
 - India reiterated its commitment to this vision at the dialogue, positioning itself as a "**first responder**" and "**net security provider**" in the region.

Additional Information

- **About the Indian Ocean Rim Association (IORA)**
 - IORA is an inter-governmental organization aimed at strengthening regional cooperation and sustainable development within the Indian Ocean region.

- It comprises **23 Member States** and **12 Dialogue Partners**.
- Its six priority areas are maritime safety and security; trade and investment facilitation; fisheries management; disaster risk management; academic, science and technology cooperation; and tourism and cultural exchange.
- **Strategic Importance of the Indian Ocean Region (IOR)**
 - The IOR is a critical global artery, carrying an estimated **80% of the world's maritime trade** and nearly **two-thirds of global oil shipments**.
 - It is home to nearly **2.7 billion people** and hosts critical maritime choke points.
 - Over **90% of global internet traffic** is carried by undersea fibre-optic cables, many of which pass through the Indian Ocean seabed.

India and UAE Sign Landmark Pacts on LPG Supply and Strategic Oil Reserves

What's the News?

- India and the United Arab Emirates (UAE) signed six agreements to deepen cooperation in energy, defence, and maritime sectors on **May 15, 2026**.
- The pacts were signed during Prime Minister **Narendra Modi's** brief stopover in Abu Dhabi, where he met UAE President **Sheikh Mohamed bin Zayed Al Nahyan**.
- Agreements include a **Memorandum of Understanding (MoU) on Strategic Petroleum Reserves (SPR)** between Indian Strategic Petroleum Reserves Limited (ISPRL) and Abu Dhabi National Oil Company (ADNOC), and an agreement to boost **Liquefied Petroleum Gas (LPG)** supplies to India.
- The visit took place against the backdrop of global energy market volatility due to the **US-Iran conflict**, which has disrupted maritime traffic through the Strait of Hormuz.

Strategic Petroleum Reserves (SPR) MoU

- **Overview:** The pact establishes a framework for India and the UAE to collaborate on storing emergency crude oil supplies within India's SPR facilities.
- **Provisions:**
 - Under the agreement, **ADNOC may store up to 30 million barrels of crude oil** in India's strategic reserves.
 - This builds upon a 2018 partnership where ADNOC stored over 5 million barrels at the **Mangaluru SPR facility** in Karnataka.
- **Significance:**
 - Enhances India's energy security by ensuring a buffer of emergency crude supplies to mitigate global oil price shocks and supply disruptions.
 - The reserves act as an energy safety net, stabilising domestic supply chains during crises.

LPG Supply Agreement

- **Overview:** The agreement ensures a reliable and increased supply of LPG from the UAE to India.
- **Facts:**
 - The UAE is India's **largest LPG supplier**, meeting approximately **40% of India's domestic LPG requirement**.
 - India is the **world's second-largest LPG importer**.
 - The UAE was also India's **fourth-largest source of crude oil**, with a share of nearly **11%** of India's crude imports.

Broader Strategic Partnership

- **Strategic Defence Partnership: A Framework Agreement for a Strategic Defence Partnership** was signed to boost defence industrial collaboration, joint exercises, and maritime security.
- **Ship Repair Cluster:** An MoU was signed to establish a **Ship Repair Cluster at Vadinar, Gujarat**, strengthening India's maritime infrastructure and repair capabilities.
- **Investment Commitments:** UAE entities announced **investments worth \$5 billion** in India:
 - **\$3 billion** by Emirates New Development Bank (ENDB) in **RBL Bank**.
 - **\$1 billion** by Abu Dhabi Investment Authority (ADIA) with the **National Infrastructure & Investment Fund (NIIF)** for priority infrastructure projects.
 - **\$1 billion** by International Holding Company in **Sammaan Capital**.

Additional Info

- **Indian Strategic Petroleum Reserves Limited (ISPRL):**
 - A Special Purpose Vehicle (SPV) under the **Ministry of Petroleum and Natural Gas**, responsible for building and managing India's strategic crude oil storage facilities.
 - ISPRL has established underground SPR facilities with a total capacity of **5.33 million metric tonnes (MMT)** at three locations:
 - **Visakhapatnam** (Andhra Pradesh) – 1.33 MMT
 - **Mangaluru** (Karnataka) – 1.50 MMT
 - **Padur** (Karnataka) – 2.50 MMT.
 - As of early 2026, these reserves held approximately **3.372 MMT** of crude oil, about **64% of total capacity**, providing roughly **74 days of import cover** when combined with refinery storage.
- **India-UAE Comprehensive Economic Partnership Agreement (CEPA):**
 - Signed in **February 2022** and effective from **May 1, 2022**, it is India's first bilateral trade agreement with a Gulf nation.
 - Bilateral trade surpassed **\$100 billion** for the second consecutive year in 2025-26 (\$101.25 billion), up from \$100.03 billion in 2024-25.
 - India's exports to the UAE rose to **\$37.36 billion**, while imports stood at **\$63.89 billion** in 2025-26.

- Both nations aim to expand bilateral trade to **\$200 billion by 2030**.
- **Strait of Hormuz:**
 - A narrow waterway connecting the Persian Gulf to the Gulf of Oman and the Arabian Sea.
 - One of the world's most critical oil transit chokepoints, with roughly **one-fifth of global oil consumption** passing through it.
 - The UAE is building an additional pipeline to the **Port of Fujairah** to bypass the Strait, enhancing secure crude and LPG export capacity for countries like India.

UAE to Store 30 Million Barrels in India's Strategic Petroleum Reserve

What's the News?

- India and the **United Arab Emirates (UAE)** have signed a **Strategic Collaboration Agreement** enabling **Abu Dhabi National Oil Company (ADNOC)** to store up to **30 million barrels** of crude oil in India's **Strategic Petroleum Reserve (SPR)**.
- The pact, concluded during high-level bilateral talks, expands energy cooperation and aims to strengthen India's **energy security** amid global supply volatility.
- The agreement also covers joint development of **strategic gas reserves** and long-term **LPG supply arrangements** between **Indian Oil Corporation (IOCL)** and ADNOC.

Strategic Petroleum Reserve: Capacity & Expansion

- **Current Infrastructure:**
 - India's operational SPR capacity: **5.33 million metric tonnes (MMT)** (~38 million barrels) across three underground facilities:
 - **Visakhapatnam** (Andhra Pradesh)
 - **Mangaluru** (Karnataka)
 - **Padur** (Karnataka)
 - Managed by **Indian Strategic Petroleum Reserves Limited (ISPRL)**, a special purpose vehicle under the **Ministry of Petroleum & Natural Gas**.
- **Phase-II Expansion:**
 - Approved in 2021: Two additional **commercial-cum-strategic reserves** with **6.5 MMT capacity** at **Chandikhol (Odisha)** and **Padur** under **Public-Private Partnership (PPP)** mode.
 - The UAE arrangement could increase India's effective reserve capacity by **~70%**, adding over **4 million tonnes** of crude storage.
- **Existing UAE Partnership:**
 - Since 2018, ADNOC has stored **~6 million barrels** (~8 lakh tonnes) at the Mangaluru facility under a prior agreement.

Policy Framework

- **Energy Security Imperative:**
 - India imports **~85% of its crude oil** and **~50% of its natural gas**, making strategic reserves critical for buffer against supply shocks.

- The UAE is India's **4th largest crude supplier** (~11% of imports) and **largest LPG source** (~40% of requirement).
- **Bilateral Investment Commitments:**
 - UAE entities pledged **\$5 billion** in new investments:
 - **Abu Dhabi Investment Authority (ADIA) + National Investment and Infrastructure Fund (NIIF):** Up to \$1 billion in infrastructure
 - **Emirates NBD:** \$3 billion in RBL Bank
 - **International Holding Company (IHC):** \$1 billion in Sammaan Capital
- **Regional Stability & Maritime Security:**
 - Both nations reaffirmed commitment to **free and safe navigation** through the **Strait of Hormuz**, a critical chokepoint for global oil transit.
 - Operationalisation of the **METRI virtual trade corridor** to enhance maritime commerce efficiency between Indian and UAE ports.

Additional Info

- **Institutional Roles:**
 - **ISPRL:** Implements India's strategic crude storage programme; authorised to partner with foreign entities for co-storage arrangements.
 - **ADNOC:** UAE's state-owned oil company; key partner in India's energy diversification strategy.
- **Relevant Constitutional & Legal Provisions:**
 - **Entry 53, Union List (Seventh Schedule):** Parliament's exclusive power to regulate oilfields and mineral resources.
 - **Entry 42, Concurrent List:** Enables Centre-State coordination on inter-state trade in petroleum products.
 - **Petroleum and Natural Gas Regulatory Board (PNGRB) Act, 2006:** Governs downstream sector infrastructure, including storage facilities.

India and Netherlands Elevate Ties to Strategic Partnership; Sign Kalpasar Project Pact

What's the News?

- Prime Minister Narendra Modi and Dutch Prime Minister Rob Jetten met in The Hague and agreed to elevate bilateral ties to a **Strategic Partnership**.
- A comprehensive **Roadmap of India-Netherlands Strategic Partnership (2026-2030)** was adopted, providing a five-year blueprint for cooperation across nine key areas including political dialogue, trade, emerging technologies, defense, and energy transition.
- A significant Letter of Intent was also signed for Dutch technical cooperation on Gujarat's ambitious **Kalpasar Project**, which involves creating a massive freshwater reservoir in the Gulf of Khambhat.

The Strategic Partnership Roadmap (2026–2030)

- **Overview:** This is a comprehensive bilateral blueprint designed to deepen cooperation into an "elite strategic alliance". It establishes institutional mechanisms and targets critical sectors for joint initiatives.
- **Institutional Mechanism:** An **Annual Foreign Ministers' Mechanism** will review the roadmap's progress and provide strategic guidance.
- **Major Areas of Cooperation & Initiatives:**
 - **Water, Agriculture & Health (WAH):**
 - Renewal of the **Strategic Partnership on Water** (till 2027), with enhanced collaboration on river basin management in the Ganga basin via the **National Mission for Clean Ganga**.
 - Cooperation on climate-resilient agriculture through **Centres of Excellence (CoEs)** and promoting agri-tech startups.
 - Collaboration in the health sector between the **Indian Council of Medical Research (ICMR)** and the Dutch **RIVM** focusing on anti-microbial resistance (**AMR**), digital health security, and One Health.
 - **Semiconductors & Emerging Technologies:**
 - Establishment of a "**Semiconductor Brain Bridge**" connecting top Dutch universities (Eindhoven, Twente) with six premier Indian institutes (like **IISc Bangalore, IIT Bombay, IIT Madras**), supported by industry giants **ASML, NXP, Tata, and CG Semi**.
 - A high-profile agreement was signed between **Tata Electronics** and **ASML** for the latter to supply advanced lithography tools for India's first commercial 300mm semiconductor fabrication plant in Dholera, Gujarat.
 - Formal integration of the **Dutch Semicon Competence Centre** with India's **Semiconductor Mission (ISM)** to accelerate breakthroughs in AI, photonics, and quantum computing.
 - **Energy Transition & Green Hydrogen:**
 - Both sides will draft an action plan for a "**Green Corridor**" between India and the Netherlands to facilitate trade in renewable hydrogen and integrate domestic production with European markets.
 - Strengthened partnership on biofuels, circular economy, and waste-to-energy via the **Global Biofuels Alliance** and **International Solar Alliance**.
 - **Defence & Security:**

- Planning for structured **Joint Tri-services interactions** and enhanced maritime cooperation through the **Indo-Pacific Oceans Initiative (IPOI)** and naval exercises.
- A commitment to work towards a **Defence Industrial Roadmap** and explore a **Mutual Logistic Support Agreement**.

Kalpasar Project

- **Objective:** To construct a massive dam across the **Gulf of Khambhat** in Gujarat, trapping the waters of seven rivers to create a freshwater reservoir with a capacity of **13,000 million cubic metres**.
- **Dutch Expertise:** The Netherlands, leveraging its experience with the iconic **Afsluitdijk Dam** (which converted a saline gulf into a freshwater lake), will provide technical know-how and water management expertise.
- **Project Benefits:**
 - **Irrigation:** Potentially irrigate **~10 lakh hectares** of land across 42 talukas in 9 districts of the parched Saurashtra region.
 - **Connectivity:** Drastically reduce the travel distance between South Gujarat and Saurashtra from approximately 240 km to 60 km.
 - **Energy:** Integrated tidal power generation.
- **Important Note:** The project was originally conceptualized when PM Modi was the Chief Minister of Gujarat.

Additional Info

- **India-Netherlands Bilateral Trade & Investment:**
 - The Netherlands is a key economic partner for India in Europe, with consistently growing bilateral trade and investment.
 - A **Joint Trade and Investment Committee (JTIC)** has been established to enhance market access in sectors like telecom, urban development, and electronics.
 - A bilateral strategic partnership has been formed to diversify global supply chains for **Critical Raw Materials (CRM)**, including exploration, circularity, and ESG standards.
- **Related Indian Initiatives:**
 - **National Mission for Clean Ganga (NMCG):** An initiative to clean and protect the Ganga River.
 - **India Semiconductor Mission (ISM):** A specialized and independent business division within the Digital India Corporation aimed at building a vibrant semiconductor and display ecosystem.
 - **Indo-Pacific Oceans Initiative (IPOI):** An Indian-led initiative focusing on collaborative efforts for a free, open, and rules-based Indo-Pacific region.
 - **Coalition for Disaster Resilient Infrastructure (CDRI):** An India-led global partnership to promote the resilience of infrastructure systems to climate and disaster risks.

- **Key Dutch Entities Involved:**
 - **RIVM:** National Institute for Public Health and the Environment.
 - **NVWA:** Netherlands Food and Consumer Product Safety Authority.

India-Vietnam Sign MoUs on AI and Quantum Technology

What's the News?

- India and Vietnam signed a **Memorandum of Understanding (MoU)** on **Artificial Intelligence (AI)** and **Quantum Technology** during Defence Minister **Rajnath Singh's** visit to Hanoi
- The MoU was exchanged between India's **Military College of Telecommunication Engineering (MCTE)** and Vietnam's **Telecommunications University**, focusing on research, capacity building, and joint innovation
- Both sides reaffirmed their **Enhanced Comprehensive Strategic Partnership** and committed to expanding cooperation in **defence modernisation, maritime security, and digital transformation**

Strategic Partnership Context?

- India-Vietnam relations elevated to **Enhanced Comprehensive Strategic Partnership** – the highest tier in India's diplomatic framework
- Defence cooperation pillars include:
 - **Maritime security:** Joint patrols, information sharing, and capacity building in the **Indo-Pacific**
 - **Defence industry:** Collaboration on technology transfer, co-production, and maintenance support
 - **Military training:** Exchange programmes, joint exercises, and specialised courses for personnel
 - **UN Peacekeeping:** Coordinated contributions and best-practice sharing
- Regional significance: Both nations emphasised **freedom of navigation, rules-based order**, and peaceful resolution of disputes in the **South China Sea**

AI & Quantum Collaboration Framework

- **Scope of MoU:**
 - Joint research in **machine learning, quantum computing, secure communications, and data analytics**
 - Faculty and student exchange programmes between MCTE and Vietnamese institutions
 - Development of indigenous applications for defence, healthcare, and governance
- **New Institutional Infrastructure:**
 - **AI Laboratory** to be established at Telecommunications University, **Nha Trang**, with Indian technical assistance
 - **Language Lab** at Vietnam's Air Force Officers' College virtually inaugurated to enhance linguistic and technical training
- **Strategic Rationale:**

- Build technological self-reliance aligned with India's **Digital India** and Vietnam's **National Digital Transformation Programme**
- Counter emerging security challenges through dual-use technologies with civilian and defence applications

Defence & Maritime Cooperation Deepening

- India reaffirmed support for Vietnam's **defence modernisation**, including potential cooperation on **BrahMos supersonic cruise missiles**
- Recent milestones in defence ties:
 - **2022:** Joint Vision Statement on Defence Partnership Towards 2030; MoU on mutual logistics support
 - **2023:** Transfer of **INS Kirpan** (indigenously built missile corvette) to Vietnam – first such gifting to a Southeast Asian nation
 - Delivery of **12 high-speed guard boats** and simulators to enhance coastal surveillance capabilities
- Focus areas for near-term collaboration:
 - Cybersecurity frameworks and threat intelligence sharing
 - Joint development of unmanned systems and surveillance technologies
 - Capacity building in space-based applications for maritime domain awareness

3rd India-Nordic Summit

What's the News?

- The **3rd India-Nordic Summit** was held in **Oslo, Norway**, with participation from India and all five Nordic nations: **Denmark, Finland, Iceland, Norway, and Sweden**.
- Leaders formally elevated the India-Nordic relationship to a **Green Technology and Innovation Strategic Partnership**, marking a strategic shift toward sustainable development, clean tech collaboration, and trusted digital infrastructure.
- The summit reinforced cooperation across **trade, climate action, maritime security, AI governance, space exploration, and defence industrial collaboration**, grounded in shared democratic values and a rules-based international order.

Strategic Partnership Framework & Key Pillars

- **Nodal Mechanism:** India-Nordic Summit (triennial plurilateral dialogue); coordinated by respective Foreign Ministries and **Ministry of External Affairs (India)**.
- **Core Pillars of Cooperation:**
 - **Green Transition & Climate Action:** Joint focus on renewable energy, green hydrogen, carbon capture, and circular economy principles aligned with **Mission LiFE** and **Paris Agreement** commitments.
 - **Trade & Economic Integration:** Operationalization of **India-EFTA Trade and Economic Partnership Agreement (TEPA)** targeting **USD 100 billion**

investment and 1 million direct jobs in India; progress on **India-EU FTA** implementation.

- **Blue Economy & Maritime Security:** Partnership for sustainable ocean management, low-carbon shipping transition, and adherence to **Hong Kong Convention** on ship recycling; initiation of bilateral **Maritime Security Dialogues** with Norway and Denmark.
- **Technology & Innovation:** Collaboration on **AI governance**, **5G/6G infrastructure**, trusted computing, and open-source solutions; building on India's **AI Impact Summit 2026**.
- **Space Cooperation:** Framework Agreement between **ISRO** and **Norwegian Space Agency**; Swedish scientific payload integration in India's **Venus Orbiter Mission (Shukrayaan-1)**.
- **Defence Industrial Collaboration:** Nordic firms eligible for **100% FDI** in Indian **Defence Industrial Corridors**; focus on supply chain resilience and co-development of critical components.

Geopolitical & Multilateral Alignment

- **UN Reform Support:** Nordic nations reiterated explicit backing for India's **permanent membership** in a reformed **UN Security Council** and supported India's application to the **Nuclear Suppliers' Group (NSG)**.
- **Indo-Pacific Engagement:** Norway formally joined India's **Indo-Pacific Oceans Initiative (IPOI)**, expanding European alignment with India's maritime vision under **MAHASAGAR** (Mutual and Holistic Advancement for Security and Growth Across Regions).
- **Counter-Terrorism Commitment:** Joint condemnation of cross-border terrorism, with specific reference to the **2025 Pahalgam and New Delhi attacks**; commitment to disrupt terror financing via **UN** and **FATF** mechanisms.
- **Arctic-Indo-Pacific Linkages:** Recognition of growing interconnections between polar and tropical climate systems; India welcomed as constructive **Arctic Council observer** for research collaboration.

Sweden Joins India's Shukrayaan Venus Orbiter Mission

What's the News?

- The **Indian Space Research Organisation (ISRO)** and **Swedish National Space Agency** have signed a **Memorandum of Understanding (MoU)** formalising Sweden's participation in India's **Shukrayaan Mission**—India's first dedicated orbiter to **Venus**.
- Under the agreement, the **Swedish Institute of Space Physics (IRF)** will develop the **Venusian Neutrals Analyser (VNA)**, a scientific instrument to study interactions between **solar wind particles** and Venus's upper atmosphere.
- The VNA will be integrated into **VISWAS (Venus Ionospheric and Solar Wind Particle AnalySer)**, a plasma package developed by India's **Space Physics Laboratory, Thiruvananthapuram**.

- The collaboration strengthens the recently elevated **India-Sweden Green Technology and Innovation Strategic Partnership** and underscores ISRO's growing role as a trusted partner in global planetary exploration.

Mission Profile & Technical Framework

- **Nodal Agency:** **ISRO**, under the **Department of Space**, Government of India.
- **Launch Vehicle:** **LVM-3 (Launch Vehicle Mark-3)**, India's heavy-lift rocket proven in **Chandrayaan-3** and commercial satellite missions.
- **Budget & Timeline:**
 - Approved by Union Cabinet with an outlay of **₹1,236 crore**.
 - Preliminary Design Review completed; targeted launch in **March 2028**.
 - **112-day transit**; orbital insertion planned for **July 2028**.
- **Orbital Parameters:** Elliptical orbit with **periapsis at 500 km** and **apoapsis at 60,000 km** to enable multi-altitude atmospheric and surface observations.
- **Payload Configuration:**
 - **19 scientific instruments** total, including Indian and international contributions.
 - **Key International Payloads:**
 - **VNA (Sweden):** Measures escaping neutral particles to study atmospheric loss mechanisms.
 - **VIRAL (Russia):** Venus Infrared Atmospheric Gases Linker for trace gas analysis.
 - **Indian Payloads:** Focus on surface composition, cloud dynamics, thermal mapping, and plasma environment.

Scientific Objectives & Research Value

- **Atmospheric Evolution:** Investigate why Venus—similar in size to Earth—evolved into an extreme **greenhouse world** with surface temperatures exceeding **460°C** and sulphuric acid clouds.
- **Solar Wind Interaction:** Study how charged particles from the Sun strip atmospheric gases, offering insights into **planetary climate change** and comparative planetology.
- **Surface & Volcanic Activity:** Map geological features to assess past/present volcanic processes and surface-atmosphere exchange mechanisms.
- **Super-Rotation Mystery:** Analyse Venus's atmosphere, which rotates **60 times faster** than the planet itself—a phenomenon not fully understood.
- **Habitability Clues:** Examine whether Venus once hosted **liquid water** or temperate conditions, informing models of exoplanet habitability.

India Launches Chenab Hydropower Projects Amid Indus Treaty Freeze

What's the News?

- India has initiated two strategic hydropower infrastructure projects on the **Chenab River** system worth approximately **₹2,600 crore**.

- The **National Hydroelectric Power Corporation (NHPC)** will execute the projects: an inter-basin water diversion tunnel in Himachal Pradesh and a sediment management tunnel at the Salal Dam in Jammu & Kashmir.
- This development marks a significant shift in water resource utilisation following India's decision to place the **Indus Waters Treaty** framework "in abeyance".

Project Details & Strategic Objectives

- **Chenab-Beas Link Tunnel Project (Himachal Pradesh)**
 - **Cost:** ₹2,352 crore.
 - **Key Feature:** Construction of an **8.7-km tunnel** to divert surplus water from the Chandra River (Chenab tributary) to the Beas river system.
 - **Infrastructure:** Includes a 19-metre-high barrage in the Lahaul valley.
 - **Objective:** Optimise water usage from western rivers for irrigation and power generation, enhancing energy security in northern India.
- **Salal Dam Sediment-Bypass Tunnel (Jammu & Kashmir)**
 - **Cost:** ₹268 crore.
 - **Key Feature:** A diversion-cum-sediment bypass mechanism to flush accumulated silt from the reservoir.
 - **Objective:** Restore operational flexibility, improve turbine efficiency, and extend the lifespan of the hydroelectric infrastructure.

Indus Waters Treaty & Geopolitical Context

- **Treaty Framework (1960)**
 - Brokered by the **World Bank**, it allocates the three **Eastern Rivers** (Ravi, Beas, Sutlej) to India and the three **Western Rivers** (Indus, Jhelum, Chenab) to Pakistan.
 - India retains rights for **non-consumptive uses** and **run-of-the-river hydropower projects** on western rivers without significant storage.
- **Current Status**
 - India suspended treaty engagements following the **Pahalgam terror attack**, citing security concerns and Pakistan's persistent objections to Indian projects.
 - India recently rejected a supplemental award by the **Court of Arbitration** regarding pondage levels for the **Kishanganga** and **Ratle** projects.
- **Strategic Significance**
 - Accelerates infrastructure development in the Himalayan border region.
 - Demonstrates India's intent to maximise hydropower potential within its sovereign rights, reducing reliance on thermal power.

Additional Info

- **Other Fast-Tracked Chenab Projects**
 - **Pakal Dul:** 1,000 MW capacity.
 - **Kiru:** 624 MW capacity.

- **Kwar:** 540 MW capacity.
- **Ratle:** 850 MW capacity.
- **Sawalkote:** 1,856 MW capacity (Estimated cost: ₹5,129 crore).
- **Dulhasti Stage-II:** 260 MW capacity (Estimated cost: ₹3,277.45 crore).

Technical Terms

- **Run-of-the-River Project:** Generates power using the natural flow of the river without large storage reservoirs, minimizing environmental impact and treaty violations.
- **Sediment-Bypass Tunnel:** Engineering structure designed to divert silt-laden water away from dams to prevent reservoir capacity loss.

Relevant Organizations

- **NHPC Ltd:** Premier hydropower development organization under the **Ministry of Power**.
- **Central Water Commission (CWC):** Apex technical body for water resource development in India.

India Joins WTO Challenge Against UK Steel Safeguard Measures

What's the News?

- India, alongside six other nations including **China, Japan, and Brazil**, has formally raised concerns at the **World Trade Organization (WTO)** against the UK's revised steel safeguard measures.
- The UK plans to reduce tariff-free steel import quotas by **60%** from July 2026, with imports beyond the quota facing a **50% tariff** (up from 25%).
- The issue was discussed during the **WTO Council for Trade in Goods** meeting, with India urging the UK to adopt "least trade-restrictive" solutions.

Details of the Dispute

- **UK's Revised Safeguard Regime**
 - Applies to **15 categories of steel products** that can be manufactured domestically in the UK.
 - Original safeguards (2018) mirrored EU measures responding to global steel overcapacity and **US Section 232 tariffs**.
 - Extended multiple times based on recommendations from the UK's **Trade Remedies Authority**.
 - WTO rules prohibit indefinite safeguards; current measures expire June 2026.
- **India's Trade Exposure**
 - India's iron and steel exports to the UK stood at **USD 893.4 million** in 2025-26.
 - Steel constitutes a significant portion of India's **USD 13.4 billion** total merchandise exports to the UK.
 - Indian exporters face heightened uncertainty amid tighter quota access and punitive tariffs.
- **Multilateral Opposition**
 - Countries flagging concerns: **Brazil, Japan, South**

Korea, Switzerland, Australia, Türkiye, China, and Russia.

- Japan and South Korea initiated the WTO discussions; India joined as a third-party complainant.

Implications for India-UK Trade Relations

- **CETA Implementation Delay**
 - The dispute has become a sticking point in operationalising the **India-UK Comprehensive Economic and Trade Agreement (CETA)**, signed in July 2025.
 - Both sides are exploring a "creative solution" to resolve the steel impasse without renegotiating the entire pact.
- **Strategic Considerations**
 - UK cites protection of domestic steelmaking capacity and **national security** concerns as justification.
 - India emphasises adherence to **WTO multilateral rules** and non-discriminatory trade practices.
 - Outcome may set precedent for future safeguard disputes involving emerging economies.

Additional Info

- **WTO Safeguard Mechanism**
 - Permitted under **GATT Article XIX** and the **Agreement on Safeguards**.
 - Allows temporary import restrictions when domestic industry faces "serious injury" from import surges.
 - Must be non-discriminatory (applied to all trading partners equally) and time-bound.
- **Key Technical Terms**
 - **Tariff-Rate Quota (TRQ)**: Two-tier tariff system where imports within a quota face lower duties; excess imports face higher tariffs.
 - **Section 232 (US)**: US trade law allowing tariffs on imports deemed threatening to national security; triggered global steel safeguard responses in 2018.
 - **Trade Remedies Authority (UK)**: Independent body investigating and recommending trade defence measures like anti-dumping duties and safeguards.
- **Relevant Organizations & Agreements**
 - **WTO Council for Trade in Goods**: Oversees implementation of goods-related agreements, including tariffs, subsidies, and import regulations.
 - **Ministry of Commerce & Industry (India)**: Leads India's trade negotiations and WTO dispute engagements.
 - **Directorate General of Trade Remedies (DGTR)**: India's apex body for investigating trade defence cases.

India Abstains on UNGA Resolution Endorsing ICJ Climate Advisory Opinion

What's the News?

- India abstained from voting on a **United Nations General Assembly (UNGA)** resolution endorsing the **International Court of Justice (ICJ)** advisory opinion on states' climate obligations.
- The resolution was adopted with **141 votes in favour, 8 against, and 28 abstentions**, including India, Turkey, Qatar, and Nigeria.
- India voiced concerns that the text undermines the **UNFCCC** framework by treating a non-binding advisory opinion as quasi-binding and omitting critical references to **climate finance**.

India's Core Objections & Rationale

- **Preservation of UNFCCC Architecture**
 - India emphasised that climate obligations must be negotiated exclusively under the **United Nations Framework Convention on Climate Change (UNFCCC)** process.
 - The resolution risks elevating the ICJ's **advisory opinion** to a binding status, creating a "dangerous precedent" for imposing unagreed obligations on developing nations.
- **Protection of National Policy Space**
 - The text prescribes specific **mitigation pathways** and external benchmarks, potentially inviting judicial scrutiny of **Nationally Determined Contributions (NDCs)**.
 - India argued this disrupts the **bottom-up architecture** of the **Paris Agreement**, which respects national circumstances and sovereign policy choices.
- **Omission of Climate Finance**
 - The resolution lacks the term "**climate finance**" despite the **2024 climate finance goal** falling short of developing countries' needs.
 - India highlighted the absence of language affirming developed nations' responsibility to lead on mitigation and provide **adequate, predictable finance**, technology transfer, and capacity building.

ICJ Advisory Opinion & Global Climate Governance

- **ICJ Advisory Opinion (July 2025)**
 - Issued unanimously at the request of **Vanuatu** and co-sponsored by Small Island Developing States (**SIDS**).
 - Clarified states' obligations under international law regarding climate change but remains **non-binding** in nature.
- **UNFCCC Principle: Common but Differentiated Responsibilities (CBDR)**
 - Recognises that developed countries, as historical emitters, bear greater responsibility for emissions reductions and financial support.

- India's stance aligns with protecting this equity-based principle in multilateral climate negotiations.
- **Voting Pattern Highlights**
 - **Against:** United States, Russia, Saudi Arabia, Iran, Israel, Belarus, Liberia, Yemen.
 - **Abstentions:** India, Turkey, Qatar, Nigeria, and others balancing climate vulnerability with developmental priorities.

Additional Info

- **Relevant Legal & Policy Frameworks**
 - **Paris Agreement (2015)**
 - Operates on a **nationally determined** approach; NDCs are self-set, not externally imposed.
 - **Article 14:** Establishes the **Global Stocktake** as a facilitative, non-prescriptive mechanism.
 - **UNFCCC (1992)**
 - Foundational treaty for global climate cooperation; entered into force in 1994.
 - Hosts annual **Conference of Parties (COP)** negotiations.
- **Technical Terms**
 - **Advisory Opinion:** Non-binding legal interpretation issued by the ICJ upon request of UN bodies; persuasive but not enforceable.
 - **Nationally Determined Contributions (NDCs):** Country-specific climate action plans under the Paris Agreement.
 - **Parametric vs. Judicial Scrutiny:** India favours peer-review mechanisms under UNFCCC over court-led assessments of climate pledges.

India Blocks China's WTO Panel Request on Solar & IT Trade Measures

What's the News?

- India has blocked China's first request at the **World Trade Organization (WTO) Dispute Settlement Body (DSB)** to establish a panel over India's tariffs on IT products and incentives for solar manufacturing.
- China alleges India's **customs duties** on ~12 imported IT goods exceed WTO **bound tariff rates**, and that India's **Production Linked Incentive (PLI) scheme** for solar modules discriminates against imports by requiring minimum local value addition.
- India maintains its measures are fully consistent with **WTO multilateral rules**, emphasizing the need for diversified global supply chains and legitimate industrial growth in developing economies.
- Under WTO procedure, China can renew its panel request at the next DSB meeting; a second request typically leads to automatic panel establishment unless there is consensus against it.

Core Dispute: IT Tariffs & Solar PLI Measures

- **IT Products Challenge:**

- China claims India imposes duties (including **Agriculture Infrastructure and Development Cess/AIDC**) on smartphones, semiconductors, wafers, and display manufacturing equipment beyond committed WTO tariff ceilings.
- India's defense: Tariff structures are within policy space for development objectives and technological self-reliance.

• Solar Manufacturing Incentives:

- China objects to India's **PLI for High-Efficiency Solar PV Modules**, arguing cash grants linked to domestic content violate the **Agreement on Subsidies and Countervailing Measures (SCM Agreement)**.
- India counters that promoting domestic solar manufacturing aligns with climate goals and reduces over-dependence on a single global supplier.

• Strategic Context:

- China controls **>80% of global solar module value chain**; India views domestic capacity building as essential for energy security and strategic autonomy.
- Bilateral trade reached **\$151.1 billion in 2025-26**, with India's trade deficit with China widening to **\$112.16 billion**, underscoring urgency for import substitution in critical sectors.

WTO Dispute Mechanism: Process & Current Challenges

• Panel Establishment Rules:

- First panel request can be blocked by respondent; second request leads to automatic establishment unless DSB consensus opposes (unlikely as complainant won't agree).
- Panel (typically 3 independent experts) examines claims, hears both sides, and issues a report adopted by DSB.

• Appellate Body Impasse:

- WTO's Appellate Body has been non-functional since **2017** due to US blocking judge appointments, leaving disputes in limbo post-panel ruling.
- Members increasingly resort to **interim appeal arbitration** or bilateral solutions amid institutional paralysis.

• Broader Trade Tensions:

- China has filed a separate WTO case against India on automotive and renewable energy measures (January 2026), indicating escalating trade friction.

Additional Info

• WTO Agreements Involved:

- **GATT 1994:** Governs tariff bindings and non-discrimination (Most Favoured Nation principle).
- **SCM Agreement:** Regulates subsidies; prohibits those contingent on export performance or domestic content.

- **TRIMS Agreement:** Prohibits trade-related investment measures that restrict imports or mandate local sourcing.
- **India's Relevant Policy Framework:**
 - **National Solar Mission:** Targets 100 GW solar capacity; ALMM (Approved List of Models and Manufacturers) mandates use of domestically produced modules in government projects.
 - **Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECES):** Complements PLI for IT hardware ecosystem development.
 - **Foreign Trade Policy 2023:** Emphasizes export competitiveness while safeguarding policy space for strategic industries.
- **Constitutional & Institutional Context:**
 - **Entry 41, List I (Union List):** Empowers Centre to regulate international trade and commerce.
 - **Department of Commerce (Ministry of Commerce & Industry):** Nodal agency for WTO disputes; coordinates with **Ministry of New and Renewable Energy (MNRE)** and **MeitY** on sectoral defenses.

India Chairs Inaugural BRICS 2026 Tourism Working Group: AI & Sustainability Agenda

What's the News?

- India has convened the **1st BRICS Tourism Working Group (TWG) Meeting** under its **BRICS 2026 Chairship**, marking the formal launch of multilateral tourism cooperation among member nations.
- Held in virtual mode and chaired by the **Joint Secretary (Tourism), Ministry of Tourism**, the meeting established India's thematic agenda focused on **innovation, resilience, sustainability, and people-to-people connectivity**.
- The overarching theme "**Building for Resilience, Innovation, Cooperation and Sustainability**" guides collaborative efforts to enhance tourism's role in economic growth and inclusive development across BRICS nations.

India's Four Thematic Priorities

- **Artificial Intelligence & Tourism:**
 - Promote **AI-driven solutions** for personalized travel experiences, demand forecasting, and smart destination management.
 - Leverage digital public infrastructure to improve tourist services, safety monitoring, and data-based policy planning.
- **Sustainable & Responsible Tourism:**
 - Advance **eco-friendly practices**, conservation-led destination management, and community-based tourism models.
 - Align with **SDG 8** (Decent Work & Economic Growth) and **SDG 12** (Responsible Consumption & Production).
- **Tourism Skilling & Capacity Building:**
 - Strengthen **hospitality workforce training**, entrepreneurship support, and cross-border knowledge exchange.

- Focus on employment generation in tourism—a labour-intensive sector critical for youth skilling under **Skill India**.
- **Tourism Exchanges & Seamless Travel Facilitation:**
 - Simplify visa processes, improve regional connectivity, and promote cultural/heritage circuits among BRICS nations.
 - Support **people-to-people ties** and soft diplomacy through coordinated tourism promotion.

Roadmap: Jaipur Meetings & Next Steps

- **2nd BRICS Tourism Working Group Meeting:** Scheduled for August in **Jaipur, Rajasthan** to finalize collaborative proposals and implementation frameworks.
- **BRICS Tourism Ministers' Meeting:** High-level ministerial dialogue to provide political direction and endorse joint initiatives.
- These in-person engagements will institutionalize tourism cooperation under India's chairship and feed into broader **BRICS 2026 outcomes**.

Additional Info

- **BRICS Context:**
 - **BRICS** (Brazil, Russia, India, China, South Africa + new members) represents ~45% of global population and significant emerging market tourism potential.
 - Tourism cooperation aligns with India's broader BRICS 2026 priorities: **reformed multilateralism, digital public infrastructure, and sustainable development**.
- **Policy Linkages:**
 - **National Tourism Policy (Draft):** Emphasizes digitalization, sustainability, and community participation—mirroring BRICS TWG priorities.
 - **Dekho Apna Desh Initiative:** Promotes domestic tourism; BRICS cooperation can boost inbound tourism from member nations.
 - **Swadesh Darshan 2.0:** Focuses on thematic circuits; potential for BRICS-led heritage/eco-tourism corridors.

Two Indian Peacekeepers to Receive United Nations Honours Posthumously

What's the News?

- The **United Nations (UN)** is set to honour two Indian peacekeepers posthumously with the **Dag Hammarskjöld Medal** for their sacrifice while serving in UN peacekeeping missions.
- The recognition highlights India's longstanding contribution to global peacekeeping efforts under the UN framework.
- The UN Secretary-General will also felicitate **Major Abhilasha Barak**, India's first woman combat aviator in the Army Aviation Corps, during the commemorative events.

UN Peacekeeping Honours

- The **Dag Hammarskjöld Medal** is awarded posthumously to military, police, and civilian

personnel who lose their lives while serving in UN peacekeeping operations.

- The medal commemorates the contribution and sacrifice of personnel working in conflict and post-conflict regions.
- It is named after **Dag Hammarskjöld**, the second Secretary-General of the United Nations.

India's Contribution to UN Peacekeeping

- India is among the largest and most consistent contributors to UN peacekeeping operations.
- Since participation began in UN missions:
 - More than **2.9 lakh Indian peacekeepers** have served in different missions worldwide.
 - Indian personnel have participated in operations across:
 - Africa.
 - Asia.
 - Middle East conflict zones.
- Indian contingents are known for:
 - Humanitarian assistance.
 - Civilian protection.
 - Medical support services.
 - Capacity-building and community outreach activities.

Role of Women in Peacekeeping

- Recognition of **Major Abhilasha Barak** reflects the growing role of women in defence and peacekeeping-related leadership.
- India has been promoting greater participation of women in:
 - Military operations.
 - Peacekeeping deployments.
 - Leadership positions within armed forces.
- Increased representation of women aligns with the UN's **Women, Peace and Security (WPS)** agenda.

Additional Info

United Nations Peacekeeping Operations

- Established to:
 - Maintain peace and security in conflict regions.
 - Monitor ceasefires and peace agreements.
 - Protect civilians.
 - Support post-conflict reconstruction.
- Peacekeeping missions operate with the consent of parties involved and under UN mandates.

Dag Hammarskjöld

- Served as the second **Secretary-General of the United Nations** from 1953 to 1961.
- Known for strengthening the role of the UN in conflict resolution and international diplomacy.
- Died in a plane crash while on a peace mission in Africa.

India and UN Peacekeeping

- India has participated in over **50 UN peacekeeping missions**.
- Indian peacekeepers have served in countries such as:
 - **Democratic Republic of the Congo**
 - **South Sudan**
 - **Lebanon**

- **Sierra Leone**
- **Sudan**

- India has also deployed:
 - Female police units.
 - Medical teams.
 - Engineering contingents.

Women, Peace and Security (WPS) Agenda

- Originates from **UN Security Council Resolution 1325 (2000)**.
- Focuses on:
 - Increased participation of women in peace processes.
 - Protection of women in conflict situations.
 - Gender-inclusive peacebuilding and security frameworks.

Army Aviation Corps

- Operational arm of the **Indian Army** responsible for:
 - Reconnaissance.
 - Surveillance.
 - Casualty evacuation.
 - Logistic support.
 - Tactical air mobility.
- **Major Abhilasha Barak** became the first woman officer inducted into the Corps as a combat aviator.

India and China Hold 35th WMCC Talks on Border Affairs

What's the News?

- India and China held the **35th meeting of the Working Mechanism for Consultation and Coordination (WMCC) on India-China Border Affairs** in Beijing.
- Both sides reviewed the situation along the **Line of Actual Control (LAC)** and discussed measures to maintain peace, stability, and effective border management.
- The two countries agreed that maintaining peace and tranquillity in border areas is essential for the normal development of bilateral relations.

35th WMCC Meeting

- The meeting focused on:
 - Border management mechanisms.
 - Confidence-building measures.
 - Diplomatic and military communication channels.
 - Follow-up actions after recent disengagement efforts.
- Both sides agreed to:
 - Continue dialogue through diplomatic and military mechanisms.
 - Maintain regular communication.
 - Avoid actions that may escalate tensions along the border.
- The talks were described as constructive and aimed at sustaining stability in frontier regions.

Importance of Border Peace

- India has consistently maintained that:
 - Peace and stability along the LAC are the foundation for normal bilateral ties.
 - Border tensions affect the overall relationship between the two countries.
- Stable border conditions are important for:

- Regional security.
- Trade and economic engagement.
- Diplomatic cooperation in multilateral forums.

What is the WMCC?

- The **Working Mechanism for Consultation and Coordination on India-China Border Affairs (WMCC)** was established in **2012**.
- It serves as an institutional mechanism for:
 - Managing border-related issues.
 - Enhancing communication between diplomatic and military officials.
 - Preventing misunderstandings and escalation.
- The mechanism does not discuss boundary settlement but focuses on maintaining peace and stability pending a final boundary resolution.

Line of Actual Control (LAC)

- The **LAC** is the de facto border between India and China.
- It is divided into:
 - Western Sector (Ladakh).
 - Middle Sector (Himachal Pradesh and Uttarakhand).
 - Eastern Sector (Arunachal Pradesh and Sikkim region).
- The alignment of the LAC is not mutually agreed upon, leading to differing perceptions and periodic tensions.

Significance

- Reflects continued diplomatic engagement despite unresolved boundary disputes.
- Helps reduce risks of military confrontation through dialogue and coordination.
- Supports confidence-building and crisis-management mechanisms.
- Contributes to regional peace and stability in Asia.
- Demonstrates the role of institutional mechanisms in managing complex bilateral disputes.

Additional Info

India-China Border Dispute

- The boundary dispute covers approximately:
 - **Western Sector:** Aksai Chin region.
 - **Eastern Sector:** Arunachal Pradesh, which China refers to as "South Tibet".
- The border remains undemarcated in several areas.

Key Border Management Mechanisms

WMCC (2012)

- Handles operational coordination and communication on border affairs.

Special Representatives (SR) Mechanism

- Established to discuss the broader framework for resolving the boundary dispute.
- Involves high-level political and diplomatic representatives from both countries.

Important Agreements Between India and China

- **1993 Agreement on the Maintenance of Peace and Tranquillity along the LAC**
 - First major agreement on border management.

- **1996 Agreement on Confidence Building Measures in the Military Field**
 - Introduced military restraint measures near the LAC.
- **2005 Protocol on Modalities for Confidence-Building Measures**
 - Strengthened mechanisms for preventing border incidents.
- **2013 Border Defence Cooperation Agreement (BDCA)**
 - Improved communication and coordination between border forces.

Recent Border Developments

- Border tensions increased following clashes in eastern Ladakh.
- Subsequent rounds of:
 - Corps Commander-level talks.
 - Diplomatic negotiations.
 - WMCC meetings. have focused on disengagement and de-escalation measures in friction points along the LAC.

Strategic Importance

- India and China are:
 - Two of the world's largest economies by population.
 - Major regional powers in Asia.
 - Members of platforms such as:
 - **BRICS**
 - **Shanghai Cooperation Organisation (SCO)**
 - **G20**
- Stable bilateral relations have implications for regional security, connectivity, and global governance.

International Events

Lebanon Accuses Israel of Ecocide What's the News?

- Lebanon has formally accused Israel of committing "ecocide" due to the profound and long-term environmental damage inflicted during military operations between 2023 and 2024.
- This accusation, made by Lebanon's Environment Minister, is based on a detailed report highlighting the "severe, widespread, or long-term damage" to the country's ecosystems.
- This development occurs amid a growing international push, led by Pacific Island nations and supported by several European countries, to recognize ecocide as a standalone international crime under the Rome Statute of the International Criminal Court (ICC).

Understanding Ecocide

- **What is Ecocide?**
 - The term refers to the most extreme forms of environmental destruction caused by human action. It is defined as "unlawful or wanton acts committed with the knowledge that there is a substantial likelihood of severe and either widespread or long-term damage to the environment being caused by those acts".
 - The concept was coined in 1970 by biologist **Arthur W. Galston** to describe the ecological devastation caused by the use of Agent Orange during the Vietnam War.
- **Ecocide vs. Existing International Law**
 - **Anthropocentric vs. Ecocentric:** Current laws are anthropocentric, viewing environmental damage as collateral to human harm. Ecocide is eco-centric, recognizing the environment itself as a victim worthy of direct protection.
 - **Peacetime Application:** A key distinction is that ecocide would apply during both war and peace. Currently, the ICC can only prosecute environmental damage as a war crime if it occurs during active conflict and is disproportionate.
 - **Criminal vs. Civil Liability:** Traditional international law treats cross-border environmental harm as a civil tort between states. The ecocide movement seeks to establish individual criminal liability for perpetrators.

Lebanon's Ecocide Allegations Against Israel

- **The Accusation:** Lebanon's Environment Minister **Tamara el Zein** stated that the "scale and intentionality of the damage... constitute what must be recognised as an act of ecocide" in the foreword to a 106-page government report.
- **Key Data on Environmental Damage:** The report, covering military operations from October 2023 to December 2024, documented extensive harm:
 - **Forest Cover:** Damage to **5,000 hectares** of forest.

- **Agriculture:** Destruction of **\$118 million** in physical agriculture assets and **\$586 million** in lost agricultural production. A total of **2,154 hectares** of orchards (including 814 hectares of olive groves) were destroyed.
- **Soil & Air Contamination:** Soils were found with phosphorus concentrations up to **1,858 parts per million**. Widespread air pollution included toxic compounds like dioxins.
- **Total Cost:** The monetary cost is estimated at **\$25 billion** for damages, economic losses, and recovery needs.
- **Broader Context:** Critics argue this mirrors actions in Gaza, where an estimated **38-48% of tree cover and farmland** was destroyed, and groundwater was contaminated by munitions.

The Legal and Enforcement Challenge

- **Limitations of the Rome Statute:** The ICC can only prosecute environmental damage as a war crime under a narrow set of conditions, requiring proof of disproportionate and intentional harm during an active war. Major peacetime ecological destruction currently has no pathway for international criminal prosecution.
- **Jurisdictional Hurdles:** The ICC cannot prosecute states that are not parties to the Rome Statute, such as Israel and Lebanon, unless there is a UN Security Council referral, which is subject to political vetoes.
- **Supermajority Requirement:** Amending the Rome Statute to include ecocide as a fifth international crime (alongside genocide, crimes against humanity, war crimes, and the crime of aggression) requires a **two-thirds majority vote** from all member states.
- **Momentum for Change:** In a significant step, **Vanuatu, Fiji, and Samoa** have formally proposed that the ICC recognize ecocide as an international crime. The **Stop Ecocide International** panel proposed a legal definition in 2021 to aid its inclusion in the Rome Statute.

India's Position on Ecocide

- **Not a Party to the ICC:** India has **neither signed nor ratified the Rome Statute** of the International Criminal Court. Therefore, it is not a party to the court's jurisdiction.
- **Domestic Legal Status:** The term 'ecocide' has been referenced in some Indian court judgments, but it has **not been formally incorporated into Indian law**.
- **Policy Approach:** India supports environmental protection through its participation in global agreements like the **United Nations Framework Convention on Climate Change (UNFCCC)** and the **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**. However, it has not taken concrete steps to enact a standalone ecocide law.

Additional Info

- **Historical Context**
 - **Vietnam War (1970):** The term 'ecocide' was coined to describe the use of Agent Orange,

which destroyed rainforests and caused long-term health defects.

- **First Codification (1990):** Vietnam became the first country to codify ecocide in its domestic law following its experience with wartime herbicides.
- **Key Organizations**
 - **Stop Ecocide International:** A leading global advocacy network working to make ecocide an international crime.
 - **International Union for Conservation of Nature (IUCN):** Recognized the crime of ecocide in 2025 but cannot enforce it.
 - **Conflict and Environment Observatory (CEOS):** An organization that studies the environmental impact of war and supports accountability.
- **Related International Frameworks**
 - **Rome Statute of the ICC:** The treaty that established the International Criminal Court. It currently lists four core international crimes.
 - **ENMOD Convention (1977):** The Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques prohibits the hostile use of environmental modification.
 - **Article 8(2)(b)(iv):** The specific provision of the Rome Statute that criminalizes intentional attacks that cause "widespread, long-term and severe damage to the natural environment" during warfare.

Philippines' Mayon Volcano Ashfall Triggers Mass Evacuations

What's the News?

The **Mayon Volcano** in the Philippines has triggered the evacuation of hundreds of families after a significant ashfall event. The activity was caused by the collapse of lava deposits on the volcano's southwestern slope, resulting in a **pyroclastic density current**—an avalanche of hot rocks, ash, and gas. While there was no explosive magmatic eruption, the event generated billowing ash clouds that heavily impacted several towns. The **Philippine Institute of Volcanology and Seismology (PHIVOLCS)** has maintained **Alert Level 3** on a 5-level scale, indicating a high level of volcanic unrest with a permanent danger zone of 6 km from the crater being enforced.

Mayon Volcano

- **Location & Geography:** The volcano is located in **Albay province**, on the island of Luzon, approximately 330 km southeast of Manila.
- **Physical Characteristics:** It is an active stratovolcano renowned for its near-perfect conical shape, standing at **2,462 meters (8,077 feet)** high.
- **Volcanic Status:** It is the most active volcano in the Philippines, having erupted nearly 50 times in the last 400 years.

Current Situation & Impact

- **Evacuations & Displacement:**

- Conflicting reports exist regarding the number of evacuees. Some sources report that over **300 families** had been evacuated, while the Philippine Department of Social Welfare and Development noted that nearly **1,500 families** were in evacuation centers at one point.
- A broader report by the Office of Civil Defence indicated that ashfall had affected **30,522 families**, or approximately **102,406 people**, across **87 barangays** (villages) in the Bicol region.
- **Casualties & Damage:**
 - No deaths or injuries were reported among residents.
 - The ashfall caused agricultural damage, with vegetable farms hit. It also led to the deaths of several livestock animals in the town of Camalig.
 - **Visibility & Infrastructure:** The ash clouds reduced visibility to near zero, even on national highways, disrupting traffic. Water supply was temporarily disrupted as resources were diverted to road-clearing operations.
 - **Aviation:** The Civil Aviation Authority issued a flight safety advisory, restricting airspace near Manila as a precaution against volcanic ash, which can damage aircraft engines.

Relevance to India

- **Barren Island Volcano:** India's own active volcano, **Barren Island**, located in the Andaman Sea, was also noted for volcanic activity during a similar period, highlighting the dynamic geology of the region.
- **Diplomatic-Ready Information:** The Ministry of External Affairs may be monitoring for Indians in the affected areas. For perspective, Philippines Volcano Hazard Level 3 is comparable to India's cyclone warnings for coastal states like Odisha and Andhra Pradesh - both require pre-positioning of response teams and preemptive evacuations.
- **Disaster Management Lessons:** The swift evacuation and government response serve as a case study for India's own disaster management protocols under the **National Disaster Management Authority (NDMA)**. The use of a defined danger zone and a clear alert level system is a practice mirrored in India for cyclones and floods.
- **Pacific Ring of Fire:** The event is a reminder that both the Philippines and the Andaman & Nicobar Islands are part of the seismically active **Pacific Ring of Fire**, making cooperation on disaster resilience and early warning systems crucial.

Additional Info

- **Pyroclastic Density Current (PDC):**
 - A fast-moving mixture of hot lava blocks, pumice, ash, and volcanic gas.
 - It moves under gravity and can reach speeds greater than 100 km/h and temperatures of 200-700 °C.
 - It is one of the most dangerous volcanic hazards.

- **Philippine Institute of Volcanology and Seismology (PHIVOLCS):**
 - The primary government agency in the Philippines responsible for monitoring and mitigating disasters from volcanic eruptions, earthquakes, and tsunamis.
- **National Disaster Management Authority (NDMA):**
 - **Mandate:** Apex body for disaster management in India, established under the Disaster Management Act, 2005.
 - **Leadership:** Headed by the Prime Minister of India.
 - **Function:** Responsible for laying down policies, plans, and guidelines for disaster management to ensure a timely and effective response to disasters.
- **Pacific Ring of Fire:**
 - A major area in the basin of the Pacific Ocean where many earthquakes and volcanic eruptions occur.
 - It is a direct result of plate tectonics and the movement and collisions of lithospheric plates.
 - India's Andaman and Nicobar Islands are also part of this geological zone.

2026 Guillermo Cano World Press Freedom Prize

What's the News?

- UNESCO announced that the **Sudanese Journalists Syndicate (SJS)** is the laureate of the **2026 UNESCO/Guillermo Cano World Press Freedom Prize**.
- The award recognises the Syndicate's role in condemning the deliberate targeting of journalists and its steadfast defence of press freedom during the armed conflict in Sudan that began in April 2023.
- The official award ceremony took place in Lusaka, Zambia, aligning with the global observance of **World Press Freedom Day** on 3 May.

The Guillermo Cano World Press Freedom Prize

- **Purpose:** It is the only UN-recognised award that honours individuals or organisations for outstanding contributions to the defence and promotion of press freedom, especially under dangerous conditions.
- **Origin:** Established in 1997, the prize is named after **Guillermo Cano Isaza**, a courageous Colombian journalist and editor of *El Espectador*. He was assassinated in 1986 for his fearless reporting against powerful drug cartels.
- **Key Features:**
 - **Monetary Value:** The prize carries a monetary award of **US \$25,000**.
 - **Jury:** An independent international jury of media professionals selects the laureate annually.
 - **Funding:** It is funded by the Guillermo Cano Isaza Foundation (Colombia) and the Helsingin Sanomat Foundation (Finland).

2026 Laureate: The Sudanese Journalists Syndicate (SJS)

- **Context:** Since the outbreak of war in Sudan in April 2023, journalists have faced extreme risks. The SJS has been at the forefront of documenting abuses and advocating for media freedom.
- **Documented Impact:**
 - The Syndicate has documented at least **34 journalists killed** and over **680 violations** against media professionals since the conflict began.
 - The conflict has led to the destruction of **90% of Sudan's media infrastructure**, forcing many outlets to shut down.
 - Sudan is ranked **156th out of 180 countries** on the World Press Freedom Index, reflecting a severe crisis.

World Press Freedom Day 2026

- **Date:** Observed annually on **3 May**.
- **2026 Theme:** "**Shaping a Future at Peace: Promoting Press Freedom for Human Rights, Development, and Security**".
- **Significance:** The theme directly links a free and pluralistic media to the achievement of global peace and sustainable development, resonating with **UN Sustainable Development Goal 16** (Peace, Justice, and Strong Institutions).

Additional Information

- **Press Freedom in India**
 - **Constitutional Guarantee:** The **Constitution of India** guarantees the **Fundamental Right to Freedom of Speech and Expression** under **Article 19(1)(a)**. The Supreme Court has interpreted this to include the freedom of the press.
 - **Related Constitutional Provisions:** This right is subject to reasonable restrictions laid out in **Article 19(2)**, which include grounds related to the sovereignty and integrity of India, security of the state, public order, decency, or morality.
 - **Statutory Framework:** The **Press Council of India** functions as a statutory, quasi-judicial body to preserve the freedom of the press and maintain high standards of journalism.
 - **UNESCO's Role:** UNESCO actively works to strengthen the safety of journalists. In India, it has conducted workshops on "Safety, Legal Empowerment, and Gender-Responsive Protection of Journalists" in collaboration with the Indian Journalists Union (IJU). It also spearheads the **Internet for Trust (I4T)** initiative to address challenges like misinformation and threats to freedom of expression in South Asia.

UNCTAD Report Flags Rising Cost of Non-Tariff Barriers, Outweighing Tariffs for 88% of Countries

What's the News?

- The **United Nations Conference on Trade and Development (UNCTAD)** released its **May 2026 Global Trade Update**, titled “**Invisible Barriers: The Costs of Non-Tariff Measures**”.
- The report finds that **non-tariff measures (NTMs)** now impose higher trade costs than tariffs for **88% of countries** globally.
- It highlights that developing economies face a “**double burden**” of rising tariffs and disproportionately high compliance costs of complex regulations.
- The report was released amidst rising trade fragmentation following the **COVID-19 pandemic**, the **Russia-Ukraine conflict**, and recent **tariff increases initiated by the United States in 2025**.

Findings of the Report

- **Dominance of NTMs over Tariffs:**
 - NTMs impose greater export costs than traditional customs duties for nearly **9 out of 10 countries**.
 - This trend continues despite a sharp rise in global tariffs, which increased by **10%** for developed countries, **16%** for developing countries, and **18%** for Least Developed Countries (LDCs) in 2025.
- **Asymmetric Impact on Developing Countries:**
 - **LDCs lose approximately 10% of their exports** to G20 markets specifically because they are unable to meet regulatory requirements.
 - Exporters in smaller economies face steep costs for product certification, testing, and inspections, often because accredited laboratories or certification agencies are not available domestically, forcing them to send products abroad for approval.

Defining Non-Tariff Measures (NTMs)

- **Definition:** NTMs are policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods. They include regulatory or procedural requirements that can act as barriers to trade.
- **Common Types of NTMs:**
 - **Technical Barriers to Trade (TBT):** Regulations and standards for product quality, safety, size, labeling, and packaging.
 - **Sanitary and Phytosanitary (SPS) Measures:** Rules to protect human, animal, and plant life from diseases, pests, or contaminants. These are often a significant hurdle for agricultural exporters.
 - **Import Licensing & Quotas:** Administrative processes for obtaining permission to import goods, which can be burdensome and unclear.
 - **Conformity Assessments:** Requirements for testing, verification, and inspection to prove

that a product complies with specified standards.

Policy Solutions

- **The Transparency Dividend:**
 - UNCTAD estimates that **improving transparency** in NTM regulations alone could **reduce related trade costs by approximately 19%**.
 - The lack of information on regulations acts as a hidden barrier; UNCTAD quantifies that non-notified measures can equate to a **28% tariff** on affected goods.
- **Regulatory Cooperation:**
 - **Convergence of differing national regulations** can cut NTM-related trade costs by **15% to 30%**.
 - In Africa, even limited regulatory cooperation under agreements like the **African Continental Free Trade Area (AfCFTA)** could reduce compliance costs by **30% to 40%** in key sectors such as agriculture and manufacturing.

Additional Info

- **India's Context:**
 - As India lowers tariff barriers through Free Trade Agreements (FTAs) with partners like the **UK, Oman, and the European Union**, its exporters, particularly from the MSME sector, increasingly face stringent sanitary, phytosanitary, and technical standards in these markets.
 - The **Global Trade Research Initiative (GTRI)** has emphasized that tariffs alone will not deliver export gains unless accompanied by deeper regulatory cooperation and mutual recognition of standards.
- **About UNCTAD:**
 - **Established:** In 1964 as a permanent intergovernmental body of the United Nations.
 - **Objective:** To integrate developing countries into the global economy through trade, investment, finance, and technology.
 - **Headquarters:** Geneva, Switzerland.
- **Trade Abbreviations:**
 - **LDCs:** Least Developed Countries, a UN-designated group of low-income countries confronting severe structural impediments to sustainable development.
 - **TRAINS (Trade Analysis and Information System):** A UNCTAD-maintained comprehensive database on NTMs, used as a source for the report.
 - **AfCFTA (African Continental Free Trade Area):** The world's largest free trade area by participating countries, aimed at boosting intra-African trade.

UNCTAD Report Highlights Non-Tariff Barriers as Dominant Trade Cost, Surpassing Tariffs

What's the News?

The **United Nations Conference on Trade and Development (UNCTAD)** released its **Global Trade Update (May 2026)** titled *Invisible Barriers: The Costs of Non-Tariff Measures*. The report finds that **non-tariff measures (NTMs)** now impose higher trade costs than traditional tariffs for **88% of countries** worldwide. This structural shift indicates that regulations, standards, and compliance procedures—not tariffs—are the primary determinants of market access and trade competitiveness in the current global economy.

Findings of the UNCTAD Report

- **Dominance of NTMs Over Tariffs:** NTMs have become the main trade cost driver. While global tariffs rose sharply in 2025—by **10%** for developed countries, **16%** for developing countries, and **18%** for Least Developed Countries (LDCs)—the compliance costs associated with NTMs outweigh these tariff costs for the vast majority of nations.
- **Developing Countries Face a Double Burden:** Developing economies are disproportionately affected, facing both rising tariffs and high compliance costs to meet complex foreign regulations.
 - **Export Losses: Least Developed Countries (LDCs)** lose an estimated **10%** of their exports to **G20** markets due to their inability to meet NTM requirements.
 - **Disproportionate Tariff Impact:** Tariff costs on exports from regions like **Latin America, East Asia, and South Asia** have increased much faster than for developed economies.
 - **Capacity Constraints:** Exporters in poorer economies often lack access to accredited domestic testing laboratories and certification agencies, making compliance significantly more expensive.
- **NTMs as the New Focus of Trade Negotiations:** Modern trade deals, such as the **EU-India Free Trade Agreement** negotiations, increasingly focus on regulatory alignment, mutual recognition of standards, and simplifying procedures rather than solely cutting tariffs.
- **Potential Cost Savings Identified:** The report highlights significant opportunities to reduce trade costs without eliminating essential regulations:
 - **Transparency:** Improving the transparency of trade regulations alone could cut NTM-related trade costs by nearly **20% (around 19%)**.
 - **Regulatory Cooperation:** Aligning domestic regulations with international standards and fostering mutual recognition could slash NTM-related trade costs by **15–30%**.
 - **South-South Trade:** Even limited regulatory cooperation within Africa could reduce trade costs by **30–40%** in key sectors like agriculture and manufacturing.

What are Non-Tariff Measures (NTMs) / Non-Tariff Barriers (NTBs)?

- **Definition:** Policy measures, other than ordinary customs tariffs, that can potentially have an economic effect on international trade in goods. They often function as "invisible hurdles" that change the quantity of goods traded or their prices.
- **Dual Nature:** While many NTMs serve legitimate public policy objectives like protecting human, animal, or plant health, they can also be deliberately used as instruments of **disguised protectionism** to shield domestic industries from foreign competition.

Types of Non-Tariff Measures (Based on UNCTAD Classification)

NTMs are broadly divided into technical and non-technical measures:

- **Technical Measures:**
 - **Sanitary and Phytosanitary (SPS) Measures:** Regulations to protect human, animal, or plant life from risks like pests, diseases, or contaminants (e.g., maximum pesticide residue limits in food).
 - **Technical Barriers to Trade (TBT):** Regulations on product characteristics, production processes, packaging, and labeling (e.g., mandatory energy efficiency ratings, safety standards for electronics).
- **Non-Technical Measures:**
 - **Quantitative Restrictions:** Quotas, embargos, or outright bans on the import of specific goods.
 - **Import Licensing:** Requirements for obtaining special permits before importing goods.
 - **Price Control Measures:** Anti-dumping duties, countervailing duties, or administrative pricing to support domestic prices.
 - **Rules of Origin:** Laws and regulations to determine the national source of a product, critical for availing preferential tariff rates under Free Trade Agreements.

Additional Info

- **UNCTAD and Key Reports:**
 - **UNCTAD:** A permanent intergovernmental body of the United Nations, established in 1964, headquartered in **Geneva, Switzerland**. It aims to integrate developing countries into the global economy.
 - **Key Reports:** In addition to the **Global Trade Update**, UNCTAD also publishes the **Trade and Development Report**, the **World Investment Report**, and the **Least Developed Countries Report**.
- **WTO and NTBs:** The **World Trade Organization (WTO)** does not prohibit the use of NTBs. Instead, it seeks to ensure they are not applied arbitrarily or as a means of unjustifiable discrimination through agreements like the **SPS Agreement** and the **TBT Agreement**.
- **Global Context:** The rise of NTMs occurs amid increasing global trade fragmentation fueled by the COVID-19 pandemic, the Russia-Ukraine war, and sweeping tariff actions. Governments are increasingly

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using trade regulations to secure strategic sectors like critical minerals and green technologies.

BRICS Reaffirms Support for Independent State of Palestine and Two-State Solution

What's the News?

- The **BRICS** member nations have reached a joint consensus reaffirming their commitment to a peaceful resolution of the Middle East conflict through the establishment of an independent **State of Palestine**.
- The bloc explicitly backed the creation of a sovereign, contiguous, and viable Palestinian state based on the pre-1967 borders, with **East Jerusalem** as its capital.
- The declaration emphasizes the immediate cessation of hostilities, adherence to international humanitarian law, and a renewed multilateral diplomatic push to address the crisis.

The BRICS Consensus and Two-State Solution?

- **Core Declaration:** The member states called for the full implementation of relevant **United Nations Security Council (UNSC)** and **UN General Assembly (UNGA)** resolutions to guarantee the legitimate rights of the Palestinian people.
- **Territorial Parameters:** The grouping strictly endorsed the **1967 borders** (the green line), which recognize the **West Bank**, the **Gaza Strip**, and **East Jerusalem** as the structural components of a future Palestinian territory.
- **Global South Solidarity:** The consensus highlights a unified stance among major emerging economies (**Brazil, Russia, India, China, South Africa**, along with newly integrated members like the **UAE, Egypt, Iran, and Ethiopia**) to champion the interests and stability of the Global South.
- **Humanitarian Mandate:** The bloc strongly opposed the forced displacement of Palestinians from their land and demanded unhindered, continuous access for humanitarian aid agencies across conflict zones.

Geopolitical Significance for India?

- **Policy of De-hyphenation:** India's alignment with the BRICS statement reflects its traditional yet balanced foreign policy, where it maintains independent, deep strategic and defense ties with **Israel** while consistently supporting the Palestinian cause on international platforms.
- **Strategic Stability:** Stability in West Asia is vital for India's economic interests, given that the region hosts over 8.5 million Indian expatriates and serves as a major source for India's crude oil and natural gas imports.
- **Economic Corridors:** Prolonged regional instability directly impacts long-term connectivity projects, such as the proposed **India-Middle East-Europe Economic Corridor (IMEC)**, making a negotiated settlement crucial for regional trade security.

Additional Info

- **Historical Genesis of the Conflict:**
 - **UN Partition Plan (Resolution 181):** Proposed the division of British Mandatory Palestine into

independent Arab and Jewish states, with Jerusalem under international administration.

- **1967 Six-Day War:** A pivotal conflict during which Israel captured the **West Bank** and **East Jerusalem** from Jordan, the **Gaza Strip** and **Sinai Peninsula** from Egypt, and the **Golan Heights** from Syria. The pre-war boundaries are referred to as the 1967 lines.
- **UNSC Resolution 242:** Adopted after the 1967 war, it established the formula of "land for peace," calling for the withdrawal of Israeli armed forces from territories occupied in the recent conflict.
- **Oslo Accords:** Signed in the 1990s, these agreements established the **Palestinian Authority (PA)** and granted it limited self-governance over parts of the West Bank and Gaza Strip, intended as a stepping stone toward a definitive two-state solution.
- **The BRICS Grouping:**
 - **Evolution:** Originally formed as BRIC in 2009, it became **BRICS** with the inclusion of South Africa. The alliance underwent a major expansion, bringing in new energy powers and regional leaders to amplify its collective geopolitical influence.

US Senate Advances Resolution to Curb Presidential War Powers on Iran

What's the News?

- The **United States Senate** has advanced a procedural vote on a **War Powers Resolution** aimed at limiting the President's authority to conduct military operations against **Iran** without explicit **Congressional authorization**.
- The resolution, sponsored by Democratic Senator **Tim Kaine**, directs the President to withdraw US Armed Forces from hostilities against Iran unless Congress issues a **declaration of war** or specific **Authorization for Use of Military Force (AUMF)**.
- The **50-47 procedural vote** marks a rare instance of bipartisan support, with four Republican senators joining nearly all Democrats to advance the measure.
- While symbolic, the vote underscores growing legislative scrutiny over executive war powers and the constitutional balance between the **Executive** and **Legislative** branches in matters of national security.

Constitutional Framework: War Powers Resolution, 1973

- **Legal Basis:** The resolution invokes the **War Powers Resolution of 1973**, enacted post-Vietnam War to check prolonged military engagements without Congressional approval.
- **Key Provisions:**
 - President must **consult Congress** before introducing US forces into hostilities.
 - Military action limited to **60 days** unless Congress authorizes continuation or grants

a **30-day extension** for "unavoidable military necessity".

- Requires **reporting to Congress** within 48 hours of deploying forces.

- **Constitutional Tension:**

- **Article I, Section 8:** Grants Congress the exclusive power to **declare war**.
- **Article II, Section 2:** Designates the President as **Commander-in-Chief** of the Armed Forces.
- The resolution seeks to reaffirm Congressional primacy in authorizing sustained military conflict.

Voting Dynamics & Political Significance

- **Bipartisan Cross-Voting:**

- **Republican Supporters:** Susan Collins (Maine), Lisa Murkowski (Alaska), Rand Paul (Kentucky), Bill Cassidy (Louisiana).
- **Notable Shift:** Senator **Bill Cassidy** switched support days after losing his Republican primary to a Trump-backed challenger, citing lack of transparency on "Operation Epic Fury".
- **Lone Dissenting Democrat:** John Fetterman (Pennsylvania) voted against advancement.

- **Legislative Hurdles Ahead:**

- Resolution requires a **final Senate vote**, passage in the **Republican-led House**, and a **two-thirds majority** in both chambers to override an expected presidential veto.
- Even if enacted, the White House may argue the resolution is moot due to the declared **ceasefire**, despite ongoing naval blockades and skirmishes.

Strategic Context: US-Iran Conflict & Regional Security

- **Conflict Timeline:** Hostilities began in late February 2026; the 60-day War Powers clock expired on May 1, prompting the resolution's advancement.
- **Current Status:**
 - President declared a ceasefire "terminated" hostilities, but US continues **maritime blockades** of Iranian ports and strikes on Iranian vessels.
 - Iran maintains effective control over the **Strait of Hormuz**, a critical chokepoint for **~20% of global oil trade**.
- **Geopolitical Implications:**
 - **Energy Security:** Disruptions in the Strait of Hormuz impact global oil prices and India's energy imports (**~85% crude import dependence**).
 - **Regional Stability:** Escalation risks affecting India's strategic interests in West Asia, including diaspora safety and trade routes.
 - **Diplomatic Channels:** Gulf states (Saudi Arabia, UAE, Qatar) acting as mediators for US-Iran negotiations.

Electrification Emerges as Core Priority for COP31 Climate Summit

What's the News?

- Ahead of **COP31** in Antalya, **Türkiye** (co-host with **Australia**) has elevated **economy-wide electrification** as a central pillar of global climate action.
- **COP31 President-Designate Murat Kurum** called for accelerating electrification across **transport, buildings, and industry** to replace direct fossil fuel use—not just decarbonising power generation.
- **International Renewable Energy Agency (IRENA)** proposes increasing electricity's share of **global final energy consumption** from current **~20% to 35% by 2035**, and **50% by 2050**, to stay on a **1.5°C pathway**.
- Electrification framed as dual solution: enhances **energy security** against fossil fuel volatility while enabling deep decarbonisation of "hard-to-abate" sectors.
- Key challenge identified: Global power grid investment must double from **\$0.5 trillion/year (2025)** to **\$1 trillion/year until 2035** to support this transition.

The "35 by 35" Electrification Target: Scope & Rationale

- **Overview:** Metric tracks electricity's share in *final* energy consumption (end-use), distinct from generation mix.
- **Sectoral Focus:**
 - **Transport:** Scale-up of **electric vehicles (EVs)**, rail electrification, and charging infrastructure.
 - **Buildings:** Shift to **electric heat pumps**, induction cooking, and smart energy management.
 - **Industry:** Electrification of low/medium-temperature processes; green hydrogen for high-heat applications.
- **Strategic Logic:**
 - **Emissions Reduction:** Direct fossil fuel combustion accounts for **~75%** of global GHG emissions; electrification + clean grids cuts this at source.
 - **Energy Security:** Reduces exposure to geopolitical oil/gas supply shocks; leverages domestically generated renewables.
 - **Co-benefits:** Improves urban air quality, reduces health burdens, and creates green jobs in manufacturing and grid services.

India's Position: Opportunities & Preparedness

- **Current Status:**
 - Peak power demand recently crossed **270 GW**, with **renewables (including hydro)** contributing **~34%** during peak hours.
 - **Electricity share in final energy:** Estimated at **~22-24%** (slightly above global average), with significant headroom for growth.
- **Policy Enablers:**

- **National Green Hydrogen Mission:** Supports electrification of industry and heavy transport via clean fuel integration.
- **FAME-II & PLI Schemes:** Accelerate EV adoption and domestic battery manufacturing.
- **Green Energy Corridors:** Strengthen interstate transmission for renewable integration.
- **Implementation Gaps:**
 - **Distribution Company (DISCOM) Finances:** Weak financial health of state DISCOMs constrains grid modernisation investments.
 - **Equity Concerns:** Rural/low-income households need targeted subsidies for appliance electrification (e.g., heat pumps, EVs) to avoid energy poverty.

Additional Info

- **Global Governance Framework:**
 - **UNFCCC & Paris Agreement:** Provide legal basis for nationally determined contributions (NDCs); electrification targets can be integrated into updated NDCs.
 - **COP28 Outcomes:** "Transitioning away from fossil fuels" pledge creates momentum for COP31 electrification focus.
 - **SDG 7 (Affordable & Clean Energy) & SDG 13 (Climate Action):** Electrification with renewables directly advances both goals.
- **India's Legal & Institutional Architecture:**
 - **Electricity Act, 2003:** Mandates promotion of renewables, open access, and consumer choice—foundational for electrification transition.
 - **Energy Conservation Act, 2001 (amended 2022):** Empowers **Bureau of Energy Efficiency (BEE)** to set standards for appliances, buildings, and industries.
 - **Constitutional Provisions:** **Article 48A** (environment protection) and **Article 51A(g)** (citizen duty) support climate-resilient energy policy.
- **Financing Mechanisms:**
 - **Green Climate Fund (GCF) & Adaptation Fund:** Potential sources for concessional finance for grid upgrades in developing countries.
 - **Sovereign Green Bonds:** India issued ₹16,000 crore in 2023-24; proceeds allocated to renewable and grid projects.
 - **Blended Finance Models:** Public capital to de-risk private investment in distribution infrastructure and EV charging networks.

Russia and Afghanistan Sign Military Cooperation Pact

What's the News?

- Russia and Afghanistan's Taliban-led government have signed a **military-technical cooperation agreement**, marking a further expansion of bilateral ties.

- The agreement was signed during an international security forum in Russia and reflects growing security and strategic engagement between the two sides.
- The development comes after Russia deepened diplomatic relations with the Taliban administration and emerged as one of its key international partners.

Military Cooperation Agreement

- The pact focuses on **military-technical cooperation** between Russia and Afghanistan.
- Such agreements generally include:
 - Defence and security cooperation.
 - Transfer of military technology.
 - Training and technical assistance.
 - Possible cooperation in defence equipment and logistics.
- The agreement indicates a move beyond diplomatic engagement towards structured security cooperation.

Russia-Taliban Relations

- Russia has steadily expanded engagement with the Taliban since the group returned to power in Afghanistan.
- Moscow has emphasized cooperation in:
 - Security.
 - Counter-terrorism.
 - Trade and economic relations.
 - Regional stability initiatives.
- Russia has described its relationship with Kabul as a **"full-fledged partnership"** and has encouraged greater regional engagement with Afghanistan.

Background: Recognition of the Taliban Government

- Russia became the **first country to formally recognise the Taliban-led government** after its return to power in Afghanistan.
- Prior to recognition:
 - Russia removed restrictions on engagement with the Taliban.
 - Diplomatic exchanges between Moscow and Kabul increased significantly.
- The recognition was viewed as a major step in reducing Afghanistan's international isolation.

Why is Russia Engaging Afghanistan?

- Russia views Afghanistan as strategically important for:
 - Regional security in Central Asia.
 - Countering extremist groups such as **Islamic State-Khorasan (ISIS-K)**.
 - Preventing instability from spreading into neighbouring regions.
- Moscow also seeks:
 - Greater regional influence.
 - Economic connectivity opportunities.
 - Cooperation on transport and energy initiatives.

Additional Info Taliban

- An Islamist political and military movement that regained control of Afghanistan after the collapse of the previous government.
- First ruled Afghanistan from **1996–2001**.
- Returned to power after the withdrawal of US-led forces in 2021.

Islamic State-Khorasan (ISIS-K)

- Regional affiliate of the Islamic State operating in Afghanistan and surrounding areas.
- Considered a major security threat by:
 - Afghanistan.
 - Russia.
 - Central Asian countries.
- Responsible for multiple terrorist attacks in the region.

Strategic Importance of Afghanistan

- Located at the intersection of:
 - South Asia.
 - Central Asia.
 - West Asia.
- Important for:
 - Regional trade corridors.
 - Energy connectivity projects.
 - Counter-terrorism cooperation.

Shanghai Cooperation Organisation (SCO)

- Regional organisation focusing on:
 - Security cooperation.
 - Counter-terrorism.
 - Economic coordination.
- Members include:
 - **India**
 - **China**
 - **Russia**
 - **Pakistan**
 - Central Asian countries.
- Afghanistan remains an important regional security concern within SCO discussions.

India's Concerns

- India closely monitors developments in Afghanistan because of:
 - Regional security implications.
 - Terrorism and extremism concerns.
 - Connectivity interests in Central Asia.
- Stability in Afghanistan is important for broader security in South Asia.

North Korea Rejects QUAD's Call for Denuclearisation

What's the News?

- **North Korea** has rejected the recent call by the **QUAD** nations for complete denuclearisation of the Korean Peninsula.
- Pyongyang stated that it will not abandon its nuclear weapons programme and reaffirmed its intention to retain and strengthen its nuclear deterrent.
- The response came after the **QUAD** expressed concerns regarding North Korea's missile and nuclear activities and called for compliance with international obligations.

QUAD's Position on Denuclearisation

- The **Quadrilateral Security Dialogue (QUAD)** — comprising **India, United States, Japan, and Australia** — reiterated support for:
 - Complete denuclearisation of the Korean Peninsula.
 - Maintenance of regional peace and stability.
 - Adherence to relevant **United Nations Security Council (UNSC)** resolutions.

- The grouping expressed concerns over:
 - Ballistic missile launches by North Korea.
 - Continued development of nuclear weapons capabilities.
 - Regional security risks arising from military escalation.

North Korea's Response

- North Korea rejected external demands for nuclear disarmament.
- It argued that its nuclear arsenal is necessary for:
 - National security.
 - Strategic deterrence.
 - Protection against perceived military threats.
- Pyongyang stated that denuclearisation is not under consideration and described its nuclear status as irreversible.

Why is North Korea Pursuing Nuclear Weapons?

- North Korea considers nuclear weapons essential for:
 - Regime survival.
 - Deterrence against external intervention.
 - Strategic leverage in international negotiations.
- The country has conducted:
 - Multiple nuclear tests.
 - Ballistic missile launches.
 - Development of long-range missile systems capable of carrying nuclear warheads.

Regional Security Concerns

- North Korea's nuclear and missile programmes remain a major security concern in:
 - East Asia.
 - Indo-Pacific region.
- Key concerns include:
 - Arms race dynamics.
 - Increased military tensions.
 - Risks of miscalculation and conflict.
- The issue affects security interests of:
 - South Korea.
 - Japan.
 - United States.
 - China.
 - Russia.

Additional Info

Quadrilateral Security Dialogue (QUAD)

- Informal strategic grouping comprising:
 - **India**
 - **United States**
 - **Japan**
 - **Australia**
- Focus areas include:
 - Free and open Indo-Pacific.
 - Maritime security.
 - Supply-chain resilience.
 - Critical technologies.
 - Disaster response and humanitarian cooperation.
- It is not a formal military alliance.

Korean Peninsula Denuclearisation

- Refers to the removal of nuclear weapons and nuclear weapons-related programmes from the Korean Peninsula.
- Has been a long-standing objective of:
 - United Nations.
 - United States.
 - South Korea.
 - Japan.
- Several diplomatic efforts have been undertaken, but no permanent settlement has been achieved.

United Nations Security Council (UNSC) Sanctions

- North Korea is subject to multiple UNSC sanctions because of:
 - Nuclear weapons development.
 - Ballistic missile testing.
- Restrictions cover:
 - Arms trade.
 - Financial transactions.
 - Strategic materials and technology transfers.

Nuclear Non-Proliferation Treaty (NPT)

- International treaty aimed at:
 - Preventing the spread of nuclear weapons.
 - Promoting peaceful uses of nuclear energy.
 - Advancing nuclear disarmament.

- North Korea withdrew from the treaty in **2003**.

North Korea's Nuclear Programme

- Officially known as the **Democratic People's Republic of Korea (DPRK)**.
- Has developed:
 - Nuclear warheads.
 - Intercontinental Ballistic Missiles (ICBMs).
 - Short- and medium-range missile systems.
- Nuclear capability remains central to its national security strategy.

India's Position

- India supports:
 - Peaceful resolution of disputes.
 - Denuclearisation of the Korean Peninsula.
 - Adherence to international law and UNSC resolutions.
- India also promotes stability and security in the broader Indo-Pacific region through cooperation platforms such as the **QUAD**.

UN Adds Israel to Blacklist for Conflict-Related Sexual Violence

What's the News?

- The **United Nations** has added **Israel** to its list of parties suspected of committing **conflict-related sexual violence** in armed conflict situations.
- The inclusion was made in the UN Secretary-General's annual report on conflict-related sexual violence.
- The move has generated international debate, with Israel rejecting the allegations and criticizing the decision.

UN Blacklist on Conflict-Related Sexual Violence

- The blacklist identifies:
 - State actors.

- Armed groups.
 - Conflict parties, that are suspected of or responsible for serious acts of sexual violence during armed conflicts.
- It is part of the UN's broader framework to:
 - Protect civilians.
 - Monitor violations of international humanitarian law.
 - Promote accountability in conflict zones.
 - Inclusion in the list does not automatically imply criminal conviction but reflects concerns raised through UN monitoring and reporting mechanisms.

Basis of the UN Report

- The report documented allegations of:
 - Sexual violence.
 - Gender-based violence.
 - Abuse linked to armed conflict situations.
- The findings were connected to developments in the ongoing conflict involving Israel and Palestinian territories.
- The report called for:
 - Accountability measures.
 - Victim support mechanisms.
 - Compliance with international humanitarian and human rights standards.

Israel's Response

- Israel rejected the allegations and criticized its inclusion in the blacklist.
- Israeli authorities argued that:
 - The findings were unfair and politically motivated.
 - Israel maintains mechanisms for investigating misconduct.
- The issue has become part of wider international debates regarding accountability and conduct during armed conflicts.

Conflict-Related Sexual Violence (CRSV)

- Refers to acts such as:
 - Rape.
 - Sexual slavery.
 - Forced prostitution.
 - Forced pregnancy.
 - Other forms of sexual abuse linked directly or indirectly to conflict.
- Such acts are considered serious violations of:
 - International humanitarian law.
 - Human rights law.
 - International criminal law.

Additional Info

United Nations Framework on Conflict-Related Sexual Violence

- Led through the office of the **Special Representative of the Secretary-General on Sexual Violence in Conflict (SRSG-SVC)**.
- Focuses on:
 - Prevention.
 - Documentation.
 - Accountability.
 - Support for survivors.

- Works with governments, peacekeeping missions, and international organizations.

UN Security Council Resolution 1820 (2008)

- Recognized sexual violence as:
 - A tactic of war.
 - A threat to international peace and security.
- Called for protection of civilians and accountability for perpetrators.

Women, Peace and Security (WPS) Agenda

- Based on **UN Security Council Resolution 1325 (2000)**.
- Promotes:
 - Protection of women in conflict situations.
 - Participation of women in peace processes.
 - Gender-sensitive conflict resolution and peacebuilding.

International Humanitarian Law (IHL)

- Governs conduct during armed conflict.
- Protects:
 - Civilians.
 - Prisoners of war.
 - Non-combatants.
- Serious violations can constitute:
 - War crimes.
 - Crimes against humanity.

Geneva Conventions

- Core treaties governing humanitarian conduct during war.
- Prohibit violence against civilians, including sexual violence and inhumane treatment.

Israel-Palestine Conflict

- One of the longest-running geopolitical conflicts in the world.
- Involves disputes over:
 - Territory.
 - Sovereignty.
 - Security.
 - National self-determination.
- The conflict continues to attract significant international diplomatic and humanitarian attention.

Miscellaneous

Pentagon Releases Initial Batch of Declassified UFO Files

What's the News?

- The **United States Pentagon** released an initial batch of declassified files related to **Unidentified Anomalous Phenomena (UAP)**, more commonly known as UFOs.
- The documents were published on the new "**Pursuing Unidentified Anomalous Records Under Systematic Exploitation**" (**PURSUE**) website, a government portal designed to host declassified UAP material.
- The release includes approximately **160 documents**, containing military videos, infrared imagery, FBI memos, NASA transcripts, and eyewitness accounts dating from the **1940s through 2026**.
- The files range from reports of in-flight military encounters to astronaut testimonies and historical FBI dossiers, offering the public a first-hand look at decades of government investigations into these phenomena.

Driving Factors Behind the Release

- **Presidential Directive:** The release follows a directive from former President **Donald Trump**, who called for all government files related to UFOs and extraterrestrial topics to be identified and made public. Defense Secretary Pete Hegseth stated the files have "long fueled justified speculation" and that the department is acting to provide "unprecedented transparency".
- **Congressional Pressure:** Lawmakers, notably a task force led by Representative **Anna Paulina Luna**, have been actively pushing for the release of government UAP records. This includes requests for **46 specific videos** of encounters from defence authorities, signaling that more visual evidence may be released in the coming months.
- **Broader Transparency Goal:** The Pentagon framed the effort as a historic move to let the American public "make up their own minds about the information contained in these files," rather than keeping the documents hidden behind government classifications.

Contents & Notable Sightings

- **Military Encounters:** The files contain internal military memos documenting recent observations by U.S. troops in conflict zones. This includes a report of "one possible small UAP" in **Iraq in 2022**, and observations of "multiple glares or light from an unknown origin" in **Syria in 2024**.
- **Civilian & Federal Sightings:** Reports include sightings of "orbs launching orbs" by federal employees in the **western United States in 2023**, and a "misshapen and uneven ball of white light" reported by military personnel in Syria.
- **Apollo Mission Reports:** The files contain UAP accounts from astronaut crews:
 - During the **Apollo 12** mission (1969), astronaut Alan L. Bean reported seeing "flashes of light" sailing off into space.
 - During the **Apollo 17** mission (1972), crew members reported observing a **light flash on the lunar surface** and "very bright" particles of light. One astronaut described the scene as "like the Fourth of July out there!".

- **FBI Dossier (1947-1968):** A substantial file containing hundreds of pages of "eyewitness testimonies and public reports" about UFOs from the late 1940s to 1968 was released. This version has **fewer redactions** than copies previously released by the FBI.

Official Assessment & Expert Reactions

- **No Evidence of Extraterrestrial Origin:** The U.S. government has never claimed to have verified evidence linking UAP sightings to alien technology. A **2024 Pentagon report** found no proof of extraterrestrial activity, attributing most resolved cases to ordinary objects like weather balloons, spy planes, satellites, and other natural or man-made phenomena.
- **Ambiguity Remains:** The Pentagon website includes a disclaimer that the descriptive language in military memos reflects the "subjective interpretation" of the reporting officer and should "not be interpreted as a conclusive indication" of what occurred.
- **Sceptical View:** Some UAP analysts have described the initial batch as containing "genuine UFO cases, but not particularly interesting" ones.
- **Public Reaction:** Public response has been mixed, with some viewing the release as a meaningful step toward openness, while scientists and sceptics note that many of the images and reports remain ambiguous or lack clear explanation.

Rollout Process & Future Disclosures

- **Phased Release:** The files are being published on a "rolling basis," with new documents added as they are processed and approved for public access. The Pentagon stated that tranches will be posted "every few weeks".
- **Unresolved Cases:** The initial release deliberately includes cases that remain unresolved, meaning authorities have not reached a final conclusion about what was observed. The release does not aim to provide conclusive answers but rather to offer a clearer view of how such cases are investigated.
- **Potential for More Visual Evidence:** The congressional task force's request for 46 additional UAP videos suggests that more visual evidence and records could be released in the coming months, depending on the ongoing review and declassification process.

Padma Awards 2026: President Murmu Honours 66 Eminent Personalities

What's the News?

- President **Droupadi Murmu** conferred **Padma Awards 2026** to 66 distinguished personalities at the first Civil Investiture Ceremony at **Rashtrapati Bhavan**.

- Distribution: **2 Padma Vibhushan, 6 Padma Bhushan, 58 Padma Shri**; total **131 awards** approved for 2026, with remaining to be conferred later.
- Notable recipients include late actor **Dharmendra** and violin maestro **Dr. N. Rajam** (Padma Vibhushan), banker **Uday Kotak**, and women's cricket captain **Harmanpreet Kaur**.
- Ceremony attended by Prime Minister **Narendra Modi**, Vice President **C.P. Radhakrishnan**, and Union Home Minister **Amit Shah**.

Padma Awards: Structure & Significance

- **Three-tier civilian honours** announced annually on Republic Day eve:
 - **Padma Vibhushan**: Exceptional and distinguished service
 - **Padma Bhushan**: Distinguished service of high order
 - **Padma Shri**: Distinguished service in any field
- Recognises excellence across **12 fields**: art, literature, sports, medicine, science & engineering, public affairs, social work, civil service, trade & industry, etc.
- Awards are **open to all** without distinction of race, occupation, position, or gender; government servants (except doctors/scientists) generally not eligible.
- **No monetary grant**; recipients receive a **Sanad** (certificate) signed by the President and a medallion.

Key Recipients & Fields

- **Padma Vibhushan**:
 - Late **Dharmendra Singh Deol** (Art/Cinema) – posthumous; received by spouse **Hema Malini**
 - **Dr. N. Rajam** (Art/Classical Music) – renowned violin maestro
- **Padma Bhushan**:
 - **Bhagat Singh Koshyari** (Public Affairs)
 - **Uday Kotak** (Trade & Industry)
 - **Dr. Kallipatti Ramasamy Palaniswamy** (Medicine)
 - **Shatavadhani Dr. R. Ganesh** (Art)
- **Padma Shri**:
 - **Harmanpreet Kaur** (Sports – Women's Cricket)
 - **Prosenjit Chatterjee** (Art – Bengali Cinema)
 - **Rohit Sharma** (Sports – Cricket)
 - Diverse representation across states, fields, and communities including tribal artists and social workers.

Constitutional & Governance Context

- **Article 18(1)** of the Constitution abolishes titles, but **Padma Awards** are exceptions as they recognise merit, not hereditary privilege.
- **Supreme Court ruling** (Balaji Raghavan vs Union of India, 1996): Upheld Padma Awards as "national

awards" not violating Article 18; clarified they cannot be used as prefixes/suffixes to names.

- **Selection Process:**

- Nominations invited from public, state governments, ministries, Bharat Ratna/Padma awardees, and Institutes of Excellence.
- **Padma Awards Committee** constituted by the Prime Minister; recommendations submitted to the President for approval.
- Emphasis on **inclusivity**, with focus on unsung heroes, women achievers, and underrepresented regions.