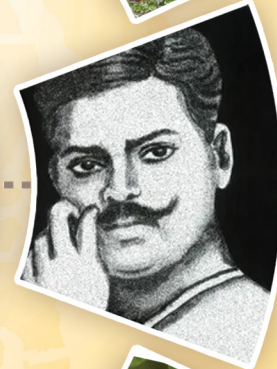
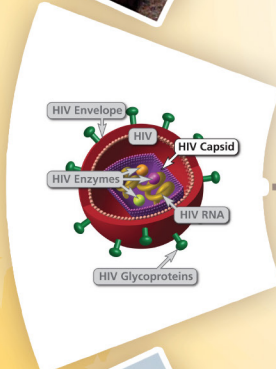


FORTUNE Prelims Precise

February 2026



FORTUNE IAS

Toppers in Top 100



Preface

Fortune IAS Academy presents '**Prelims Precise**', a monthly current affairs magazine through which we make prelims current affairs revision precise and effective.

This magazine is a comprehensive resource that condenses the significant news of each month into distinct sections such as polity and governance, economic development, science & technology, among others.

Each content is organised with the why in news context followed by its explanation.

Fortune Prelims Precise is available to all Prelims cum Mains batch students (2024) as part of the course study material. **It can be purchased from Fortune IAS Academy for Rs. 75 per issue.**



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February 2026
Monthly Current Affairs
quiz here

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Polity & Governance

Kerala as Keralam

- The Union Cabinet recently approved the renaming of the **State of 'Kerala' to 'Keralam.'**
- **According to Article 3** of the Constitution, Parliament may, by law, alter the name of any State.

The Process

- The State Assembly first passes a resolution for the change of the name and sends it to the **Ministry of Home Affairs (MHA).**
- It is then sent for the **recommendation of the President to Parliament.**
- Such a Bill can only be introduced in Parliament after the President recommends it.
- The next step is to send the **Bill to the affected state's legislature to get their views and the State's opinion is not binding.**
- Parliament can move forward even if the State disagrees.
- The Bill is then **introduced in either the Lok Sabha (Lower House) or Rajya Sabha (Upper House)** and must be passed by a **simple majority**, i.e. more than 50% of the members must be present and voting in any of the houses.
- Once passed by Parliament, the Bill goes back to the President for final signature.
- Once signed, it becomes an Act, and the **name is officially changed in the First and Fourth Schedules of the Constitution.**

Can India become 'Bharat'?

- As **Article 3 deals exclusively with changing the name of States**, changing India's name would require a formal **Constitutional Amendment under Article 368.**
- Article 1 of the Constitution, which defines the country as "India that is Bharat, shall be a Union of States...", would also need to be amended.

- In order to exclusively use just one name for the country, the amendment Bill must be **passed by two-thirds of members present and voting** in both houses of the Parliament.
- It also requires the support of more than 50% of the total strength of each House.
- **The Supreme Court of India has twice (in 2016 and 2020) rejected pleas to rename India to Bharat**, stating that both names are already official and the Constitution refers to both 'Bharat' and 'India,' signalling that they may be used interchangeably.

Privileges and Ethics Committees

- The Privileges Committee and the Ethics Committee, have not been constituted in the Lok Sabha for nearly two years.
- **Parliamentary privileges** are special rights and immunities granted to Parliament and its members to ensure they can perform their legislative functions independently and without interference.
- They are provided under **Article 105 of the Constitution of India** for Parliament and **Article 194 of the Constitution of India** for State Legislatures.
- They are of two types: **individual privileges** (e.g., freedom of speech and protection from legal action for statements in the House) and **collective privileges** (e.g., the House's power to regulate its proceedings and punish for breach of privilege).
- **Privileges Committee** is a parliamentary committee that **examines cases of breach of parliamentary privileges by members or outsiders.**
- It consists of 15 members in Lok Sabha (10 in the case of Rajya Sabha) nominated by the Speaker (Chairman in the case of Rajya Sabha).
- Since 1986, the Speaker may also refer **defection-related petitions** to the committee for preliminary inquiry.
- **The Ethics Committee** is a parliamentary committee that monitors the moral and ethical conduct of Members of Parliament (MPs) and examines cases of misconduct.

- Each House has its **own Ethics Committee**—with up to 15 members in Lok Sabha and 10 in Rajya Sabha, nominated by the Speaker/Chairman for a one-year term—and it mainly deals with complaints from citizens against MPs.

Official Secrets Act, 1923

- The **Ministry of Defence** is framing fresh guidelines incorporating provisions of the **Official Secrets Act** for serving and retired armed forces personnel regarding publication of books, following controversy over the unpublished memoir of former Army Chief M. M. Naravane.
- The **Official Secrets Act (OSA), 1923** governs secrecy and confidentiality related to government information in India.
- It replaced the **1904 law enacted during Lord Curzon’s period**, which mainly aimed to restrict press freedom.
- The Act mainly deals with **espionage (Section 3)** and **unauthorized disclosure of secret government information (Section 5)**, including codes, passwords, sketches, plans, documents, or other official information.
- Under Section 5, **both the person sharing and the person receiving such information can be punished.**
- The Act **does not clearly define what constitutes “secret” information**, leaving classification to government discretion.
- It is often criticised for conflicting with the **Right to Information Act, 2005**, though **Section 22 of RTI gives it overriding power over OSA**; however, information can still be denied under **Sections 8 and 9 of RTI** for security reasons.

Removal Motion against Speaker

- The Opposition recently moved a **Removal motion against Lok Sabha Speaker Om Birla.**
- The Lok Sabha Speaker can be removed by a **resolution passed by a majority of all the then members of the Lok Sabha (effective majority)** under **Article 94 of the Constitution of India.**

Procedure:

- ➔ A member must give **at least 14 days’ written notice** to the Secretary-General of the Lok Sabha.
- ➔ The motion is admitted only if **at least 50 MPs support it.**
- ➔ Once admitted, it is **listed for discussion in the House.**
- ➔ **The member(s) who moved the motion cannot speak during the debate**, and discussion must be confined to the charges in the resolution.
- ➔ The **Speaker cannot preside over the sitting**, but may participate in the debate and vote as a member (without a casting vote).
- ➔ If the resolution passes by **effective majority**, the Speaker is **removed immediately**, though they continue as an MP.
- **Historical note:** Motions were moved against Speakers in **1954 (G.V. Mavalankar), 1966 (Hukam Singh), and 1987 (Balram Jakhar)**, but none were successful.

Frontier Nagaland Territorial Authority (FNTA)

- The Nagaland government, Ministry of Home Affairs, and the Eastern Nagaland People’s Organisation (ENPO) signed an agreement to create the **Frontier Nagaland Territorial Authority (FNTA).**
- ENPO represents **eight tribes from six eastern districts** seeking better governance due to long-standing neglect.
- The FNTA will give **semi-autonomous powers** over 46 subjects, including land, agriculture, and rural development, with a mini-secretariat in the region to improve administration.
- It **does not change Article 371(A)**, which protects Naga customs and rights.
- FNTA is like Manipur’s Hill Areas Committee but has **executive, financial, and administrative powers**, unlike just legislative review.
- Similar autonomous bodies exist in India, such as the **Bodoland Territorial Council, Gorkhaland Territorial Administration,**

Ladakh Autonomous Hill Development Council, and Sixth Schedule Autonomous District Councils in the states of **Meghalaya**, **Mizoram**, **Tripura**, and **Assam**.

Removal of the CEC

- Opposition parties are reported to be discussing a motion to **remove Chief Election Commissioner (CEC) Gyanesh Kumar**.
- **Article 324** of the Constitution of India provides for the Chief Election Commissioner (CEC) and other Election Commissioners (ECs) but does not provide for the due process.
- **Chief Election Commissioner and Other Election Commissioners (Appointment, Conditions of Service and Term of Office) Act, 2023** regulates appointment, service conditions, and tenure.
- Appointment is by the **President** on recommendation of a **selection committee** (Prime Minister, Leader of Opposition in Lok Sabha, and a Union Cabinet Minister).
 - ⇒ A **search committee** led by the Law Minister prepares the candidate panel.
- Candidates must be **equivalent to Secretary to the Government of India**; **tenure** is 6 years or till age 65, whichever is earlier; no reappointment.
- The **Part XV of the Constitution** deals with Elections and the Articles 324–329 empowers the Election Commission and provides insight into the potential roles and functions of the commission.
- The removal of the **Chief Election Commissioner (CEC)** is governed by **Article 324 of the Constitution of India**, which deals with the **Election Commission under Part XV (Articles 324–329)**.
- The **CEC can be removed in the same manner and on the same grounds as a judge of the Supreme Court of India** (proved misbehaviour or incapacity).
- A removal motion requires **notice by 100 MPs in Lok Sabha or 50 MPs in Rajya Sabha**, after which the **Speaker/Chairman may admit it and form a three-member inquiry committee** under the **Judges Inquiry Act, 1968**.

- If the committee finds the charges proved, **both Houses of Parliament must pass the motion by a special majority**, after which the **President orders removal**.
 - ⇒ Other Election Commissioners can be removed **only on the recommendation of the CEC**.

Motion of Thanks to President's Address

- For the first time in history, Motion of Thanks on the President's Address was **passed in Parliament without the customary reply by the Prime Minister**, amid vociferous protests by the Opposition.
- The President's Address to Parliament is a **constitutional procedure under Article 87**, in which the President addresses a **joint sitting of both Houses of Parliament**.
- It occurs on **two specific occasions**: (1) the **first session after a general election** when a new Lok Sabha is constituted, and (2) the **first session of Parliament each year**, typically the Budget Session in January or February.
- **Originally, this was required for every session**, but the Constitution (First Amendment) Act, 1951 changed it.
- The speech is **prepared by the government** and reflects the government's policies, achievements, and legislative agenda for the year.
- **Article 87(2) provides for a discussion** on the matters referred to in the address.
- This is done through a **mandatory Parliamentary procedure** called "**Motion of Thanks**" initiated by a ruling party MP in each House to express gratitude for the President's Address, as provided for in the **Rules of Procedure** of both houses.
- It **concludes with the Prime Minister replying** to the points raised during the discussion.
- **Opposition may move amendments** to the wordings of the Motion of Thanks, usually to criticise the government or highlight issues not mentioned in the President's Address.
- However, since 1952, **only three amendments proposed by MPs have been passed** during the vote on the address, all in the Rajya Sabha.

Right to Menstrual Health

- The Supreme Court recognised **Menstrual Health and Hygiene (MHH)** as part of the **fundamental right to life and dignity under Article 21**, and linked it with **substantive equality under Article 14** and the **right to education under Article 21A** of the Constitution.
- It held that lack of sanitation facilities and menstrual products leads to stigma, absenteeism, and dropouts, violating **dignity, bodily autonomy, equality, and access to education**.
- The Court interpreted provisions of the **Right of Children to Free and Compulsory Education Act, 2009**, particularly **Section 19 (school infrastructure norms)**, to require **functional gender-segregated toilets and removal of financial barriers such as the cost of sanitary products**.
- It issued a **continuing mandamus** (monitor compliance with its orders over an extended period without closing the case) directing governments to ensure **free sanitary napkins, adequate toilets with water, safe waste disposal, Menstrual Hygiene Management (MHM) corners in schools, and gender sensitisation through NCERT/SCERT curricula**, with monitoring by the **National Commission for Protection of Child Rights (NCPCR)**.

Economy

Union Budget 2026–2027

- Union Budget 2026–27 (India) was presented by **Finance Minister Nirmala Sitharaman on 1 February 2026**.
- The Budget prioritises **strategic growth** with initiatives like **India Semiconductor Mission 2.0, Biopharma SHAKTI, the Electronics Components Manufacturing Scheme, and the Mega Textile & Integrated Textiles Program** to boost manufacturing, technology, and skill development.
- It also focuses on infrastructure and resources through **seven high-speed rail corridors** and **Rare Earth Mineral Corridors** to enhance connectivity and secure critical minerals for industrial growth.
- ✓ **Fiscal Deficit:** 4.3% of GDP, lower than 4.4% in 2025-26.
 - ✓ **Revenue Deficit:** 1.5% of GDP.
 - ✓ **Public Debt:** about 55.6% of GDP, with a target to gradually reduce it to around 50% by 2031.
 - ✓ **Gross Tax Revenue:** about ₹44.04 lakh crore.
 - ✓ **Transfers to States:** around ₹26.2 lakh crore, including tax devolution and grants.

The infographic features the Ministry of Finance logo, PIB India logo, and a red budget envelope. It includes social media handles for PIB India and KBK.

In ₹ crore	2024-25	2025-26	2025-26	2026-27
	(Actuals)	(Budget Estimates)	(Revised Estimates)	(Revised Estimates)
Revenue Receipts	3,03,6619	34,20,409	33,42,323	35,33,150
Capital Receipts	16,16,249	16,44,936	16,22,519	18,14,165
Total Receipts	46,52,867	50,65,345	49,64,842	53,47,315
Total Expenditure	46,52,867	50,65,345	49,64,842	53,47,315
Effective Capital Expenditure	13,24,609	15,48,282	14,03,906	17,14,523
Revenue Deficit	5,64,296	5,23,846	5,26,764	5,92,344
Effective Revenue Deficit	2,91,640	96,654	21,8,613	99,642
Fiscal Deficit	15,74,431	15,68,936	15,58,492	16,95,768
Primary Deficit	4,58,856	2,92,598	28,4154	2,91,796

16th Finance Commission Report

- The 16th Finance Commission (chaired by Dr. Arvind Panagariya) **submitted its report** for the period 2026–31 (tabled in Parliament on February 1, 2026, alongside the Union Budget 2026-27).
- The Government accepted its key recommendations.

Key Statistics & Recommendations

- **Vertical Devolution** — States' share in the divisible pool of central taxes retained at 41% (same as 15th FC, despite demands for 45–50%).
- **Horizontal Devolution Formula** (distribution among states) — Revised criteria with weights:
 - ➔ **Income Distance** (per capita GSDP gap based on top three states): 42.5% (down from 45%).
 - ➔ **Population** (2011 Census): 17.5% (up from 15%).
 - ➔ **Demographic Performance**: 10% (down from 12.5%). (methodology changed from Total Fertility Rate to Population Growth between 1971 and 2011)
 - ➔ **Area**: 10% (down from 15%).
 - ➔ **Forest Cover**: 10% (unchanged weightage but included open forests also).
 - ➔ **New Criterion – Contribution to GDP**: 10% (replaces tax/fiscal effort of 2.5% from 15th FC; rewards economic performance).
- **Grants-in-Aid** (total recommended: ~₹9.47 lakh crore over 5 years):
 - ➔ **Local Bodies** — ₹7.91 lakh crore (₹4.4 lakh crore for Rural Local Bodies + ₹3.6 lakh crore for Urban Local Bodies).
 - ➔ **Disaster Management** — ₹2.04 lakh crore corpus for State Disaster Response Fund (SDRF) + State Disaster Mitigation Fund (SDMF) (Union share ~₹1.56 lakh crore).
- **No Revenue Deficit Grants** recommended (discontinued).
- **No sector-specific or state-specific grants** recommended.
- **Fiscal Roadmap** — Centre should reduce fiscal deficit to 3.5% of GDP by 2030–31; states capped at 3% of GSDP; push for fiscal discipline and outcome-based spending.

New GDP Series (Base Year FY23)

- **The Ministry of Statistics and Programme Implementation (MoSPI)** has officially overhauled India's gross domestic product (GDP), **shifting the GDP base year from 2011-12 to 2022-23** and introducing significant methodological shifts to improve accuracy.
- **Base Year:** The base year functions as the standard reference point, which enables economists to **measure real economic growth by eliminating inflationary effects** to determine actual output changes.
- When the base year becomes outdated, it no longer reflects current consumption patterns, industrial structure, or technology adoption.

The Methodological Shift:

- **Enhanced Price Indicators:** The statistics ministry will now reportedly use nearly 500-600 price indicators **drawn from detailed Consumer Price Index (CPI)** and Wholesale Price Index (WPI) components, compared with about 180 earlier. This expansion is **intended to improve accuracy** in measuring real output.
- **Sector-Specific Price Indicators:** The revised methodology will also **replace composite deflators with sector-specific price indicators** and unit value indices where available.
 - 👉 This allows consumption, investment, and trade flows to be adjusted using price movements relevant to each category rather than economy-wide averages.
- **Double Deflation Methodology:** Under the earlier approach, GDP estimates often relied on single deflation, where output was adjusted using a single price index. The double deflation method will correct this by separately adjusting output and input prices.

Double Taxation Avoidance Convention (DTAC)

- India and France have recently signed a **Protocol amending the India-France Double Taxation Avoidance Convention**, signed on 29 September 1992 ('India-France DTAC').
- **Double taxation** occurs when you are taxed on the same income in two different countries, one where you earn the income (known as the **source country**) and the other where you are a tax resident (known as the **resident country**).

- India has signed **comprehensive DTAA**s with **more than 90* countries** to help Non-Resident Indians (NRIs) avoid being doubly taxed.
- DTAA helps ensure that NRIs/Persons of Indian Origin (PIO)/Overseas Citizens of India (OCI) **don't face excessive international tax burdens or cash outflows** due to the same income being taxed in multiple jurisdictions.

National Monetisation Pipeline 2.0 (NMP 2.0)

- The government has proposed **disinvestment and equity sales by PSUs** under its new **₹16.72 lakh crore Asset Monetisation Pipeline 2.0 (NMP 2.0)**, developed by NITI Aayog.
- **Asset monetisation** means generating revenue from underused public assets (like roads, pipelines, land) by leasing, concessions, or selling operational rights, while the government keeps ownership.
- NMP 2.0 focuses on **core assets** such as airports, ports, highways, power plants, and telecom networks, and uses private sector efficiency to improve operations and fund new infrastructure.
- **Non-core assets** like land and buildings are included only if developed further under PPP or leasing models.
- The funds raised are reinvested into new assets, and CPSEs will mainly monetise assets by **selling equity in subsidiaries and joint ventures**.

Central Bank Digital Currency (CBDC)



- The Centre recently launched a **Central Bank Digital Currency (CBDC)-based public distribution system (PDS)** in Gujarat's Gandhinagar.
- A CBDC is an **electronic form of central bank money** with potential wide use by households and businesses to store value and make payments.

- It's central bank digital money in the national unit (here, the Indian Rupee) **representing legal tender with the liability of the central bank**, similar to physical currency in circulation.
- Under the **CBDC-enabled PDS system**, beneficiaries' digital wallets will carry **programmable Digital Rupee or e₹**, enabling seamless QR code-based or coupon code-based transactions at Fair Price Shops for purchase of entitled foodgrains.
- The system **eliminates repeated biometric authentication**, improves transaction efficiency, and generates a real-time digital trail, thereby enhancing transparency, monitoring and accountability.

Consumer Price Index (CPI) Base Year

- The **Ministry of Statistics and Programme Implementation (MoSPI)** has released the first CPI (Base 2024=100) press note recently, reporting Jan 2026 retail inflation at 2.75%.
- The new series incorporates an **updated base year of 2024 from the earlier 2012**.
- The new series is built using the latest **Household Consumption Expenditure Survey (HCES) 2023–24**, along with inputs from the Periodic Labour Force Survey (PLFS) and Annual Survey of Unincorporated Sector Enterprises (ASUSE).
- The new series adopts the **UN system of Classification of Individual Consumption according to Purpose (COICOP 2018)**.

Key Changes in CPI Weightage:

- **Food & Beverages:** Reduced drastically from 45.86% to 36.75%, which is expected to lower headline inflation volatility.
- **Housing & Utilities:** The combined weight of housing, water, electricity, and gas has been updated to 17.67%.
- **Miscellaneous Group:** This category now has a larger, more comprehensive role, including modern expenses like OTT subscriptions, transport, and communication.
- **Methodology:** The number of groups has increased from 6 to 12 (based on COICOP 2018), and the basket now includes e-commerce prices and, for the first time, rural housing rents.

Sovereign Gold Bonds

- The Budget has clarified that the **capital gains tax exemption on sovereign gold bonds will not apply** to investors who purchase them in the **secondary market** and hold them to maturity.
- The Budget **amends Section 70(1)(x) of the Income Tax Act**, which currently provides capital gains tax exemption on redemption at maturity of SGBs issued by the RBI.
- The **Sovereign Gold Bond (SGB)** scheme, launched in 2015, lets people invest in **gold without holding physical gold** and is also used as a debt financing for central govt.
- Issued by the **RBI**, SGBs offer **2.5% annual interest** and **capital gains tax benefits** if held till maturity.
- They have an **8-year tenure** with early redemption allowed after 5 years.
- The Indian government has **halted new SGB issuances** due to high borrowing costs.
- Existing bonds will continue to **pay interest and mature normally**, and investors can **trade them on the secondary market** (BSE/NSE).

Securities Transaction Tax (STT)

- The Union Budget has proposed to **increase the Securities Transaction Tax (STT) on futures and options by up to 150%**.
- **Securities** are tradable financial instruments such as **stocks, bonds, and derivatives**, through which companies and governments raise funds and investors earn returns.
- In India, securities markets are regulated by the **Securities and Exchange Board of India (SEBI)**.
- **Securities Transaction Tax (STT)** is a tax levied on the **value of transactions in securities traded on recognised stock exchanges**.
- Introduced in **2004**, it applies to trades in **equities, equity mutual funds, futures, and options**, and is collected **at the time of the transaction regardless of profit or loss**.
- **Futures** are contracts to **buy or sell an asset at a fixed price on a future date**, with a binding obligation to complete the trade.

- **Options** give the **right, but not the obligation**, to buy (call) or sell (put) an asset at a fixed price within a certain period, for which the buyer pays a premium.
- Both are **derivatives**, meaning their value depends on an underlying asset such as stocks, commodities, or currencies.



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International Relations

US Supreme Court on Tariffs

- The US **Supreme Court struck down tariffs** imposed by President Donald Trump under the International Emergency Economic Powers Act (IEEPA), 1977.
- The IEEPA grants the U.S. President authority to **regulate or prohibit international commerce and transactions** during declared national emergencies.
- Its primary purpose is to **address “unusual and extraordinary” threats to U.S.** national security, foreign policy, or the economy originating abroad.
- IEEPA allows the President to **freeze assets, block transactions, and prohibit trade** with foreign countries, organizations, or individuals.
- While **IEEPA was traditionally used only for sanctions**, the Trump administration attempted to use it to impose **sweeping tariffs in 2025** based on national emergency declarations regarding **trade deficits**.
- But the US Supreme Court ruled that the Article I of US Constitution vests **taxing and tariff power in Congress** (US Legislature), not the executive branch.
- This means that **IEEPA is legally restricted to non-tariff measures**, like, export controls, sector-specific regulations, blocking transactions or freezing assets.
- While viewed as a **victory for US importers**, the decision created **uncertainty regarding future trade policy and potential refunds for tariffs already paid**, with estimates ranging from \$85 billion to over \$175 billion.
- Following the ruling, Trump initiated new 10% to 15% tariffs by **citing Section 122 of the Trade Act of 1974**, which allows for temporary import restrictions to address balance-of-payments issues.

Maritime Labour Convention

- The **International Labour Organization (ILO)** and the **International Maritime Organization (IMO)** marked the **20th anniversary** of the Maritime Labour Convention, 2006 (MLC), often called the **“Seafarers’ Bill of Rights.”**
- MLC was **adopted in February 2006 in Geneva, Switzerland**, during a conference of the **International Labour Organization (ILO)**.
- ✓ It later **entered into force on 20 August 2013** after the required number of countries ratified it.
- The convention sets **minimum global standards for the working and living conditions of seafarers**, ensuring decent employment conditions regardless of nationality or ship flag.
- It applies to **most commercial ships** (excluding fishing vessels and warships) and is enforced through **Flag State inspection and Port State Control** to prevent substandard ships.
- The convention also **protects seafarers’ rights** in situations like abandonment or piracy and promotes fair competition among shipowners.
- **India ratified MLC in 2015**, effective 2016, implementing it via the **Merchant Shipping (Maritime Labour) Rules, 2016**, overseen by the **Directorate General of Shipping** under the Ministry of Ports, Shipping and Waterways.

International Energy Agency (IEA)

- The International Energy Agency (IEA) ministerial **meeting in Paris** signalled that India’s bid for full membership has entered its final stages.
- IEA is an **intergovernmental organisation** that **works to ensure global energy security**, reliable energy data, and sustainable energy policies which acts as a **major global platform for energy analysis, policy guidance, and emergency energy cooperation**.
- It was **established in 1974** in the wake of the 1973 oil crisis (Arab oil embargo), **headquartered in Paris, France** which helps industrialized nations **coordinate a collective response to major oil supply disruptions and ensure energy security**.

- Currently **it has 33 members** (Colombia was inducted as the 33rd member in February 2026) and **to join the group a country must be a member of OECD** (Organisation for Economic Co-operation and Development).
- **India became an Associate Member in 2017** and in **October 2023 Request, India formally applied for full membership** in IEA.

New Delhi Declaration – AI Impact Summit 2026

- The AI Impact Summit concluded in New Delhi with 89 countries and international organizations endorsing the New Delhi Declaration.
- New Delhi Declaration is a **comprehensive, multi-nation consensus document** aimed at **governing the development and deployment of AI** which is **grounded in the philosophy of “Sarvajan Hitaya, Sarvajan Sukhaya”** (Welfare for all, Happiness for all) which serves as a **non-binding roadmap for international AI cooperation**.
- It seeks to **bridge the AI Divide** by ensuring that foundational AI resources, such as computing power and data, are not concentrated in a few nations but are democratized for global economic growth and social good.

Key Features of the Declaration:

- **Seven Pillars (Chakras) Framework:** Built around seven pillars including democratizing AI resources, secure AI, human capital development, AI for science, and resilient AI systems.
- **Global Collaborative Platforms:** Launch of initiatives like Global AI Impact Commons, Trusted AI Commons, and AI for Social Empowerment Platform to enable shared learning and innovation.
- **Human Capital & Reskilling:** Introduces AI workforce development playbook and guiding principles for reskilling in an AI-driven economy.
- **Energy-efficient & Resilient AI:** Emphasizes sustainable AI infrastructure and efficient systems to reduce energy and resource pressures.

India–France Global Partnership

- India and France has upgraded their ties to a **Special Global Strategic Partnership** during the state visit of French President Emmanuel Macron.
- The two nations have also launched the **2026 India-France Year of Innovation**.
- Key agreements include **cooperation on Small and Advanced Modular Reactors, co-produce fighter jet engines**, and procure **26 Rafale-Marine jets**.
- They will **collaborate on Indo-Pacific health and digital projects**, human spaceflight, satellite launches, and space monitoring, while introducing **visa-free transit for Indians** and aiming for 30,000 Indian students in France by 2030.
- India and France had established **strategic cooperation in 1998**, and to mark **25 years of partnership**, they had launched **Horizon 2047** in 2023 in Paris.

India–Malaysia IMPACT Framework

- During his visit to Malaysia, the Indian Prime Minister highlighted **IMPACT as the framework guiding India–Malaysia relations**.
- **India–Malaysia Partnership for Advancing Collective Transformation (IMPACT)**, is a **strategic vision** aiming to strengthen economic, digital, cultural, and people-focused ties.
- Key aspects include cooperation in **technology and IT** (over 100 Indian IT firms in Malaysia), **digital connectivity** through UPI and the Malaysia–India Digital Council, strong diaspora engagement with **expanded OCI eligibility and scholarships**, and shared cultural and historical bonds, including **maritime heritage and Tamil-Malay links**.

Gulf Cooperation Council

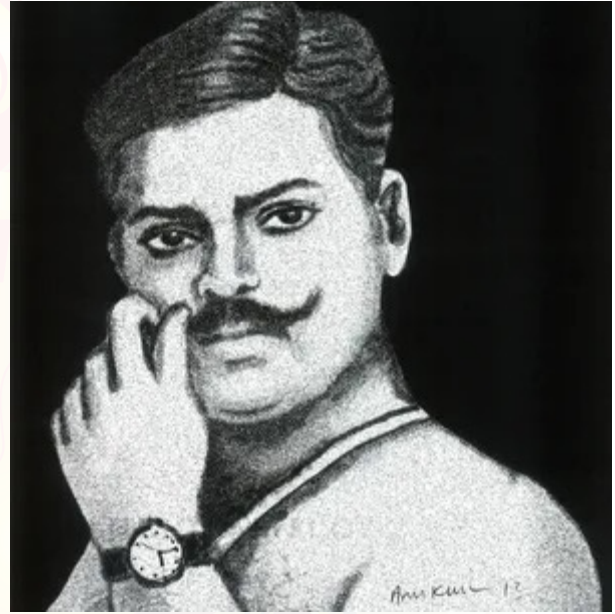
- India and the Gulf Cooperation Council (GCC) recently signed the **Terms of Reference for a Free Trade Agreement in New Delhi**.
- GCC is a **political and economic alliance of six Middle Eastern countries**—Saudi Arabia, Kuwait, the United Arab Emirates, Qatar, Bahrain, and Oman.

- It was **established in Riyadh, Saudi Arabia, in May 1981** which **promotes economic, security, cultural and social cooperation between the six states** and holds a summit every year to discuss cooperation and regional affairs.
- It was **formed in response to** escalating regional tensions, particularly the **Iranian Revolution (1979) and the Iran-Iraq War (1980–1988)**.
- **All current member states are monarchies**, including three constitutional monarchies (Qatar, Kuwait, and Bahrain), two absolute monarchies (Saudi Arabia and Oman), and one federal monarchy (the United Arab Emirates).
- It is **operating through the Supreme Council, Ministerial Council and a Secretariat in Riyadh**, the GCC occupies a strategically vital location along the Persian Gulf, connecting major global trade routes.



History & Culture

Chandrashekhar Azad



- The nation paid tributes to **Chandrashekhar Azad** on his martyrdom day (February 27), remembering his role in India's freedom struggle.
- Born in **1906 in Bhabra, Madhya Pradesh**, he joined the national movement after the **Jallianwala Bagh Massacre** and initially participated in the **Non-Cooperation Movement** led by **Mahatma Gandhi**.
- After the movement was withdrawn following the **Chauri Chaura Incident**, he turned to revolutionary activities.
- Azad was associated with the **Hindustan Republican Association (HRA)** and later helped reorganise it into the **Hindustan Socialist Republican Association (HSRA)**.
- He took part in events like the **Kakori Conspiracy (1925)** and the assassination of **John Saunders** in 1928 to avenge **Lala Lajpat Rai**.
- He died in **1931 at Alfred Park, Allahabad (now Azad Park)** after a gun battle with British police.
- At **age 24**, he chose to **die by his own bullet** rather than be captured by British police, honoring his pledge to remain "Azad" (free) forever.

Royal Indian Navy Revolt 1946

- February 18 marked the 80th anniversary of the **Royal Indian Navy Revolt (1946)**, a five-day uprising (Feb 18–23) by Indian naval ratings against British rule.
- It began at **HMIS Talwar in Bombay** over poor food, low wages, racial discrimination, and abuse by officers, triggered by the arrest of a sailor for writing “Quit India.”
- Led by **B. C. Dutt, M. S. Khan, Madan Singh, Salil Shyam**, and **Rishi Dev Puri**, a Naval Central Strike Committee coordinated the protest.
- The revolt spread to **78 ships and 20 shore establishments** across Bombay, Karachi, Madras, Visakhapatnam, Kolkata, and the Andamans, involving about **20,000 sailors**.
- The movement showed strong Hindu–Muslim unity and ended on Feb 23 after appeals by **Sardar Vallabhbhai Patel** and **Muhammad Ali Jinnah**, significantly shaking British confidence in ruling India.

OI Chiki Script

- The President of India attended the centenary celebrations of the **OI Chiki Script** of the **Santhali Language** in **Jamshedpur, Jharkhand**.
- OI Chiki was created in **1925** by **Pandit Raghunath Murmu** as a distinct, phonetic script for Santhali, which earlier used Roman, Devanagari, Odia, or Bengali scripts.
- The script has **30 letters** and accurately represents Santhali sounds, including glottal stops and vowel patterns.
- Santhali, an **Austroasiatic language**, is widely spoken in Jharkhand, Odisha, West Bengal, Bihar, and Assam.
- It was added to the **92nd Constitutional Amendment Act (2003)** under the **Eighth Schedule of the Constitution of India**, and in **December 2025**, the **Constitution of India** was translated into Santhali using OI Chiki.

Sangtam Community



- The apex body of the **Sangtam Naga Community** in **Nagaland** has passed a resolution to protect **Pangolin** within its jurisdiction.
- The Sangtam are a major Naga ethnic group mainly living in **Tuensang District** and **Kiphire District**.
- Their society is organized into six clan groups called **Shuh**, with villages built around strong kinship ties.
- Traditionally, they depend on **jhum (shifting) cultivation** and are known for their craftsmanship and indigenous architecture.
- Most Sangtams follow Christianity, and their cultural life includes festivals such as **Mongmong, Tsohsuh, and Hünapungbi**.

Pangolin are scaly mammals, often called scaly anteaters, that feed mainly on ants and termites and help control insect populations. India has two species: the **Indian Pangolin (Manis crassicaudata)** and the **Chinese Pangolin (Manis pentadactyla)**. The Indian pangolin is widely distributed across central and southern India, while the Chinese pangolin is mainly found in the northeastern states. The Indian pangolin is **Endangered** and the Chinese pangolin is **Critically Endangered (IUCN)**, and all species are protected under Appendix I of **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**.

Tamil Brahmi Inscriptions in Egypt



- Researchers have discovered nearly **30 inscriptions in Tamil-Brahmi, Prakrit, and Sanskrit** at the **Valley of the Kings** in **Egypt**, dating to the **1st–3rd centuries CE**, indicating visits by people from different parts of the Indian subcontinent.
- The visitors carved their names alongside Greek graffiti, following local commemorative customs, and similar Tamil names earlier found at **Berenike** further support maritime trade links.
- The Valley of the Kings, part of the ancient city of **Thebes**, was a burial site for New Kingdom pharaohs and was declared a **UNESCO World Heritage Site in 1979**.
- **Tamil-Brahmi Script** is an **early form of the Brahmi script adapted to write the Tamil language**, used mainly between the **3rd century BCE and 3rd century CE**.
- It modified the original **Brahmi Script** to represent **unique Tamil sounds**, making it one of the earliest writing systems for Tamil.
- It later evolved into the **modern Tamil Script** used today.

UNESCO Cultural Heritage Conservation



- The **Our Lady of Grace Cathedral** in Vasai, Maharashtra, won the **2025 UNESCO Asia-Pacific Award for Cultural Heritage Conservation**.

- The awards, started in 2000, recognises outstanding **restoration projects** that combine technical excellence, cultural authenticity, and community participation.
- Built around **475 years ago** during Portuguese rule, the 16th-century cathedral showcases early **Portuguese ecclesiastical architecture** using stone and mud mortar.
- Recently restored (2023–24) through a **community-funded initiative**, it continues to serve as a living place of worship and reflects traditional craftsmanship.

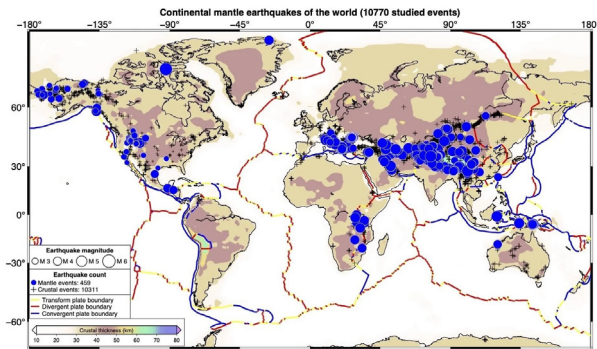
Hakki Pikki Tribe



- Eight members of the **Hakki Pikki Tribe** from **Karnataka** are facing a crisis in **Central Africa** after their visas expired while selling herbal products.
- The Hakki Pikki are a **semi-nomadic Scheduled Tribe**, traditionally known for **bird catching and hunting (Hakki = bird, Pikki = catchers)**.
- They speak an **Indo-Aryan language known as 'Vaagri' or 'Vaagribooli'**.
- The community has a **matriarchal social structure** and practice **endogamy** and **monogamy**.
- Believed to have migrated from **Gujarat and Rajasthan to South India via Andhra Pradesh**, the community is divided into four clans—Gujaratia, Panwar, Kaliwala, and Mewaras.
- Due to **stricter wildlife protection laws**, they transitioned from hunting to selling traditional medicinal herbs.
- In recent years, many members have travelled to African countries due to the growing demand for **Ayurvedic products**.

Geography

Continental Mantle Earthquakes



- A **Stanford University**-led study has produced the first global map of **Continental Mantle Earthquakes**, identifying **459 rare deep earthquakes** beneath continents.
- These quakes originate **over 80 km below the Mohorovičić Discontinuity (Moho)**—the boundary between the crust and mantle—much deeper than typical crustal earthquakes.
- Scientists identify them by analysing seismic signals, especially the ratio between **Sn Waves** (mantle-travelling) and **Lg Waves** (crust-travelling).
- They are linked to tectonic stresses such as continental collisions and cluster in active regions like the **Himalayan Collision Zone**, though their great depth means they rarely cause major surface damage.

Note: **Sn Waves** are shear waves that travel through the upper mantle and **Lg Waves** are high-frequency waves that bounce through the crust and a high Sn-to-Lg ratio serves as a unique fingerprint for an origin deep within the mantle.

Rare Earth Corridors

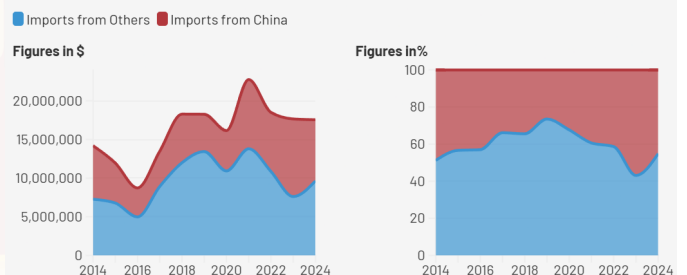
- The **Union Budget 2026–27** proposed **rare earth corridors** in coastal states—**Odisha, Kerala, Andhra Pradesh, and Tamil Nadu**—to promote mining, processing, research, and manufacturing of rare earth elements.
- According to the International Energy Agency (IEA), **Rare earths** comprise 17 metals, typically grouped into:

- ✓ **Light rare earths (LREEs)** — including lanthanum, cerium, praseodymium, neodymium, samarium and europium — and
- ✓ **Heavy rare earths (HREEs)** such as gadolinium, terbium, dysprosium, holmium, erbium, thulium, ytterbium, lutetium, scandium and yttrium.
- ✓ **Promethium is not included** in the list as it is radioactive and does not occur in mineable quantities

- The government also launched a scheme to promote **Sintered Rare Earth Permanent Magnets (REPM)** manufacturing with **6,000 mtpa capacity**.
- Globally, while rare earth deposits exist in countries like Brazil, Australia, and India, **China** dominates the sector with **about half of global reserves, over 60% of production, and around 92% of refining capacity**, supplying nearly **30% of global demand**

Note: **Sintered Rare Earth Permanent Magnets (REPM)** are high-performance magnets made from rare earth elements such as **neodymium, samarium, and dysprosium**. They are produced through a **sintering process** in which powdered rare earth alloys are pressed and heated to form very strong permanent magnets. REPMs are widely used in **electric vehicles, wind turbines, smartphones, robotics, and defence technologies** due to their high magnetic strength and efficiency.

India's total rare earth imports over the years and China's share in India's imports



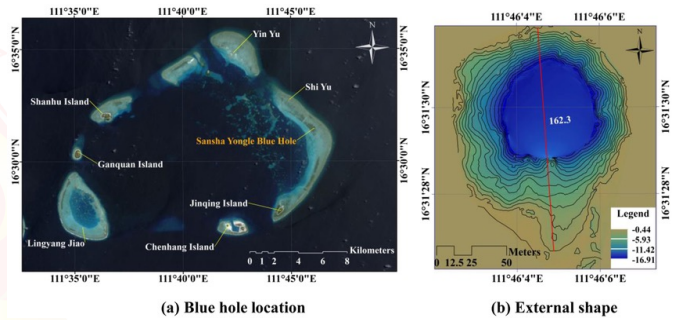
HS Codes taken:
28053000- Alkali or alkaline earth metals: Rare-earth metals, scandium and yttrium, whether or not intermixed or inter alloyed, 2846- Compounds, inorganic or organic, of rare earth metals As mentioned by GOI

INCOIS foundation day

- Indian National Centre for Ocean Information Services (INCOIS) will be launching three new ocean information services along with a new logo during the foundation day celebrations.

- The INCOIS was established in **1999 under the Ministry of Earth Sciences, is headquartered in Hyderabad**, Telangana and provides ocean information and advisory services through ocean observations and research.
- It is a **permanent member of UNESCO Intergovernmental Oceanographic Commission** and operates the **Indian Tsunami Early Warning Centre**, which issues tsunami alerts within 10 minutes for India and 28 Indian Ocean countries.
- INCOIS has also developed the **Search and Rescue Aided Tool (SARAT)** to assist maritime agencies in locating people or objects lost at sea.
- During its foundation day, INCOIS announced three new services: **JellyAIIP** (a portal to track jellyfish aggregation events), **SAMUDRA 2.0** (a multilingual ocean advisory mobile app for fishermen), and **SIVAS** (Swell-Surge Inundation Vulnerability Advisory System for coastal flooding warnings).

- The **upper layers, however, are oxygen-rich and nutrient-filled**, supporting a diverse ecosystem with at least 20 marine species, making it a unique site for scientific research and biodiversity studies.



Dragon Hole

- The **Sansha Yongle Blue Hole**, popularly called the Dragon Hole, is a massive **underwater sinkhole** located in the **South China Sea**, about 25 km from **Discovery Reef**.
- A sinkhole is a **steep-sided depression** that forms when **soluble rocks like limestone collapse**, often later flooded as sea levels rise.
- A **blue hole is a large, deep, water-filled sinkhole** or cavern formed in carbonate bedrock (like limestone) that is **open to the surface and submerged in coastal waters**.
- They are known for their **striking deep blue color**, created by high water clarity and sharp contrast with shallower surrounding waters.
- These geological wonders were **primarily formed as dry caves during ice ages and flooded when sea levels rose**
- At **301 m deep**, Sansha Yongle Blue Hole is the world's deepest blue hole, surpassing **Dean's Blue Hole in the Bahamas** by nearly 100 m.
- The **lower depths** of the hole are **stagnant and anoxic**, making them unsuitable for most marine life but home to large colonies of bacteria.

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<p>1 Kerala Rank SREEJA J S AIR 57 <small>Prelims Cum Mains (PCM), PSIR Optional</small></p>	<p>2 Kerala Rank ADITYA NARAYAN H AIR 68 <small>Prelims & Mains Test Series, Sociology Optional & Interview Mentorship Program</small></p>
<p>3 Kerala Rank GOPIKA B AIR 105 <small>Prelims & Mains Test Series, Interview Mentorship Program</small></p>	<p>4 Kerala Rank AJAY R RAJ AIR 109 <small>Interview Mentorship Program</small></p>

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Environment & Ecology

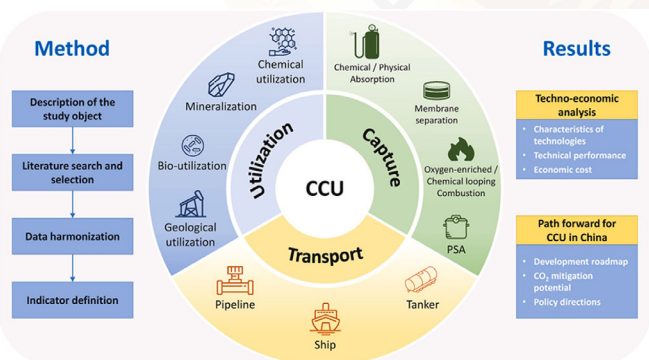
UV index

UV INDEX	UV INDEX	UV INDEX	UV INDEX	UV INDEX	UV INDEX	UV INDEX	UV INDEX	UV INDEX	UV INDEX	UV INDEX
1	2	3	4	5	6	7	8	9	10	11+
Low (1,2)		Moderate (3,4,5)			High (6,7)		Very high (8,9,10)		Extreme (11+)	
Green PMS 375		Yellow PMS 102			Orange PMS 151		Red PMS 032		Purple PMS 265	

Table 4: Presenting the UV: International colour codes!

- A **UV Index of 11 (Extreme)** was recorded in **Munnar**, prompting an orange alert by the **Kerala State Disaster Management Authority**.
- The **Ultraviolet Index (UV Index)**—developed by the **World Health Organization, World Meteorological Organization, and United Nations Environment Programme**—measures the intensity of harmful UV radiation reaching Earth's surface.
- There are **three types of UV radiation: UVA** (causes skin ageing), **UVB** (causes sunburn and skin cancer), and **UVC** (mostly absorbed by the ozone layer).
- UV levels are classified from **Low (1–2)** to **Extreme (11+)**, and high exposure can cause **sunburn, skin cancer, premature ageing, and eye damage such as cataracts**.
- India's tropical location and high-altitude regions contribute to **higher UV radiation levels**.

Carbon Capture Technologies



- The **Union Budget 2026** allocated **₹20,000 crore** to scale up **Carbon Capture, Utilisation and Storage (CCUS)** technologies over the next five years.

- Carbon Capture and Utilisation (CCU)** captures **CO₂ emissions** from industries or the atmosphere and converts them into useful products instead of only storing them underground.
- The process involves **capture, compression and transport, and utilisation**, where CO₂ is transformed through chemical or biological processes into products like **sustainable aviation fuels, construction materials, and fertilizers**.
- CCU can be **retrofitted to existing plants** and supports the **circular economy** by turning waste emissions into valuable industrial inputs.

International Climate Initiative (IKI)

- Germany and India** have launched a **€20 million Large Grant project** under the **International Climate Initiative (IKI)** to strengthen India's climate resilience.
- Established in **2008**, IKI is a **German government funding mechanism** that supports climate and biodiversity projects in over **150 developing and emerging countries**, including priority partners like India, Brazil, China, and South Africa.
- It helps countries implement their Paris Agreement commitments through **Nationally Determined Contributions (NDCs)** and supports goals under the **Convention on Biological Diversity**.
- The initiative focuses on **four areas**: climate mitigation, climate adaptation, conservation of carbon sinks (including REDD+), and biodiversity protection.

Note: The abbreviation **IKI** comes from the **German name** of the programme, **Internationale Klimaschutzinitiative (IKI)**.



PRIORITY COUNTRIES OF IKI

Dolphin Census in Odisha

- Odisha has recorded its highest marine dolphin population in five years, with 765 individuals counted in the 2026 state-wide census.
- It is conducted by the **Wildlife Wing of the Forest, Environment and Climate Change Department, Government of Odisha**, involving forest officials, marine experts, and field personnel **using boat- and shore-based transect surveys**.
- **Outcomes of 2026 Census:**
- **Total Population:** 765 dolphins (**highest in 5 years**).
- **Species-wise Distribution:** Humpback dolphins – 497, Irrawaddy dolphins – 208, Bottlenose dolphins – 55, Spinner dolphins – 3, Finless porpoise – 2.
- **Key Conservation Zones:** **Chilika Lake** – 159 Irrawaddy dolphins (largest single-area concentration globally) and **Gahirmatha Marine Sanctuary** – 474 Humpback dolphins.
- In India dolphins have been included in **Schedule I of the Wildlife (Protection) Act, 1972** and categorised as **‘Endangered’ on the International Union for the Conservation of Nature’s (IUCN) Red List**.

Addition to India’s Ramsar List

- The Union Environment Minister announced the addition of two new wetlands—**Patna Bird Sanctuary (Uttar Pradesh)** and **Chhari Dhand Wetland Reserve (Gujarat)** to India’s Ramsar List ahead of World Wetlands Day 2026.
- Patna Vihar Bird Sanctuary is a **protected bird sanctuary and wetland ecosystem**, known as the **smallest bird sanctuary in Uttar Pradesh** with over 106 migratory and resident bird species
- Chhari Dhand Wetland Reserve is a **seasonal desert wetland conservation reserve**, ecologically unique due to its **saline and freshwater interactions** which is **situated between Banni grasslands and the Rann of Kutch**.

- Ramsar Convention is an **international treaty signed at Ramsar, Iran (1971)** for **conservation and wise use of wetlands** where **India became a Contracting Party in 1982** and the **ramsar sites act as model ecosystems** for biodiversity conservation, climate resilience, and sustainable livelihoods.
- **State governments in India identify and submit proposals** for potential wetlands to the Ministry of Environment, Forest and Climate Change (MoEFCC), which then nominates them to the Ramsar Secretariat for designation.

Turtle Trails

- The **Union Budget 2026–27** proposed developing **‘turtle trails’** along key nesting sites of the **Olive Ridley Sea Turtle** to promote eco-tourism and conservation.
- These are **regulated eco-tourism pathways and guided experiences** near turtle nesting beaches, with low-impact infrastructure and community participation.
- Key locations include **Rushikulya** and **Gahirmatha Beach** in **Odisha**, along with nesting beaches in **Karnataka** and **Kerala**.
- The Olive Ridley is the **smallest sea turtle species** and is known for **Arribada**, a mass nesting phenomenon where thousands of turtles come ashore simultaneously to lay eggs.
- It is listed as **Vulnerable** by the **International Union for Conservation of Nature**, included in **Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora**, and protected under **Schedule I of the Wildlife (Protection) Act, 1972**.

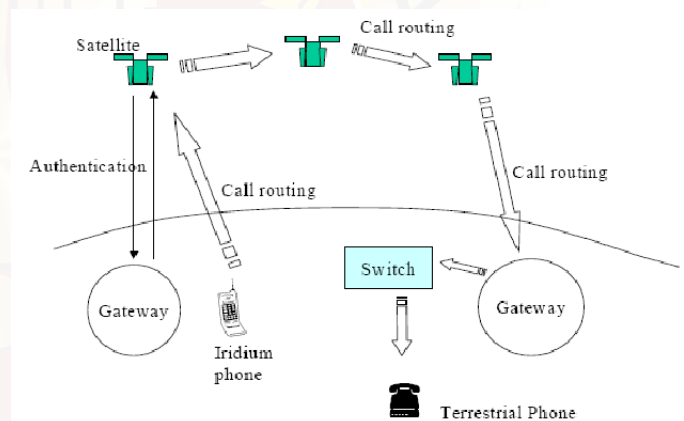
Human Papillomavirus (HPV) Vaccination

- **India** plans to launch a nationwide **Human Papillomavirus Vaccine (HPV vaccine)** programme to prevent **Cervical Cancer** in adolescent girls.
- **Human papillomavirus (HPV)** is the most common **sexually transmitted infection (STI)**, affecting nearly all sexually active people at some point, often without symptoms.
- While **most infections clear on their own within 1-2 years**, persistent high-risk strains can cause **cancers** (cervical, anal, throat) and low-risk strains cause **genital warts**.
- While it is mostly spread through sexual contact, **very rarely it can pass** from mother to baby during childbirth or via contact with contaminated surfaces.
- **Persistent infection** with high-risk types (especially HPV-16 and HPV-18) can cause abnormal **changes in the cells of the cervix**.
- Over **10–15 years**, these abnormal cells may gradually **turn into cancer** if not detected or treated early.
- Factors that increase the risk include **early sexual activity, multiple sexual partners, weak immunity, smoking, and lack of regular cervical screening**.
- The vaccine will mainly target **girls around 14 years old**, as it works best before exposure to the virus and can reduce cervical cancer risk by **about 90–95%**.
- The HPV vaccine is a **recombinant vaccine**, meaning it is made using **genetic engineering to produce harmless viral proteins** that trigger immunity without using the whole virus.

Note: The **cervix** is the lower, narrow part of the uterus that **opens into the vagina**, acting as a crucial, muscular, and fibrous gateway in the female reproductive system. It produces **mucus** to protect against infections and facilitates fertility by allowing sperm to enter the uterus. **During pregnancy, it remains closed** to protect the baby, later dilating for childbirth

Satellite Phone

- Security agencies have flagged the illegal use of **undeclared satellite communication devices** by vessels in Indian waters, citing national security concerns.
- A satellite phone (satphone) is a **communication device that connects directly to orbiting satellites instead of terrestrial mobile towers**, enabling **communication in remote or off-grid areas** such as oceans, deserts, and disaster zones.
- By **relaying signals through Geostationary (GEO) or Low Earth Orbit (LEO) satellite systems** to ground stations and other users, these phones facilitate communication, also it **requires a clear line-of-sight to the sky for effective transmission**.
- It provides **Global/Remote Coverage, Widely used for distress and safety operations** and also **provides basic functions like Voice calls, SMS, and limited data services**.
- Its limitations include **high cost, limited data speed, line of sight requirement** (Poor performance indoors or in dense terrain) and **signal delay**.

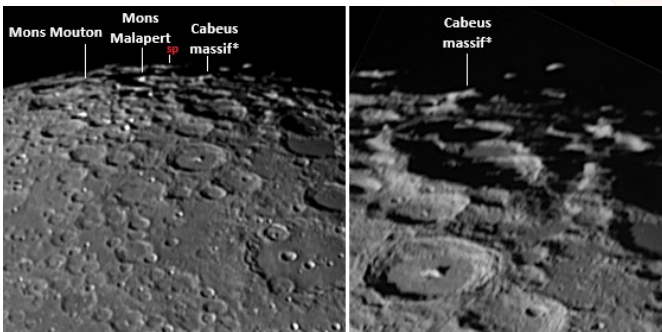


Moon's Mons Mouton

- ISRO's Space Applications Centre has identified a safe landing site near **Mons Mouton** for **Chandrayaan-4**, India's first lunar sample return mission.
- Mons Mouton is a large, flat-topped mountain near the Moon's south pole, named after NASA mathematician **Melba Roy Mouton** by the IAU.
- It lies close to the **South Pole–Aitken Basin**, one of the largest and oldest impact basins in the Solar System, formed by ancient asteroid impacts.

- The site is suitable for landing due to **gentle slopes, few boulders, and adequate sunlight**, and it offers valuable scientific insights into the Moon's early formation and impact history.

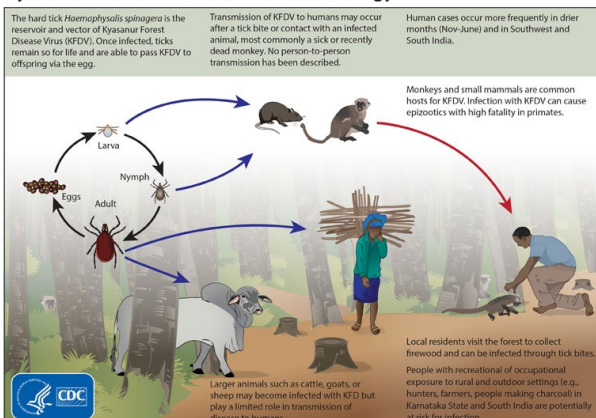
Note: Shiv Shakti Point is the official name of the landing site of **India's Chandrayaan-3 mission**, located near the **Moon's South Pole** at approximately 69.37°S, 32.32°E. Named following the successful landing on August 23, 2023, the International Astronomical Union (IAU) approved the name "Statio Shiv Shakti" in March 2024.



Kyasanur Forest Disease (KFD)

- India has started Phase I human trials of a fully indigenous **Kyasanur Forest Disease (KFD) vaccine**, developed under an ICMR-led collaboration.
- KFD is a **tick-borne viral hemorrhagic fever** first identified in Karnataka, causing high fever, weakness, muscle pain, and sometimes fatal complications.
- It is endemic to the **Western Ghats** (Karnataka, Tamil Nadu, Kerala, Goa, Maharashtra) and spreads via **tick bites** or contact with infected animals, especially monkeys; there is **no human-to-human transmission**.
- No specific cure exists, and the **fatality rate is 3-10%** without prompt medical care.

Kyasanur Forest Disease (KFD) Virus Ecology

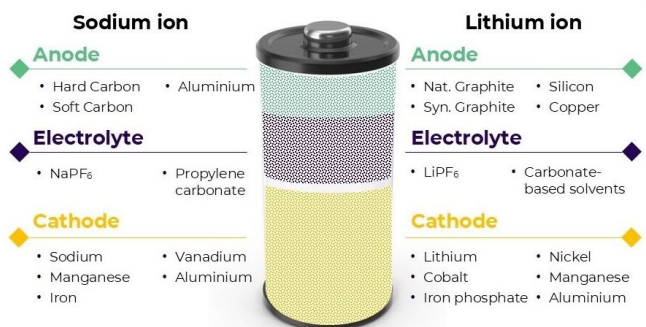


Sodium-ion battery

- India is re-evaluating its battery strategy amid rising **concerns** over critical mineral dependence, import vulnerability, and supply security linked to **lithium-ion batteries**.
- Sodium-ion (Na-ion) batteries are **cost-effective, and safe alternatives to lithium-ion batteries**, utilizing abundant sodium resources (e.g., sea salt) for energy storage.
- They offer **rapid charging, excellent low-temperature performance, and a longer lifespan**, making them ideal for electric vehicles (EVs), grid storage, and solar applications.

Sodium-Ion Batteries vs Lithium-Ion:

- Energy Density:** Historically, **SiBs had lower specific energy because sodium is heavier than lithium**. However, modern layered transition-metal oxide cathodes in SiBs are now approaching the energy density of Lithium Iron Phosphate (LFP) batteries.
- Safety Profile:** **SiBs are intrinsically safer**. They exhibit significantly lower peak temperatures during thermal runaway events compared to lithium-ion cells.
- Transportation Benefits:** Unlike lithium-ion batteries, which are dangerous goods and must be shipped at ~30% charge, **SiBs can be stored and transported at zero volts without degradation. This eliminates fire risks during transport and lowers logistical costs.**

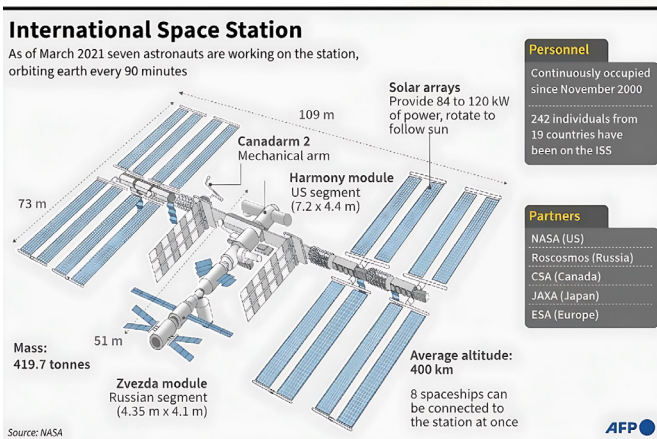


International Space Station (ISS)

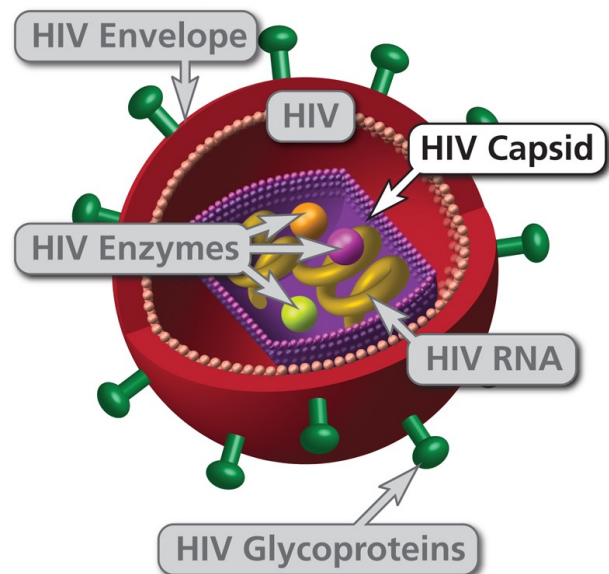
- The **International Space Station (ISS) is planned to be de-orbited in 2030** in a controlled re-entry over a remote ocean area, bringing an end to the longest-running era of continuous human presence in low Earth orbit.

- The ISS is a multinational, permanently crewed orbital laboratory and research facility, **orbiting about 400 km above Earth.**
- It is operated through an **international partnership of five space agencies: NASA (USA), Roscosmos (Russia), ESA (Europe), JAXA (Japan), and CSA (Canada)** - totally representing 15 nations, serving as a platform for scientific experiments in medicine, materials, and climate science
- The assembly **began in 1998** with the launch of the first module Zarya on 20 November 1998 and **continuous habitation started with Expedition 1 in November 2000.**
- The **station orbits Earth roughly every 90 minutes**, traveling at about 8 kilometers per second (28,000 kmph)

- This ability to execute **massive numbers of repetitive tasks concurrently** makes GPUs much faster than CPUs for graphics rendering, AI computations, scientific simulations, and cryptocurrency mining.
- While a CPU acts like a versatile “general-purpose brain” for the computer, a GPU is a **specialized parallel processor** designed for **speed and efficiency in data-heavy task**



Capsid



Graphics Processing Unit (GPU)

- Graphics Processing Units (GPUs) are in focus as they have become the **backbone of modern AI systems**, cloud computing, and high-performance digital infrastructure.
- **GPUs are specialized processors** designed to perform thousands of simple calculations simultaneously, making them ideal for **parallel processing** tasks.
- Unlike **CPUs** (Central Processing Units), which have a few powerful cores optimized for sequential, complex tasks, GPUs have hundreds or thousands of smaller cores that handle **many operations at once**, such as processing large datasets, rendering images, or performing matrix operations in AI.
- In functioning, a GPU **transforms 3D geometry into a 2D image** by calculating vertex positions, rasterizing shapes into pixels, applying textures and shading, and then sending the final output to a display.

- A study revealed that **Human immunodeficiency virus (HIV)** must damage its own **protective capsid** to evade the drug Lenacapavir, highlighting the **capsid as a crucial weak point** for developing effective antiviral treatments.
- HIV is an RNA retrovirus that contains two identical single-stranded RNA molecules and **attacks the human immune system**, specifically CD4 cells, and if untreated can progress to **AIDS**.
- The **capsid** is a protective shell made of **proteins that surrounds the virus's genetic material** (RNA and essential enzymes like reverse transcriptase, integrase), keeping it **safe until it enters a human cell**.
- Once HIV enters human cells it **uses an enzyme called reverse transcriptase** to convert its RNA into DNA.
- This newly synthesized DNA is then **integrated into the host cell's genome by an enzyme called integrase**, turning the host into a factory that produces new viral particles that exit the cell to infect others.

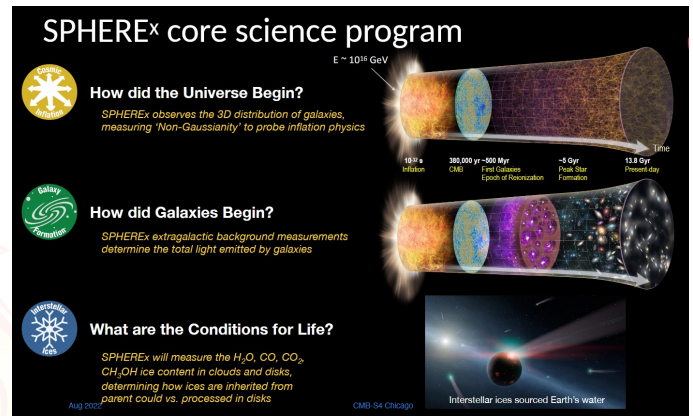
- The study saw that the virus must damage its own capsid to escape drugs like Lenacapavir, **medicines that stabilize or block the capsid can prevent HIV from replicating**, potentially leading to stronger, longer-lasting antiviral therapies.
- This also opens the door for **developing drugs against other viruses with similar capsid structures**, making it a promising approach in antiviral research.

Aluminium Phosphide poisoning

- Doctors at **PGIMER, Chandigarh** have achieved a global first by successfully treating **aluminium phosphide (Celphos) poisoning** using **intravenous lipid emulsion (ILE) therapy**.
- Aluminium phosphide is a widely used **pesticide** that releases **phosphine gas** when it comes into contact with water or moisture in the air.
- This gas is highly toxic and attacks the cells in the body, **disrupting energy production in organs** and causing symptoms like nausea, vomiting, difficulty in breathing, pulmonary edema, heart problems, convulsions, and even death.
- Poisoning with this chemical is **common in agricultural states** such as Punjab, Haryana, and Uttar Pradesh, often due to accidental or intentional ingestion.
- **ILE therapy works** by injecting a special **fat solution into the bloodstream, which absorbs and neutralizes fat-soluble toxins like phosphine**, reducing their effect on organs and giving patients a better chance of survival.

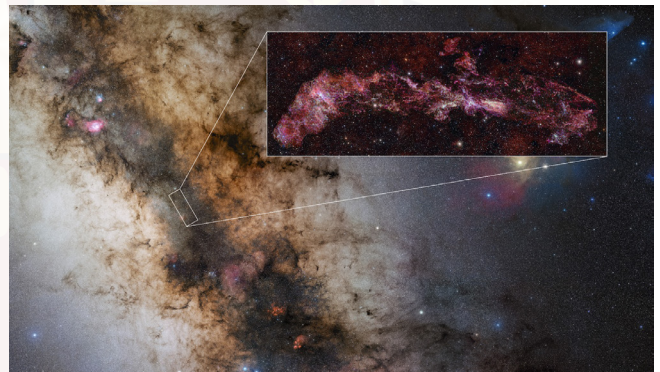
SPHEREx Mission

- NASA's **SPHEREx** mission recently observed the interstellar comet **3I/ATLAS**, the third such object known to pass through our solar system.
- An **interstellar comet** is a comet that originates from outside the solar system, traveling through interstellar space before entering our Sun's neighborhood.
- Launched in 2025, **SPHEREx** is an infrared space telescope mapping the entire sky to study **cosmic origins, large-scale structures, and the distribution of water and organic molecules**.
- It surveys in optical and near-infrared light, complementing telescopes like **JWST, Euclid, and the Roman Space Telescope** with its unique all-sky infrared coverage.



Alma Telescope

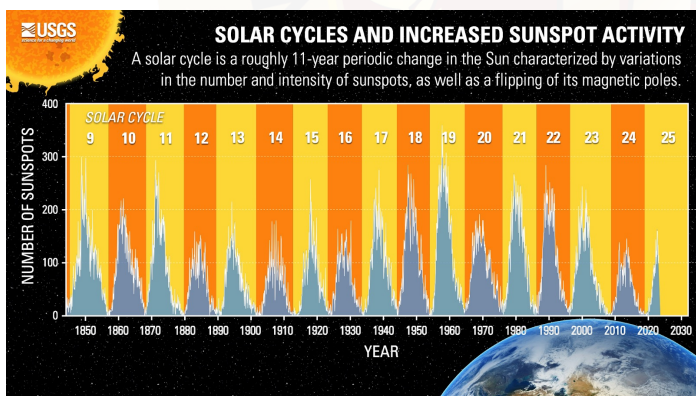
- Astronomers recently captured a detailed image of the **Milky Way's central region** using **ALMA (Atacama Large Millimeter/submillimeter Array)** in Chile.
- ALMA is a **66-antenna telescope** that studies some of the coldest objects in the Universe by detecting **millimetre and submillimetre radiation** (between infrared and radio waves).
- Using **interferometry**, its antennas work together to pinpoint and analyze cosmic signals from stars, planets, and galaxies.
- Located on the **dry Chajnantor plateau**, ALMA is the largest ground-based astronomy project in the world.



Solar Peak

- **NASA** observed a powerful **X-class solar flare**, the most intense category of solar storms, captured by the **Solar Dynamics Observatory**.
- **Solar Flares** are sudden, intense bursts of energy and radiation released from the Sun's surface, usually near **Sunspots** where magnetic activity is strong.

- They emit large amounts of **X-rays, ultraviolet radiation, and charged particles**, which can disturb space weather and affect satellites, radio communication, and power systems on Earth.
- Solar flares are classified by intensity into **A, B, C, M, and X classes**, with **X-class flares** being the strongest and capable of causing major disruptions.
- Such strong flares usually occur during the **Solar Maximum**, the peak phase of the **Solar Cycle**, an approximately **11-year cycle** of changing solar magnetic activity.
- During this cycle, solar activity gradually rises from **Solar Minimum** (when the Sun has very few eruptions) to Solar maximum, when the Sun shows many **Sunspots**—cooler dark regions that act as centres of eruptions.
- At this stage, the frequency of **Coronal Mass Ejections (CMEs)** and solar flares increases significantly.
- During the peak, the **Sun's magnetic poles reverse**, and then activity slowly declines back toward solar minimum, completing the cycle.
- The current 11-year period of solar activity is called the **Solar Cycle 25** which began in December 2019 and is projected to last until 2030.
- It represents the **25th cycle since 1755** which despite initial predictions that it would be weak has exceeded expectations, showing higher solar activity than the previous, weak Cycle 24.



Defence

INS Anjadip & INS Krishna

- The Indian Navy commissioned **INS Anjadip**, the fourth Anti-Submarine Warfare Shallow Water Craft (ASW-SWC), and **INS Krishna**, the first of three indigenous Cadet Training Ships (CTS).
- INS Anjadip, named after the **Karwar island**, is 77 m long, 1,400 tons, **over 80% indigenously built**, and equipped with an advanced ASW suite and Combat Management System for detecting and neutralising submarines, earning the nickname **“Dolphin Hunter.”**
- INS Krishna, built at **L&T Kattupalli**, serves as a **floating classroom** for hands-on cadet training in navigation, seamanship, and watch-keeping, including training for women and cadets from friendly countries.
- **Note: INS Arnala** is the Indian Navy's first indigenously designed and built Anti-Submarine Warfare Shallow Water Craft (ASW-SWC).

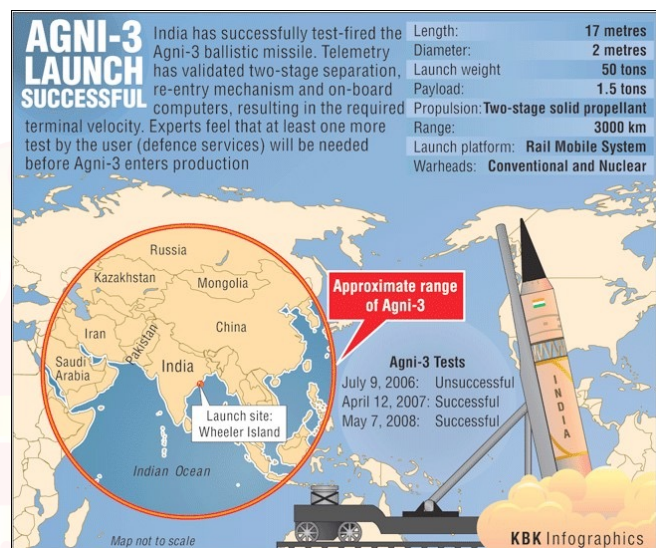
Dornier 228 Aircraft



- **The Ministry of Defence** recently signed a deal with the state-owned Hindustan Aeronautics Limited (HAL) for the **acquisition of eight Dornier 228 aircraft** along with Operational Role Equipment for the Indian Coast Guard (ICG).
- **Dornier 228 is a twin-engine turboprop** and a multi-mission maritime patrol aircraft manufactured by HAL for the ICG.
- HAL Dornier DO-228 is a light transport aircraft manufactured under license from **M/s. Dornier GmbH of Germany**.
- Functional versatility with **low operating cost makes** HAL DO-228 adaptable for a wide variety of roles including Commuter, Air Taxi, Utility, Corporate, Aircrew Training, Maritime Surveillance, Search & Rescue and for Observation & Communication duties.

Agni-3 Intermediate-Range Ballistic Missile

- India successfully test-fired the Intermediate-Range Ballistic Missile (IRBM) Agni-3 from the Integrated Test Range, Chandipur, Odisha validating its operational readiness.
- Agni-3 is a **medium-to-long-range ballistic missile** with a maximum **range of approximately 3,000 kilometers** which is a **part of the Agni missile family**.
- It is a **surface-to-surface missile** with a **two-stage solid-fuel engine** which was **developed by the Defence Research and Development Organisation (DRDO)** and operationally deployed under the Strategic Forces Command.
- It has a **Road-mountable mobile launcher**, capable of carrying **both conventional and nuclear payloads** with **advanced inertial navigation system** providing high accuracy.



Exercise in News

Exercise	Participants	Force	Description
DHARMA GUARDIAN	India-Japan	Army	The 7th edition of the annual Exercise between the Indian Army and the Japan Ground Self-Defense Force (JGSDF) was held at the Foreign Training Node, Chaubattia in Uttarakhand .
VAJRA PRAHAR	India-US	Army (SF)	The 16th edition of the India-US Joint Special Forces Exercise (SF) was held at the Special Forces Training School, Bakloh, Himachal Pradesh .
MILAN 2026	Multilateral Exercise	Navy	It was held off the coast of Visakhapatnam, under the theme ' Camaraderie, Cooperation, Collaboration '. It featured participation from over 70 countries, including first-timers like Germany, the Philippines, and the UAE.
Khanjar	India-Kyrgyzstan	Army (SF)	The 13th edition of the annual training exercise was held in Missamari, Assam . Aim of the exercise is to exchange best practices and experiences in Counter Terrorism and Special Forces Operations in urban and mountainous terrain.

Miscellaneous

SANKALP scheme

- The **Public Accounts Committee (PAC)** recently criticised the government for slow progress and weak monitoring of the **SANKALP scheme**.
- Launched in **2018** by the **Ministry of Skill Development and Entrepreneurship (MSDE)** with **World Bank support**, **SANKALP (Skill Acquisition and Knowledge Awareness for Livelihood Promotion)** is a flagship programme to improve **short-term skill training**.
- This **Centrally Sponsored Scheme** focuses on **institutional strengthening, quality assurance, and inclusion of women, SC/ST, and PwD**, while aligning training with **industry needs**.
- The scheme strengthens **District Skill Committees** and works closely with Pradhan Mantri Kaushal Vikas Yojana (PMKVY) to provide certified, market-relevant skills.
- Its goal is to enhance **employability, livelihoods, and inclusive skill development** across India.

Note: The PAC is a **financial standing committee** of the **Indian Parliament** established in 1921, **oversees government revenue and expenditure** to ensure accountability, transparency, and proper use of public funds. It reviews reports from the **Comptroller and Auditor General of India (CAG)** on appropriation accounts, aiming to detect and prevent waste, corruption, and financial irregularities.

Vibrant Villages Programme-II (VVP-II)

- The Union Home Minister recently launched **Vibrant Villages Programme-II (VVP-II)** in Assam's Cachar district to support the overall development of villages along India's borders.
- Building on VVP-I, which focused on northern borders, VVP-II covers border villages across **15 States and 2 UTs**: Arunachal Pradesh, Assam, Bihar, Gujarat, J&K (UT), Ladakh (UT), Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tripura, Uttarakhand, Uttar Pradesh, and West Bengal

- The programme aims to **improve infrastructure, provide better living conditions, and create sustainable livelihoods** to reduce out-migration and strengthen strategic villages.
- It focuses on ensuring **essential services for all**, such as **all-weather roads, reliable electricity, telecom and TV connectivity**, and other basic amenities, with implementation planned from FY 2024–25 to 2025–26 and funding support available until 2028–29.

Bharat-VISTAAR

- The Union Agriculture Minister launched **Bharat-VISTAAR** (Virtually Integrated System to Access Agricultural Resources), an AI-powered multilingual platform announced in the 2026–27 Budget.
- It provides **real-time, personalised advisories** to farmers via voice, chat, and mobile access, acting as a single digital gateway for schemes, markets, and grievance redressal.
- Initially in Hindi and English, it will expand to **11 languages** and includes a toll-free helpline (155261) and AI assistant "Bharati."
- Integrating **AgriStack portals and ICAR practices**, it covers schemes like PM-KISAN, PMFBY, Soil Health Card, and Kisan Credit Card, helping farmers improve productivity, decision-making, and risk management.

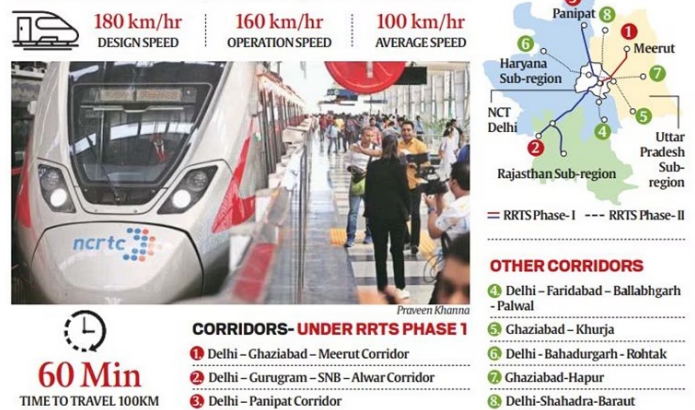
Urban Challenge Fund (UCF)

- The Union Cabinet has approved the launch of the Urban Challenge Fund (UCF) with ₹1 lakh crore Central assistance to drive market-led urban transformation.
- UCF is a **Centrally Sponsored Scheme** designed to **support transformative and bankable urban infrastructure projects** through a competitive "**challenge mode**" framework implemented by the **Ministry of Housing and Urban Affairs (MoHUA)**.
- The **challenge mode** means cities compete for funding by submitting projects, and only the most **innovative, high-impact, and reform-linked proposals** are selected.

- It ensures resources go to initiatives that can **transform cities** and attract **private investment**, rather than funding all projects automatically.
- **At least half of the project funding** must come from **market sources** like municipal bonds, bank loans, or public-private partnerships, reducing dependence on government funds.
- Funding is linked to **reforms** in governance, finance, operations, and urban planning, verified by independent agencies.
- UCF targets **major cities, state capitals, and smaller urban local bodies**, including those in hilly and North-Eastern regions, to build resilient, inclusive, and climate-responsive urban spaces.

- It offers a high-frequency, 160–180 km/h service, aimed at reducing traffic congestion and travel time between major regional hubs
- The **National Capital Region Transport Corporation (NCRTC)**, a joint venture between the central government and the state governments of Delhi, Haryana, Rajasthan, and Uttar Pradesh, is responsible for **implementing the RRTS project across the NCR**.

FASTER THAN METROS, MORE FREQUENT THAN TRAINS



Corruption Perceptions Index 2025

- India improved slightly on the **Corruption Perceptions Index (CPI)**, moving to **91st place** in 2025 from 96th in 2024, with a score of **39/100** (0 = highly corrupt, 100 = very clean).
- Released by Berlin, Germany based NGO. **Transparency International**, the CPI ranks 182 countries based on perceived public sector corruption.
- Globally, the **average score has dropped to 42**, and only **5 countries (Denmark, Finland, Singapore, New Zealand, Norway)** scored **above 80**.
- Denmark tops the list with 89, while **Somalia and South Sudan remain at the bottom** with 9.
- **India’s modest improvement** reflects reforms and digitalization, though challenges like bureaucratic opacity and weak enforcement persist.

Lakhpati Didi Initiative

- The Union Minister for Rural Development has directed officials to achieve the revised target of **6 crore ‘Lakhpati Didis’** by March 2029.
- A **Lakhpati Didi** is a woman member of a **Self-Help Group (SHG)** earning at least ₹1 lakh per year for four consecutive agricultural or business cycles, reflecting sustained income generation.
- The initiative operates under the **Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY-NRLM)**, which focuses on promoting women’s economic empowerment.
- To officially count as a **Lakhpati Didi**, the woman must be a member of a Self-Help Group **supported under DAY-NRLM**
- Its strategy includes **expanding livelihood options, capacity building through cascade training, and providing financial assistance and credit linkages** to help women cross the income threshold.

Note: Cascade training is a “train-the-trainer” method where a **small group of master trainers is trained, who then train smaller groups, cascading knowledge down to the final target audience.**

Regional Rapid Transit System (RRTS)

- The Prime Minister has recently launched the Delhi-Meerut Regional Rapid Transit System (RRTS) to boost regional connectivity.
- RRTS, earlier called RapidX and now branded as “Namo Bharat,” is **India’s first dedicated, semi-high-speed rail network** designed for fast, intercity commuting within the **National Capital Region (NCR)**.

Winter Olympics

- The **25th Winter Olympic Games known as Milano Cortina 2026** was recently held in **Italy**.
- The Winter Games took place in two main hubs: **Milan**, the second-most populous city in Italy, and **Cortina**, an upscale winter resort in the Dolomites mountain range in the Alps.
- The first Winter Olympic Games were held in **1924 in Chamonix, France**.
- **Originally held in the same year as the Summer Olympics**, the Winter Games were shifted to a **separate four-year cycle in 1994** to alternate every two years with the Summer Games.
- The Winter Olympic Games feature **sports played on snow or ice**, with athletes competing in fifteen events for medals.
- The 2026 edition saw **Norway** topping the medals table followed by **the USA and Netherlands**.
- **India won no medals** but had a two-member team—**Arif Mohammad Khan** (alpine skiing) and **Stanzin Lundup** (cross-country skiing)
- **The International Olympic Committee (IOC)**, based in Lausanne, Switzerland, is the independent, non-profit governing body of the Winter Olympics.
- The **next Winter Olympics** are scheduled to take place in the **French Alps in 2030**, followed by **Salt Lake City, USA**, in 2034.



Places in News

Druzhba Oil Pipeline

Verified Ukrainian strikes on oil pumping stations, August 2025



Source: Global Energy Monitor, BBC Verify

BBC

- The **Druzhba oil pipeline**, meaning “friendship,” carries **Russian crude through Ukraine to Eastern Europe**, including Belarus, Germany, Hungary, Poland, Slovakia, the Czech Republic, and Ukraine.
- A **recent halt** in flows due to drone attacks has triggered a geopolitical standoff, with Hungary and Slovakia **vetoing new EU sanctions** on Russia.
- Built during the Soviet era, Druzhba was once a major artery, pumping over **1 million barrels per day**—more than 1% of global oil supply.
- Currently, only Hungary and Slovakia still import Russian oil via Druzhba.

Chagos Islands



- The UK is reconsidering its **Chagos Islands sovereignty deal** with Mauritius after opposition from former US President Donald Trump.
- The **Chagos Islands** (British Indian Ocean Territory) have been under UK control since the 19th century, with residents forcibly displaced to establish the UK-US military base on Diego Garcia.
- In 2019, **Mauritius won a legal battle** for sovereignty, and the ICJ urged the UK to hand over control.
- Under the 2025 deal, the UK would pay **£101 million annually for 99 years** to retain the Diego Garcia base.

Congo Lakes (Mai Ndombe and Tumba)



- A study found that **Lakes Mai Ndombe and Tumba** in the Congo Basin are releasing ancient carbon stored in peatlands for over 3,000 years, contributing up to **40% of their CO₂ emissions**.
- Mai Ndombe and Tumba, both in the **Democratic Republic of Congo**, are shallow lakes in low-lying areas of the basin.
- Although Congo Basin peatlands cover only **0.3% of the Earth's land**, they store **one-third of tropical peatland carbon**, making the region a crucial global carbon reservoir.

Takeshima/Dokdo Islands



- South Korea lodged a firm diplomatic protest **against Japan's Takeshima Day**, an annual event to assert sovereignty over disputed islets.
- The **small islets — known as Takeshima in Japan and Dokdo in South Korea** — have remained a source of tension **since Japan's colonial rule of the Korean peninsula** from 1910 to 1945.
- **Dokdo** is 215 kms from mainland Korea and 250 kms from Japan proper.
- Known also as the **Liancourt Rocks**, this group of islets is located in the **Sea of Japan (East Sea)**.
- Although **claimed by both Korea and Japan**, **Dokdo Island is currently administered by the Republic of Korea**.
- It lies in **fertile fishing grounds** and may sit above **substantial deposits of natural gas hydrate** that could be worth billions of dollars.

Ravi River



- India plans to utilise surplus **Ravi River** waters via the **Shahpur Kandi Dam (Pathankot, Punjab)**, preventing unused flows into Pakistan.
- The **Ravi River** originates at an altitude of about 4,300 meters in the Himalayas, in Chamba district of Himachal Pradesh, India, flowing through a valley bounded by the **Pir Panjal** and **Dhauladhar** ranges.
- It travels a total length of **about 720 km, with nearly 320 km in India**, and forms part of the **India-Pakistan border** for over 80 km before entering Pakistan's Punjab and merging with the **Chenab River** near Ahmedpur Sial.
- Known historically as **Iravati** or **Parushni**, the Ravi is classified as an **eastern river** under the **Indus Waters Treaty**, with its entire annual flow allocated to India for unrestricted use.

- It was **established in 1893** through an agreement **between Sir Mortimer Durand**, a British colonial administrator, and **Abdur Rahman Khan**, the then Emir of Afghanistan.
- It was **originally designed to demarcate the spheres of influence between British India and the Afghan Emirate**, serving as a buffer zone against the Russian Empire.
- After the partition of India in 1947, Pakistan inherited this border.
- However, **Afghanistan has historically refused to recognize it as an international boundary** as it considers the 1893 agreement a **colonial-era imposition** by the British that **divided Pashtun and Baloch tribal lands** without their consent.

Mount Aconcagua



- Indian mountaineer **Kabak Yano** from Arunachal Pradesh successfully summited **Mount Aconcagua** in Argentina as part of her 7-Summit Expedition.
- Located in western Mendoza province near the Chilean border, Aconcagua is the **highest peak in the Western Hemisphere**, part of the **Southern Andes**, of **volcanic origin** but not an active volcano.
- Its name likely comes from Quechua: **Ackon Cahuak**, meaning "Sentinel of Stone."

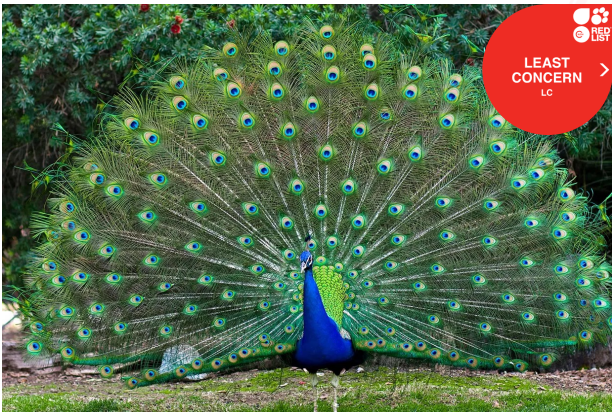
Durand Line

- **Pakistan and Afghanistan** have engaged in an intense military clash over the **Durand Line**.
- It is the **international land border** that stretches for about 1,600 miles (2,600 km) stretching **from the Karakoram Range near China in the northeast down to the Registan Desert near Iran in the southwest**, which passes through vital geographic and strategic features like **Khyber Pass** and the **Spin Ghar (White Mountains)**.



Species in News

Peacocks



- A pair of **Indian peafowls** were spotted above 6,000 ft near **Manali, Himachal Pradesh**, unusual for this lowland species.
- Peafowl belong to the **Phasianidae family**, with males called **peacocks** and females **peahens**.
- India hosts the **blue/Indian peacock**, native to India, Pakistan, and Sri Lanka, and the green/Javanese peacock, found from Myanmar to Java.
- They are India's **national bird**, known for males' iridescent tail feathers and courtship display; they are omnivorous, feeding on grains, insects, and small reptiles.
- Rising sightings in higher altitudes and dry regions indicate **climate change** impacts.
- **IUCN Status:** Least Concern.

Japanese Macaque



- The story of **Punch**, a baby **Japanese macaque abandoned by its mother** and comforted by a stuffed toy at a Japanese zoo, has gone viral, highlighting the complex social hierarchies.
- Japanese macaques (**Macaca fuscata**), or **snow monkeys** are Old World monkeys endemic to **Honshu, Shikoku, and Kyushu islands** in Japan.
- They live in **forests**, sometimes above 3,000 m, and descend in winter.
- Recognizable by their **pinkish-red face and rump and thick brown-grey fur**, they survive harsh winters.
- They live in **social groups**: females stay in natal groups, males leave at adulthood, and exhibit **sexual dimorphism** (systematic difference in form, size, color, or behavior between males and females of the same species, excluding their sex organs).
- Diet is **seasonal** with fruits in summer, leaves, flowers, insects, nuts, and mushrooms in winter.
- **IUCN Status: Least Concern.**

Tangkul Hui and Kombai



- **Assam Rifles** plans to induct two indigenous dog breeds—**Tangkul Hui (Manipur)** and **Kombai (Tamil Nadu)**—to reduce reliance on foreign breeds.
- **Tangkul Hui (Haofa):** A rare working dog from Ukhrul (Manipur), traditionally used for hunting.
 - ✓ Known for **stamina, alertness, disease resistance**, and intelligence; it exists in two sizes.
- **Kombai (Polygar dog):** Indigenous to Theni (Tamil Nadu), used for **guarding and protection**.

- ✓ Muscular and athletic, with a short reddish-brown coat and black mask-like muzzle; loyal and occasionally used for hunting

Mangrove clam



- The ICAR-CMFRI has successfully induced captive breeding of **mangrove clams (Polymesoda/Geloina)**, locally called **Kandal Kakka** in northern Kerala.
- These burrowing bivalves live in **muddy, brackish, and near-freshwater mangrove habitats across the Indo-Pacific**, tolerating a wide salinity range.
- Their **life cycle** includes larva, spat, juvenile, and adult stages, and they are **filter feeders** active during low tides.
- Known as “**mud clams**,” they play a vital role in **nutrient recycling and sediment stabilisation** and are a bioindicator for environmental health.
- In India, wild populations are **declining due to overharvesting**, habitat loss, pollution, and coastal development.

Amur Falcon



- Three Amur falcons tagged with satellite transmitters in Manipur are currently spending their winter migration period across three African countries, officials said recently.
- Amur Falcon (**Falco amurensis**) is a **migratory raptor of the falcon family** also known by the names, such as **Eastern Red-footed Falcon, Eastern Red-footed Kestrel, Manchurian Falcon, and Red-legged Falcon**.
- They **breed in southeastern Siberia and Northern China** and **migrate long distances in large flocks to winter in Southern and East Africa** and along the way, large numbers pass through India, with the **biggest congregations seen in the northeastern states**.
- The **male of this small falcon is sooty gray with rufous-orange thighs** and vent while the **females are duller gray above, and their white underparts** are well marked with dark chevrons.
- And a **distinctive feature of both the male and the female is the orange of the eye-ring, beak base (the cere), feet** and they feed mainly on insects.
- **IUCN Status: Least Concern**

Reticulated Python



- A **giant female reticulated python** discovered deep in the forests of the **Indonesian** island of **Sulawesi** late last year is now believed to be the **longest measured snake in the world** at 7.22 metres (23 feet 8 inches), the Guinness Book of World Records has confirmed.
- The reticulated python, Malayopython reticulatus, regularly exceeds 6.25 metres in length.
- They are **native to South and Southeast Asia** which **inhabit tropical forest regions in India, Indonesia, the Philippines**, and other parts of Southeast Asia.

- They have **grayish tan bodies with X- or diamond-shaped blotches** containing black, white, yellow, and red scales and they are **active during night**.
- They are **non venomous** and are **known to climb trees** by firmly wrapping their bodies around the trunks and using muscular upward force.
- **IUCN Status: Least Concern**

- Found in the **Nilgiris, Anamalai Hills**, and some isolated locations, it faces threats from hunting, deforestation, plantations, infrastructure, and climate change.
- **IUCN Status: Least Concern**

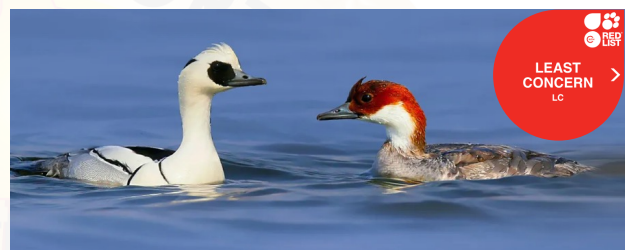


Eurasian Otter



- The **Eurasian otter (Lutra lutra)**, once thought extinct in Jammu and Kashmir, was recently **spotted in the Sindh River, Ganderbal**.
- This semiaquatic mammal has a streamlined body, webbed feet, a strong tail, and sensitive whiskers for hunting.
- **Primarily carnivorous**, it feeds mostly on fish but also eats amphibians, crustaceans, and small animals.
- **As a keystone predator and bio-indicator**, its presence signals healthy freshwater ecosystems.
- **IUCN Red List: Near Threatened**
- **CITES: Appendix I**
- **Wildlife (Protection) Act, 1972: Schedule II**

Smew



- The smew (**Mergellus albellus**), a **small diving duck**, was spotted for the first time in **Kaziranga Tiger Reserve**.
- **Males** are **white** with black markings, while **females** are **grey** with reddish-brown heads.
- They breed in **Europe's** northern taiga on fish-rich lakes and rivers, wintering on sheltered coasts and inland lakes.

Nilgiri Wood Pigeon

- The **Nilgiri Wood Pigeon (Columba elphinstonii)**, endemic to the Western Ghats, inhabits high-elevation wet and semi-evergreen forests, including sholas.
- Recognizable by its large size, dark plumage, and checkerboard nape pattern, it feeds mainly on **fruits** in the forest canopy.

Keywords

1. **Biofoundry:** A biofoundry is a **specialized facility** that **automates the design, engineering, and testing of biological systems** using AI and high-throughput technologies to **accelerate biotechnology research** and manufacturing. The Ministry of Science and Technology launched the country's first National Biofoundry Network under **BioE3** (Biotechnology for Economy, Environment, and Employment) **policy**. It comprises **six institutions to help scale up proof-of-concept developments**, enhance indigenous biomanufacturing, and create employment opportunities.
2. **Panda Diplomacy:** China has a history of **loaning out pandas to reward its allies**, though it has sometimes taken them back to express displeasure. Native to China, giant pandas typically return home after the loan agreement ends - and cubs born overseas are no exception. **China recalled its giant pandas from Japan ahead of schedule** amid rising bilateral tensions.
3. **Blue Line:** The **United Nations Interim Force in Lebanon (UNIFIL)** temporarily suspended patrols along parts of the Blue Line after Israel announced the release of a chemical substance near the frontier. The Blue Line stretches for approximately 120 kilometres **along Lebanon's southern frontier** and serves as a **"line of withdrawal"** confirming Israel's withdrawal from southern Lebanon.
4. **Avoidant/Restrictive Food Intake Disorder (ARFID):** It is an **eating disorder** where individuals avoid certain foods or restrict intake. It has three **subtypes: avoidant** (sensitive to food texture, taste, or smell), **aversive** (fear of choking or vomiting), and **lack of interest** (low appetite or motivation to eat). ARFID affects up to **5% of people**, often starting in early childhood and can continue into adulthood.
5. **Project Vault:** It is a U.S. government-backed, **\$12 billion public-private partnership** to create a **Strategic Critical Minerals Reserve**. Similar to the Strategic Petroleum Reserve, it aims to secure supplies of **critical minerals and rare earth elements**—such as cobalt, lithium, and gallium—to shield American industries from foreign supply disruptions.
6. **Bee Corridor:** The **National Highways Authority of India (NHAI)** has announced India's first dedicated 'Bee Corridors' along National Highways. This initiative focuses on planting native, nectar-rich vegetation, such as **Neem, Karanj, Mahua, and Palash**, in clusters 500 meters to 1 km apart to support **pollinator conservation**.
7. **Network Readiness Index (NRI) 2025:** It measures how well **countries leverage digital technologies for economic growth, social development, and innovation**. It evaluates **127 economies across four pillars**—Technology, People, Governance, and Impact—using 53 indicators, and is published by the **Portulans Institute, a Washington DC-based non-profit**. In the 2025 NRI, **India improved its rank to 45th**, up four places from the previous year,
8. **Prahaar Anti Terror Policy:** The **Ministry of Home Affairs (MHA)** unveiled India's first National Counter-Terrorism Policy and Strategy, titled 'PRAHAAR'. Its pillars include **Prevention, Response, Capacity Building, Human Rights, Attenuation, International Cooperation, and Recovery & Resilience**.
9. **ALARA principle:** it is a **radiation safety principle** that stands for **"As Low As Reasonably Achievable,"** guiding professionals to **minimize exposure to ionizing radiation** through time, distance, and shielding, while still maintaining necessary diagnostic quality. While **many countries including India use this principle** in various work environments that have radiation exposure, the **US Department of Energy (DOE) has decided to move away from it**.
10. **Tender Years Doctrine:** It is an **outdated legal principle**, originating in the 19th century, that **presumed mothers were better suited to care for young children** (typically under age 4 or 7) during divorce, awarding them **primary custody**. Modern courts increasingly reject this "stereotypical" doctrine, favoring a **gender-neutral "best interests of the child" standard**.

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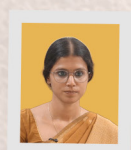
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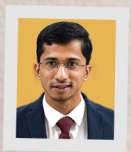
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AIR 708



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HASHIM K**
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