

FORTUNE Prelims Precise

July 2026



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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 as part of the course study material. **It can be purchased from Fortune IAS Academy for Rs. 100 per issue.**



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Polity & Governance

Cauvery Water Dispute

- The **Cauvery Water Management Authority (CWMA)** recently upheld the **Cauvery Water Regulation Committee's (CWRC)** order directing Karnataka to release **3,500 cusecs of water per day for 15 days** to Tamil Nadu.
- The **inter-State Cauvery water dispute** is primarily between **Karnataka and Tamil Nadu** over the **sharing and release of Cauvery river water**.
- **Article 262** of Indian Constitution gives **Parliament the power** to make laws for adjudicating inter-State river-water disputes and **exclude** the jurisdiction of **courts**.
- Using this power, Parliament enacted the **Inter-State River Water Disputes Act, 1956**, which provides for **water dispute tribunals** and has a **section 11 that bars courts** including the Supreme Court (SC) from hearing such cases.
- However, SC uses the **powers under Article 136** of Indian Constitution to grant **Special Leave to Appeal** against any judgment, decree, or order passed by any court or tribunal in India.
- In the Cauvery case, there was a **pre-independence 50 year treaty** between **Madras** Presidency and the Princely State of **Mysore** that expired in 1974, following which Karnataka started building dams over cauvery leading to water disputes.
- A **Cauvery tribunal** was set up in **1990** which gave a verdict in **2007** and was modified by **SC** in **2018**.
- The **CWMA (New Delhi)** and **CWRC (Bengaluru)** were constituted under **Section 6A** to implement the SC verdict.
- CWMA is the **apex statutory decision-making body**, while CWRC is its **technical and monitoring arm that works** directly under the CWMA.

National Commission for Minorities (NCM)

- **Harjit Singh Grewal** was recently appointed **Chairperson of the National Commission for Minorities (NCM)**, filling the post that had been vacant since April 2025.
- NCM is a **statutory body** established under the **National Commission for Minorities Act, 1992**; unlike the **NCSC (Article 338)** and **NCST (Article 338A)**, it has **no constitutional status**.
- The six notified religious minorities are **Muslims, Christians, Sikhs, Buddhists, Parsis and Jains**.
- Under **Section 3**, NCM consists of **1 Chairperson + 1 Vice-Chairperson + 5 Members = 7 members**, all **nominated by the Central Government** from among persons of **eminence, ability and integrity**.
- **Five members, including the Chairperson, must belong to minority communities**.
- Members hold office for **3 years**.
- The **Ministry of Minority Affairs** was created in **2006** after being carved out of the Ministry of Social Justice & Empowerment.
- **Linguistic minorities** are outside the NCM's purview; they are protected under **Article 350B** through the **Special Officer for Linguistic Minorities**.

National Honour Act Amendment

- Parliament passed an important amendment, extending protection of the **Prevention of Insults to National Honour Act, 1971** to the **National Song (Vande Mataram)**.
 - ✓ The parent act **only had this provision** for the **National Anthem (Jana Gana Mana)**.
- Initially the **Indian Constitution did not mention** the National Flag, the National Anthem or the National Song.
- The Constituent Assembly, however, accorded **Vande Mataram equal honour** with the National Anthem on **24 January 1950**.
- The **Prevention of Insults to National Honour Act, 1971** was passed to protect the National Flag, Constitution and National Anthem.
- Under section 3, intentionally **preventing singing or disturbing an assembly** singing

either song or anthem is now punishable with **up to 3 years' imprisonment, fine, or both.**

✓ Repeat conviction carries **minimum 1-year imprisonment.**

- In 1976, the 42nd constitutional amendment under **Article 51A(a)** required **citizens** to respect the **National Flag and National Anthem.**
- **Vande Mataram** was composed by **Bankim Chandra Chattopadhyay**, included in **Anandamath** (1882), and sung by **Rabindranath Tagore** at the **1896 INC session.**
- It became a major slogan during the **Swadeshi Movement (1905).**

Minister Resignation and appointment

- Following **Dharmendra Pradhan's resignation as Union Minister of Education**, **Pralhad Joshi** was given additional charge of the **Ministry of Education**, alongside his existing portfolios.
- Under **Article 75(2)**, a Union Minister holds office **during the pleasure of the President**; in practice, the minister tenders resignation to the **Prime Minister**, who advises the President on its acceptance.
- The **President formally accepts** the resignation and, on the **Prime Minister's advice**, reallocates the vacant portfolio to another minister.
- Acceptance of an individual minister's resignation results in their **immediate exit from the Union Council of Ministers.**
- Both the acceptance of resignation and **reallocation of portfolios** are formal actions of the **President exercised on the binding advice of the Prime Minister.**

Public Examinations Act Amendment

- **Public Examinations (Prevention of Unfair Means) Amendment Bill, 2026** was passed altering the parent 2024 Act, and **tightens penalties for paper leaks and exam fraud** and introduces time-bound investigations and Special Fast Track Courts.
- Offences are **cognisable** (police can arrest without warrant), **non-bailable** (bail is not a right) and **non-compoundable** (case cannot be privately settled/withdrawn by the parties).

- **Individuals:** imprisonment of **5–10 years** and fine up to **₹50 lakh.**
- **Service providers:** fine up to **₹5 crore** and **8-year debarment** from conducting examinations.
- **Organised examination fraud:** minimum **7 years' imprisonment** and minimum fine increased to **₹10 crore.**
- Investigations must be completed within **2 months** of referral by the Centre.
- **Fast-Track Courts** are to complete trials within **3 months** of filing the chargesheet.
- Provides for **Special Task Forces** to investigate organised examination-related crimes.

e-OCI Card

- The **Ministry of Home Affairs** recently launched the Electronic Overseas Citizen of India (e-OCI) Card, a fully digital version of the OCI card aimed at modernising OCI services.
- **OCI (Overseas Citizen of India)** status is available to foreign citizens who were **Indian citizens on or after 26 January 1950**, were eligible to become Indian citizens on that date, or are **children, grandchildren or great-grandchildren** of such persons
 - ➔ It also covers **minor children and spouses** of eligible OCI/Indian citizens subject to specified conditions.
- **Citizens of Pakistan or Bangladesh**, and persons whose parents, grandparents or great-grandparents are/were citizens of these countries, are generally **not eligible.**
- OCI provides lifelong **multiple-entry visa access to India** and **NRI-like benefits** in education, employment, economic activities and banking, including purchase of residential/commercial property.
- OCI holders **generally do not need FRRO/FRO registration**, but **cannot purchase** agricultural land, farmhouses or plantation property.
- However, it **does not confer** Indian citizenship, voting rights, an Indian passport, or eligibility for constitutional/public offices.
- The e-OCI system enables holders to **generate, access and store their OCI card electronically.**
- The **OCI registration number becomes unique**, facilitating **real-time verification** and reducing risks from loss or damage of physical documents.

e-Zero FIR System

- The government has introduced **e-Zero FIRs** for **cybercrime cases involving financial fraud** across **18 States/UTs**.
- Complaints through the **National Cyber Crime Reporting Portal** or **1930 helpline** involving financial losses **above ₹1 lakh** automatically trigger an **e-Zero FIR**.
- The e-Zero FIR is transferred electronically to the **concerned territorial cybercrime police station**.
- **FIR (First Information Report)** is the formal police record of information about a **cognisable offence**, initiating investigation.
- Importantly, FIR is **not separately defined or expressly named** anywhere but Section 173 lays down the procedure for **recording information about cognisable offences**, which is what is commonly called an FIR.
- The concept of zero FIR gained formal recognition through the **Supreme Court's Lalita Kumari v. Government of Uttar Pradesh judgment (2013)**, which made registration of FIR mandatory when information discloses a cognisable offence.
- Under the **BNSS, 2023, Section 173**, information relating to a cognisable offence can be given **irrespective of the area where the offence was committed**, providing the statutory basis for registering an FIR even when the police station lacks territorial jurisdiction.
- Such an FIR is commonly called a **Zero FIR** because it can initially be registered without a territorial jurisdiction number and then **transferred to the police station having jurisdiction**.
- Under **Section 173 of the BNSS**, for an electronically submitted FIR, the informant must sign the recorded information **within 3 days** for it to be taken on record at the respective police station.
- The Constitution **does not prescribe** the number, names, or duration of parliamentary sessions but mentions the **gap** between two such sittings **cannot exceed six months**.
- This effectively means Parliament must meet at least twice a year.
- **Article 85 was adapted from the Government of India Act, 1935**, which originally required the central legislature to meet only once a year (with a gap of up to 12 months).

Types of Parliamentary Sessions:

- **Monsoon Session:** The second session of the year. It typically lasts for three weeks, usually beginning in July and concluding by August.
- **Budget Session:** The first and longest session of the year. Begins towards the end of January and finishes by the end of April or the first week of May.
 - ➔ **Features a recess in the middle** to allow Parliamentary Standing Committees to examine budgetary proposals in detail.
- **Winter Session:** The final session of the parliamentary year. Lasts for roughly three weeks, taking place between November and December.

Prior to 1994, the **Rajya Sabha held four annual sessions**, but it moved to the current three-session pattern when the **two Budget sessions** were consolidated following the introduction of Departmentally Related Standing Committees.

Monsoon Session Parliament

- **Monsoon Session** of Indian Parliament started from **21st July and will last till 21st August** as per Presidential notification.
- Under **Article 85** of the Constitution, the **President** issues a **notification** to **summon** each House of Parliament to meet.

Specialised Investment Funds (SIFs)

COMPARATIVE ANALYSIS: MF, PMS, SIF & AIF IN INDIA

PARAMETER	Mutual Funds (MF)	Portfolio Management Services (PMS)	Specialised Investment Funds (SIF)	Alternative Investment Funds (AIF)
INVESTOR PROFILE	Retail investor	HNI	Seasoned investor	Ultra-HNI / Institution
KEY DETAILS	- Pooled Trust Structure - Minimum: ₹100 - ₹5,000 - Very Strict SEBI Regulation - Standard Portfolio - Focus: Equity, Equity, Debt, Gold	- Discretionary / Segregated Account - Minimum: ₹10 Lakh - Moderate Regulation - Customized Portfolio Gears - Focus: Listed Equity, Debt	- Pooled Trust Structure - Minimum: ₹10 Lakh - Moderate to Strict Regulation - Long-short/Derivatives - Focus: Equity, Debt, Derivatives	- Pooled Trust Structure - Minimum: ₹1 Crore - Regulation Details Vary - High Complexity / Hedge Strategies - Focus: VC, Private Equity, Hedge Funds

- Securities and Exchange Board of India's (SEBI) newly introduced Specialised Investment Funds (SIFs) have witnessed rapid adoption.

- SIF is a **SEBI-regulated investment option** that requires a **minimum investment of ₹10 lakh** and can use advanced strategies such as long-short equity and dynamic asset allocation to boost returns.
- SIFs are positioned directly between **Mutual Funds (MFs)** and **Portfolio Management Services (PMS)/Alternative Investment Funds (AIFs)**.

➔ **Mutual Fund (MF):** Many investors **pool their money**, and a professional fund manager invests the pooled money in shares, bonds, etc. You buy **units of the fund** and not the investments directly.

➔ **Portfolio Management Services (PMS):** You give money to a professional manager who **manages a portfolio (varied investments) specifically for you**. Your investments are generally held **directly in your name**, rather than being pooled with everyone else's money.

➔ **Alternative Investment Fund (AIF):** It is a much more complex and high value (typically above 1 crore) **privately pooled investment fund** that collects money from investors and invests it in **alternative assets or strategies**, rather than operating like a normal mutual fund.

- MFs face strict constraints** on leverage, shorting, and hedging, whereas **PMS/AIFs require high capital commitments**.

Comparative Scale:

- ➔ **Mutual Funds:** Nominal entry (₹100–₹500 via SIP).
- ➔ **SIFs:** Intermediate entry (**₹10 lakh**).
- ➔ **PMS:** High entry (**₹50 lakh** minimum).
- ➔ **AIFs:** Highest entry (**₹1 crore** minimum).

Antariksh Venture Capital Fund (AVCF)

- Reports show that India's dedicated **Antariksh Venture Capital Fund (AVCF)** for the space sector has progressed steadily.

- Venture Capital Fund (VCF)** is a pool of money that invests mainly in **high-potential startups**, providing capital for development, scaling and commercialisation in return for a financial share in their future growth.

- AVCF was **started in 2025** as a India government-backed fund managed by **SIDBI** to provide investment capital to **emerging Indian space-tech startups** at different stages of their growth.

- It will have **IN-SPACE** (Indian National Space Promotion and Authorization Centre) under Department of Space as the main investor

- It is registered with **SEBI as a Category II Alternative Investment Fund (AIF)** with an overall target of **₹1,600 crore**.

- AIFs** are privately pooled investment funds generally targeted at wealthier/sophisticated investors who can take higher risks.

- They are of **3 categories** and **Category II AIF** mainly invests in private-company/debt investments, without the specific social/economic-sector focus of Category I and without the complex trading strategies of Category III.

Negotiated Dealing System-Order Matching

- Bloomberg**, an international financial technology company, introduced the first electronic **trade in Indian government bonds (IGBs)** through its terminal making it easier for foreign and institutional investors.

- Indian government bonds (IGBs)** are debt instruments used by the government to borrow funds to raise money for public spending and infrastructure.

- **IGBs are issued by RBI** on behalf of the government under **Government Securities Act, 2006**.
- They are **primarily sold to Primary Dealers (PDs)** and other institutional investors through auctions via RBI operated **e-Kuber platform** (primary market).
- For trading of IGBs between investors (secondary market) there is the **Negotiated Dealing System-Order Matching (NDS-OM)** platform operated by RBI and managed by Clearcorp Dealing Systems (India) Limited.
- Bloomberg has a **Emerging Market (EM) Local Currency Index** that tracked government Bonds globally and was **used by FPIs to make trade decisions in IGBs**, but to execute trade they had to use a Bank or dealer as a separate intermediary.
- The Bloomberg terminal will now connect FPIs directly to the **NDS-OM** to facilitate fully electronic trades of IGBs via **international and domestic banks**, cutting execution time.

SASCI Scheme

- The Centre recently approved **28 major projects proposed by Delhi** under the **Special Assistance to States for Capital Investment (SASCI) scheme**.
- Indian constitution under **Article 293** allows states to borrow within India, but if they have outstanding Central loans, Central consent is required.
- The **Centre sets an annual Net Borrowing Ceiling (NBC)**, generally around 3% of GSDP, with performance-based additional borrowing allowed.
- The **NBC covers all major borrowing avenues**, including market loans, financial institutions, public-account liabilities and certain off-budget borrowings.
- **SASCI**, started in 2020–21, is a Central Government scheme providing States/UTs with **50-year interest-free loans** to boost **capital expenditure**, especially on infrastructure and productive assets.
- The Central Government provides **100% funding** (allocated in every budget), while **State Governments execute**, operate and maintain the projects.

- The unique Scheme is **over and above the normal Net Borrowing Ceiling (NBC)** permitted to States/UTs, giving them additional fiscal space for capital expenditure.
- SASCI's annual budget is at **₹2 lakh crore** for 2026-27.

Electronic Gold Receipts (EGRs)

- The **National Stock Exchange** introduced **Electronic Gold Receipts (EGRs)**, an exchange-traded instrument that allows investors to **own and trade physical gold electronically**.
- **EGRs** are electronic certificates representing ownership of a specified quantity and purity of **physical gold stored in SEBI-regulated vaults**.
- Gold investors **instead of physically buying and storing gold** at home or bank locker can buy EGRs that are held in a regular **demat account**.
- It can be converted into physical gold and conversion attracts no Capital Gains Tax (CGT), but selling EGRs do attract CGT applicable to physical gold.
- EGRs follow a **T+1 settlement cycle**, mainly to avoid market speculation, meaning the EGR is credited to the buyer's demat account on the next trading day.
- EGRs are available in **999 (99.9%) and 995 (99.5%) purity**, with denominations of **10 mg, 100 mg, 1 g, 10 g, 100 g and 1 kg**.
- **EGR trading itself has no GST**, but physical delivery of gold attracts **3% GST** on the value of gold.
- Bombay Stock Exchange (BSE) launched its EGRs in 2022.

Note: EGRs are **different from Digital Gold**. Digital Gold allows you to buy gold in small amounts (starting from Rs.100) and the vendor stores it in a vault allowing you to sell or convert to real gold. But they are **not regulated in India**.

Investment Friendliness Index (IFI) 2026

- **Gujarat** emerged as India's most investment-friendly state in **NITI Aayog's first ever Investment Friendliness Index (IFI) 2026**, followed by **Maharashtra and Tamil Nadu**.

- The index assesses **28 States and 8 Union Territories** on their ability to **attract and sustain investments**.
- Among hilly and North-Eastern States, **Uttarakhand** ranked first.
- Among UTs and city-states, **Goa** topped the ranking.
- **States are classified into four categories:** Top Performers, Frontrunners, Emerging Performers and Aspiring States.
- **The IFI evaluates States across 84 indicators under eight pillars:** infrastructure, business climate, resources, government policy, regulatory ease, institutional environment, financial health and environmental resilience.

Financial Intelligence Unit-India

- **The Financial Intelligence Unit-India (FIU-IND)** recently earned a significant international recognition with its case regarding a large-scale cyber fraud, securing the Runner-up position at the prestigious **Best Egmont Case Award (BECA) 2026**.
- FIU-IND was set by the Government of India in 2004 under the **Department of Revenue, Ministry of Finance** as the **central national agency** responsible for receiving, processes, analysing, and sharing data on suspect financial transactions to combat money laundering and terrorist financing.
- FIU-IND is a **non-statutory independent body** reporting directly to the **Economic Intelligence Council (EIC)** headed by the **Finance Minister**.
- It has a Director and members **appointed by the Central Government**.
- FIU-IND's **FINNET system** allows banks and financial institutions to submit **mandatory reports** like Cash Transaction Reports (CTR) and Suspicious Transaction Reports (STR) to help **detect money laundering** and financial crimes.
- **The Egmont Group** is a Canada based (founded in Belgium) international **network of Financial Intelligence Units** that facilitates secure



exchange of financial intelligence to combat money laundering and terrorist financing.

- It has **182 member Financial Intelligence Units (FIUs)** globally with FIU-IND officially becoming a member in 2007.

RBI's ₹10 and ₹20 Polymer Notes

- The **Union Government** approved the **RBI's proposal to conduct field trials of polymer (plastic) banknotes** in **₹10 and ₹20 denominations**.
- There is **no proposal to replace existing paper notes** (which are actually 100% cotton); polymer notes will be **tested alongside them** to assess their performance under real-world conditions.
- ₹10 and ₹20 notes circulate frequently, so they **wear out and become dirty quickly**; polymer notes are more **durable, water-resistant and tear-resistant**.
- Although polymer notes have a **higher initial production cost**, their longer lifespan can reduce the frequency of **printing and replacement**, potentially lowering costs over time.
- Polymer notes can also incorporate **advanced security features**, making counterfeiting more difficult.
- Countries including **Australia, Canada, the UK, New Zealand, Singapore and Romania** already use polymer banknotes.
- Under **Section 22 of the Reserve Bank of India Act, 1934**, the Reserve Bank of India has the sole right to issue bank notes in India except ₹1 note.
- Currency notes are printed by RBI through its **Bharatiya Reserve Bank Note Mudran Private Limited (BRBNMPL)**, a wholly owned subsidiary of the Reserve Bank of India (RBI) established in 1995.
- It has two presses located in **Mysuru (Karnataka)** and **Salboni (West Bengal)**.
- Indian 1-rupee note is printed by the **Security Printing and Minting Corporation of India Limited (SPMCIL)**, wholly owned by the Government of India at **Nashik (Maharashtra)** and **Dewas (Madhya Pradesh)**.

Updated Index of Core Industries (ICI)

- The Union Government released an **updated Index of Core Industries (ICI)** with a new **base year of 2022–23**, replacing 2011–12.
- The **ICI** is a **monthly index** compiled and released by the **Office of the Economic Adviser (OEA), DPIIT**, and measures the performance of key industries that have a major influence on the overall industrial economy.
- The new series has been aligned with the recently revised base years of **GDP/GVA, inflation and the Index of Industrial Production (IIP)**.
- The number of core industries has increased from **8 to 9** with the addition of **iron ore**, reflecting its significant use in industrial production.
- The **nine core industries** are **coal, crude oil, natural gas, refinery products, steel, cement, electricity, fertilizers and iron ore**.
- Earlier, the coal sector included **raw coal, coal middlings and washed coal**; the new series retains only **raw coal** to avoid **double counting**, since middlings and washed coal are produced from raw coal.

International Relations

Global Passport Index (GPI)

- India ranked **125th** in the latest **Global Passport Index (GPI)**, down **one place** from last year.
- Published by **Global Citizen Solutions (GCS)**, a UK- and Portugal-based residency and citizenship advisory firm (**HQ: Kingston upon Thames and Lisbon**).
- Ranks passports based on **travel freedom** as well as opportunities for **living, working and investing** abroad.
- Uses data from the **World Bank, World Economic Forum (WEF)** and **Sustainable Development Report**.
- Parameters:
 - ➔ **Enhanced Mobility – 50%**
 - ➔ **Investment – 25%**
 - ➔ **Quality of Living – 25%**

Note: A similar index called the **Henley Passport Index** (Published by UK based Henley & Partners) ranks passports solely on **visa-free/visa-on-arrival access**, while the **Global Passport Index (GPI)** also evaluates **investment opportunities** and **quality of living**, in addition to **travel mobility**.

1 st	 Sweden	11 th	9 th	2 nd
2 nd	 Switzerland	7 th	2 nd	36 th
3 rd	 Finland	4 th	28 th	1 st
4 th	 Germany	15 th	20 th	3 rd
5 th	 Denmark	15 th	23 rd	4 th

Global Liveability Index 2026

- The **Economist Intelligence Unit (EIU)** officially released its **Global Liveability Index 2026**, which evaluates living conditions across 173 cities worldwide.
- It is an **annual benchmark** that **identifies the world's most and least liveable cities** by **measuring the quality, accessibility, and**

reliability of essential urban services and overall lifestyle conditions.

- It assesses **173 cities across the world across 30 indicators** based on five parameters namely **Stability, Healthcare, Culture & Environment, Education and Infrastructure**.
- **Copenhagen (Denmark) remains the world's most liveable city**, edging out Vienna (Austria) and Melbourne (Australia).
- **New Delhi ranked 120**, followed by Mumbai (121), Chennai (123), and Bengaluru (127) in India.

East Asia Summit



- India participated at the **21st East Asia Summit (EAS)** in **Manila, Philippines**
- The **East Asia Summit (EAS)** was established in **2005**, with the **first summit held in Kuala Lumpur, Malaysia**.
- It is the **only leader-led forum** (Heads of State/Government directly participate instead of diplomats) in the **Indo-Pacific** for dialogue on **political, security and economic issues**.
- It has **19 participating countries**: **11 ASEAN Member States** (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Vietnam) and **Australia, China, India, Japan, New Zealand, Republic of Korea, Russia and the United States**.
- The six priority areas are **Environment & Energy, Education, Finance, Global Health & Pandemic Diseases, Disaster Management, and ASEAN Connectivity**.
- **ASEAN Centrality** is the guiding principle of the EAS, with the **ASEAN Chair** also serving as the **EAS Chair**.
- **India** is a **founding member** and participates through its **Act East Policy, Indo-Pacific Oceans Initiative (IPOI)** and maritime security initiatives.

WTO Agreement on Fisheries Subsidies

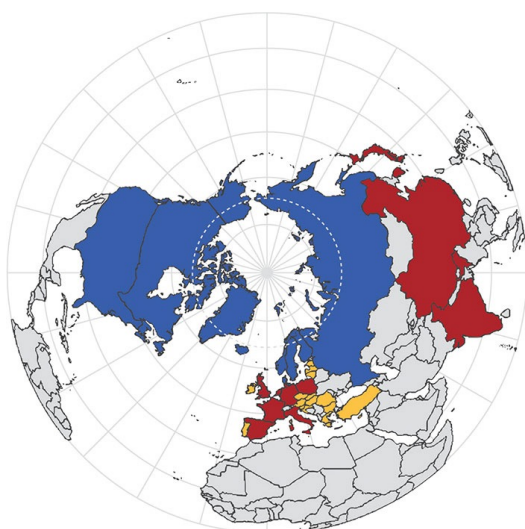
- India recently deposited its **Instrument of Acceptance** of the **WTO Agreement on Fisheries Subsidies (AFS)**, becoming the **123rd Party** to the Agreement.
- AFS was adopted at the **12th WTO Ministerial Conference (MC12), Geneva (2022)**; entered into force on **15 September 2025**.
- It is the **first WTO multilateral agreement** focused on **environmental sustainability**.
- Applies only to **marine wild capture fisheries** (fishing directly from oceans and seas, rather than farming them); **aquaculture** and **inland fisheries** are **excluded**.
- Prohibits subsidies for **Illegal, Unreported and Unregulated (IUU) fishing, overfished stocks, and unregulated high seas fishing**.
- The exclusion of **aquaculture** protects India's **shrimp exports**.

Note: WTO was established in **1995** with **HQ at Geneva, Switzerland** and has **166 members** (2026). Prior to the WTO there was the **General Agreement on Tariffs and Trade (GATT)**, a legal treaty signed by 23 nations on October 30, 1947, to boost economic recovery after World War II. It **reduced tariffs, quotas, and trade subsidies**.

Arctic Council

- The **Parliamentary Standing Committee on External Affairs** recommended appointing a **Polar Ambassador** and urged India to seek **full membership** of the **Arctic Council**.
- Established by the **1996 Ottawa Declaration**, it is a **consensus-based, non-treaty intergovernmental forum** for environmental protection, sustainable development and scientific cooperation in the Arctic.
- **Members:** Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States.
- **Permanent Participants:** Six organizations representing **Arctic Indigenous peoples**.
- **India** has been an **Observer** since **2013** and is one of **13 observer states** (2026).
- The Council **does not deal with military security** or defence issues.

Note: Parliamentary Standing Committee on External Affairs is a Department-related Parliamentary Standing Committee (DRSC) that scrutinises the policies, Bills, budget, and functioning of the **Ministry of External Affairs**. It consists of **31 members (21 Lok Sabha + 10 Rajya Sabha)**, nominated by the **Speaker of the Lok Sabha** and the **Chairman of the Rajya Sabha** for a **one-year term**.



ARCTIC COUNCIL MEMBERS AND OBSERVERS

Member States

Permanent Observers

Ad Hoc Observers

US–Saudi 123 Agreement

- The **US** and **Saudi Arabia** recently signed a **123 Agreement** for civilian nuclear cooperation.
- A **123 Agreement** (under Section 123 of the **US Atomic Energy Act, 1954**) provides the legal framework for **US civil nuclear cooperation** with other countries.
- It enables the transfer of **civil nuclear materials, equipment and technology**.
- The **India–US Civil Nuclear Deal (2008)** is based on a **123 Agreement** and secured India a **Nuclear Suppliers Group (NSG) waiver**, making it the **only non-signatory to the Nuclear Non-Proliferation Treaty (NPT)** allowed to engage in global civil nuclear commerce.
- India secured the right to **reprocess spent fuel** under **International Atomic Energy Agency (IAEA)** safeguards.
- Unlike the **US–UAE Gold Standard**, the **US–Saudi agreement** permits **domestic uranium enrichment** under agreed conditions.

- India follows **facility-specific IAEA safeguards** (only for designated civilian nuclear facilities), while Saudi Arabia is under a **Comprehensive Safeguards Agreement (CSA)**, covering its entire nuclear programme.

Information Fusion Centre

- Real-time **maritime information sharing** by **Information Fusion Centre – Indian Ocean Region (IFC-IOR)** facilitated thwarting a piracy attempt in the Gulf of Aden.
- IFC-IOR was **established by the Indian Navy in 2018** at the Information Management and Analysis Centre (IMAC), Gurugram, to **strengthen maritime security** in the Indian Ocean Region.
- It aims to strengthen maritime security in the region by building a **common coherent maritime situation picture** using White Shipping Agreements.
- It **covers the Indian Ocean Region and adjoining Seas with 76 linkages in 28 countries**, to secure the global commons for a peaceful, stable and prosperous region towards the well-being of all.
- Also it hosts **15 International Liaison Officers (ILOs)** from 15 partner nations viz. Kenya, Australia, Bangladesh, France, Italy, Japan, Maldives, Mauritius, Myanmar, Sri Lanka, Seychelles, Singapore, Thailand, UK and USA.
- White Shipping Agreements** enable the exchange of information on **commercial merchant shipping** between partner countries for maritime security.

India–Australia uranium export

- India and Australia recently finalized the **Administrative Arrangement**, operationalising commercial uranium exports under the **India–Australia Civil Nuclear Cooperation Agreement**.
- The Agreement was **signed in 2014** and **entered into force in 2015**, but its commercial uranium export provisions were **not yet operationalised**.
- Uranium supplied under the Agreement is for **peaceful purposes only** and remains under **International Atomic Energy Agency (IAEA)** safeguards.
- Australia has the **world's largest recoverable**

uranium reserves (about **one-third** of the global total).

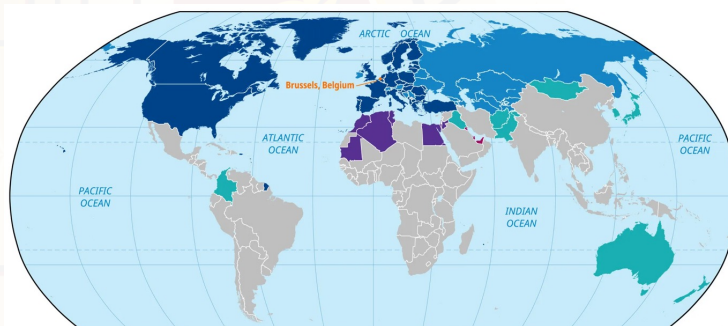
- India has **identified uranium reserves of over 4.25 lakh tonnes**, with major deposits at **Tummalapalle (Andhra Pradesh)** and **Jaduguda (Jharkhand)**.
- India imports about **70% of its civilian uranium requirement**, with **Kazakhstan** as the largest supplier, followed by **Canada, Uzbekistan and Russia**.

SHANTI Diplomacy

- India launched its **foreign policy and maritime governance vision** called the SHANTI (Securing Holistic Advancement through Norms, Trust and Integrity) Doctrine during its **campaign for a non-permanent seat** on the United Nations Security Council (UNSC) for the 2028–29 term.
- SHANTI Doctrine is a **diplomatic framework** promoting **peace, progress and prosperity** through a **rules-based international order**, with emphasis on the **Global South**.
- **Key areas** include UN peacekeeping, counter-terrorism, climate action, maritime security and responsible use of technology especially AI.
- **UNSC is a binding principal organ** of the UN, and has **15 members** including 5 **permanent members (often called the P5)** - China, France, Russia, the United Kingdom, and the United States.
- The **10 non-permanent members** are elected by the **UN General Assembly** for **two-year terms**, with 5 members elected each year.
- A candidate needs a **two-thirds majority of members present and voting**.
- The 10 seats are distributed geographically: **5 African/Asian States, 1 Eastern European State, 2 Latin American & Caribbean States, and 2 Western European & Other States**.
- India's SHANTI framework is intended to strengthen its **2028–29 UNSC campaign** and project India as a **rules-based and development-oriented global partner**.
- **India** has served as a non-permanent member of the United Nations Security Council for **eight terms, beginning with its first tenure in 1950–1951** and most recently in 2021–2022.

NATO summit

- The 2026 NATO Summit was recently held in **Ankara, Türkiye**.
- NATO (**HQ: Brussels, Belgium**) was established in **1949 by the North Atlantic Treaty (Washington Treaty)**.
- It is based on **collective defence under Article 5**—an attack on one member is considered an attack on all.
- Under **Article 10**, any European state capable of furthering the Treaty's principles may be invited to join with the **unanimous consent of existing members**.
- The **US and Canada**, though not European nations, were founding members and **Türkiye** (semi-European) joined in 1952.
- **NATO Plus (often called NATO Plus Five)** is an unofficial strategic security arrangement to expand NATO cooperation with **Australia, Japan, New Zealand and South Korea And Israel**.
- **India** is neither a member of NATO nor in the NATO plus strategy.



History & Culture

Guru Ravidas

- The Prime Minister recently inaugurated **Adampur Airport, Punjab**, and renamed it **Sri Sant Guru Ravidas Ji Airport** to honour **Guru Ravidas** on his birth anniversary.



- Guru Ravidas (14th century)**, also known as **Raidas**, was a prominent **Bhakti saint and poet** from **Varanasi**.
- A proponent of **Nirguna Bhakti** (devotion to a formless God), he advocated **equality, human dignity and rejection of caste discrimination**.
- His devotional hymns are included in the **Guru Granth Sahib**; **Mirabai** is traditionally associated with him as a disciple.
- Importantly, **Ravidassia (Ravidas Panth)** is a religion based on **Guru Ravidas's teachings**. It separated from Sikhism in **2010**, with **Amritbani Satguru Ravidas Maharaj Ji** as its scripture, though some followers continue Sikh practices and revere the **Guru Granth Sahib**.

Trimbakeshwar Temple Complex



- A **Shivling** hidden for centuries was recently discovered in the **Amrit Kund** within the **Trimbakeshwar Temple complex**, Nashik, Maharashtra.

- The ancient temple is dedicated to **Lord Shiva** and is located near **Brahmagiri**, the source region of the **Godavari River**.
- It is one of India's **12 Jyotirlingas**, considered the holiest abodes of Shiva, mentioned in the Shiva Purana.
- The present structure was built by **Peshwa Balaji Bajirao (1740–1760)** in **Hemadpanthi style** (a sub-style of Vesara Temple architecture) using **black basalt**.
- The sanctum houses a **three-faced Jyotirlinga**, representing **Brahma, Vishnu and Shiva**.

12 Jyotirlingas: **Somnath** (Gujarat), **Mallikarjuna** (Andhra Pradesh), **Mahakaleshwar** (Madhya Pradesh), **Omkareshwar** (Madhya Pradesh), **Kedarnath** (Uttarakhand), **Bhimashankar** (Maharashtra), **Kashi Vishwanath** (Uttar Pradesh), **Trimbakeshwar** (Maharashtra), **Vaidyanath** (Jharkhand), **Nageshwar** (Gujarat), **Rameshwar/Ramanathaswamy** (Tamil Nadu) and **Grishneshwar** (Maharashtra).

Pandavani



- Legendary **Pandavani** singer **Teejan Bai**, who popularised Chhattisgarh's traditional storytelling art globally, recently passed away.
- Pandavani is a **traditional folk-narrative art** form from central India, primarily Chhattisgarh, where artists musically narrate and enact stories from the ancient epic Mahabharata, with a special focus on **Bhima** as the hero.
- The lead performer **sings, narrates and enacts characters**, accompanied by instruments such as **tambura, tabla, harmonium, manjira and kartal**.
- Two major styles: **Vedamati** – performer sits and narrates; **Kapalik** – performer moves around and uses dramatic gestures and enactment.

- **Teejan Bai** was a renowned exponent of Pandavani and received the **Padma Vibhushan**; other notable artists include **Jhaduram Devangan** and **Ritu Verma**.

Prambanan Temple



- The Prime Minister recently visited the **UNESCO World Heritage Site** of Prambanan Temple in **Yogyakarta, Indonesia**.
- **Prambanan** is **Indonesia's largest Hindu temple complex**, built in the **9th-10th centuries** under the **Sanjaya dynasty** of the **Mataram Kingdom**.
- It is dedicated to the Hindu **Trimurti** — **Shiva, Vishnu and Brahma**.
- The complex includes **Prambanan (Loro Jonggrang), Sewu, Bubrah and Lumbung temples** and has around **240 temples**.
- The main **Shiva Temple** is about **47 m high** and is the tallest and most prominent structure.
- The temple walls contain **Ramayana reliefs**, and the **Prambanan Temple Compounds** became a **UNESCO World Heritage Site** in **1991**.

Moken People

- Scientists recently found that **Moken sea-nomad children** can see underwater with **about twice the clarity** of other children, attributed to their ability to **constrict their pupils and adjust their eyes** through repeated underwater exposure.
- The **Moken** are indigenous **sea nomads** living around the **Andaman Sea coasts of Thailand and Myanmar**.
- They traditionally travel in wooden boats called **kabang** and depend on **fishing, free-diving, spear hunting and shellfish gathering**.

- They speak **Moken Language**, an **Austronesian language** and possess extensive traditional knowledge of the **marine environment and coral reefs**.
- Many Moken have historically been **stateless**, lacking citizenship in Thailand or Myanmar.
- They gained attention during the **2004 Indian Ocean tsunami** for recognising natural warning signs and moving to safer areas.



Sarnath



- At the 48th session of the World Heritage Committee in Busan, South Korea, the **"Ancient Buddhist Site of Sarnath"** got inscribed on the UNESCO World Heritage List, becoming India's **45th property** to receive this recognition..
- The site has two components—**Chaukhandi Stupa** and **Sarnath archaeological remains** (Dhamekh Stupa, Dharmarajika Stupa, Ashokan Pillar, etc.) in Varanasi, Uttar Pradesh.
- Anciently called **Rishipatana/Ishipatana/Mrigadava**, it is where the **Buddha delivered his first sermon (Dharmachakra Pravartana)**, marking the beginning of the **Buddhist Sangha** and teaching of the **Noble Eightfold Path**.
- Sarnath evolved into a major Buddhist religious and educational centre through continuous royal, monastic, and lay patronage from the **Mauryan period to the Kushana and Gupta periods**.
- It was further developed with numerous stupas, temples, viharas, and the renowned **Sarnath School of Buddhist Art**, famous for standing Buddha.

- The Lion Capital of **Ashokan Pillar at Sarnath** was adopted as the National Emblem of India on January 26, 1950.
- Following Sarnath's declaration, **3 of the 4 major Buddhist pilgrimage sites** are now included in the World Heritage list: **Lumbini (Nepal - place of birth), Mahabodhi Temple at Bodh Gaya (enlightenment), and Sarnath (first sermon).**
- ➔ **Kushinagar** (death and parinirvana), the 4th site is only in the tentative list of World Heritage Sites from India.
- Other important Buddhist World Heritage sites include **Sanchi, Nalanda and Ajanta (India), Anuradhapura (Sri Lanka), Paharpur (Bangladesh), and Taxila and Takht-i-Bahi (Pakistan).**



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Geography

National Disaster Management Authority (NDMA)

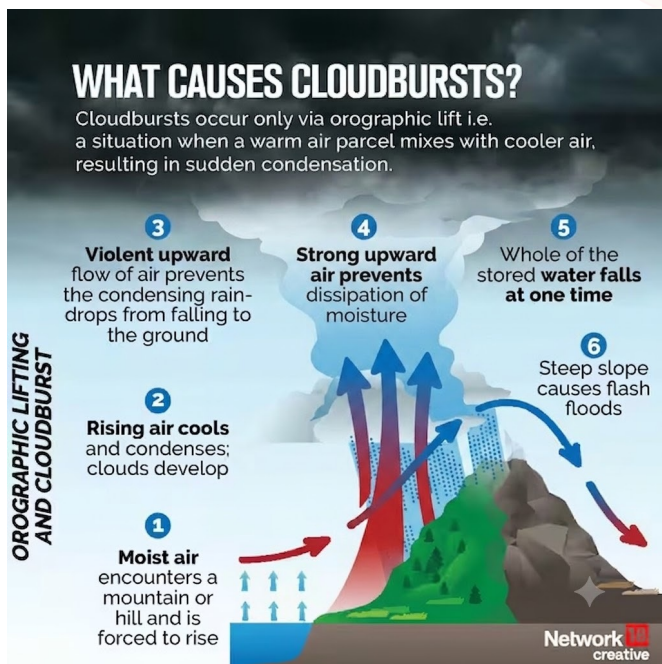


- The **Prime Minister** recently nominated **2 new members** and re-nominated **3 existing members** of the **NDMA for 3 years.**
- **NDMA** is the **apex statutory body for disaster management**, established under the **Disaster Management Act, 2005**, with the **Prime Minister as ex-officio Chairperson.**
- It consists of the **PM as Chairperson** and not more than 9 Members with one of them appointed as Vice Chairperson.
- **Section 3 of NDMA** allows the chairperson to nominate the members and the vice chairperson.
- NDMA formulates **national policies, plans and guidelines** for disaster management and approves the **National Disaster Management Plan.**
- It coordinates disaster-management measures and is supported by **State Disaster Management Authorities (SDMAs)** and **District Disaster Management Authorities (DDMAs).**
- It also oversees the **National Institute of Disaster Management (NIDM).**

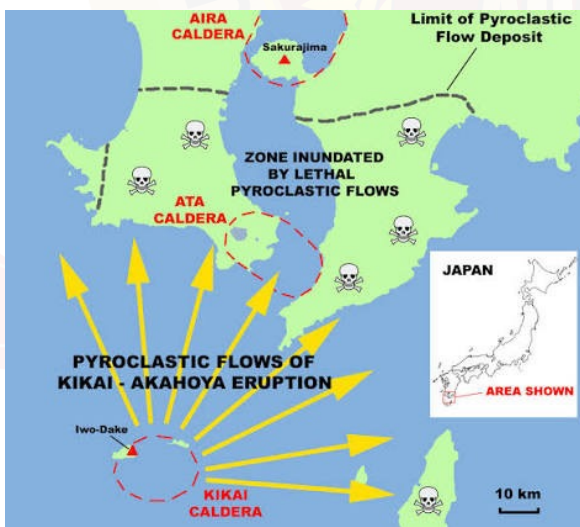
Cloudburst

- The **India Meteorological Department (IMD)** recently rejected reports that **Assam and Nagaland** had experienced cloudbursts causing the **Upper Assam floods.**
- A **cloudburst** is **10 cm or more rainfall within 1 hour** over an area of about **20–30 sq km.**
- Cloudburst **forms** when large amounts of **warm, moisture-laden air rise rapidly**, often when mountains force the air upward (**orographic lifting**).

- As the air rises, it **cools and condenses**, forming towering **cumulonimbus clouds**.
- Strong **updrafts** keep water droplets suspended, allowing them to grow.
- When the cloud can no longer support them, they fall as **extremely heavy rain within a short period**.
- Most common in **hilly and mountainous regions**, but can also occur in plains.
- Can trigger **flash floods and landslides** due to intense rainfall concentrated over a small area.



Kikai Caldera



- Scientists recently found that the **magma reservoir beneath Japan's Kikai Caldera is filling again**, showing how large volcanoes can recover after massive eruptions.

- A **caldera** is a large **bowl-shaped depression** formed when a major eruption empties a magma chamber, causing the ground above it to **collapse**.
- Calderas can remain **volcanically active** if magma replenishes the underlying reservoir.
- **Kikai Caldera** is a **submarine caldera** in the **East China Sea**, south of **Kyushu**, about **19 km wide**.
- About **7,300 years ago**, it produced one of the **largest Holocene eruptions**, releasing around **150 km³ of ash** and generating huge **pyroclastic flows**.
- **India** has **no major active volcanic caldera** comparable to Kikai but **Barren Island Andaman Sea** is India's **only confirmed active volcano**, while **Lonar in Maharashtra** is an **impact crater**, not a volcanic caldera.

Rice fields as methane sources

- A study found that greenhouse gas **GHG emissions from global paddy fields have nearly doubled since the 1960s**, reaching about 1.1 billion tonnes CO₂-equivalent annually during 2011–2020.
- **Flooded paddy fields** produce large amounts of **methane (CH₄)** because waterlogged, oxygen-poor soils promote methane-producing microbes.
- Methane **absorbs outgoing infrared radiation** from Earth, trapping heat in the atmosphere and redirects some of it back to earth.
- It is about **27–30 times more powerful than CO₂** over 100 years
- **India** is a major methane hotspot, with irrigated paddy fields emitting about **3.9 million tonnes of methane annually**.
- Over **one-third of global paddy fields** are losing soil organic carbon, shifting from **carbon sinks to carbon sources**.
- **Climate-smart practices** such as **Alternate Wetting and Drying (AWD)**, **Direct Seeded Rice (DSR)**, **System of Rice Intensification (SRI)** and **crop diversification** can reduce methane emissions.

Ken-Betwa River Linking Project

The Ken-Betwa River Linking Project

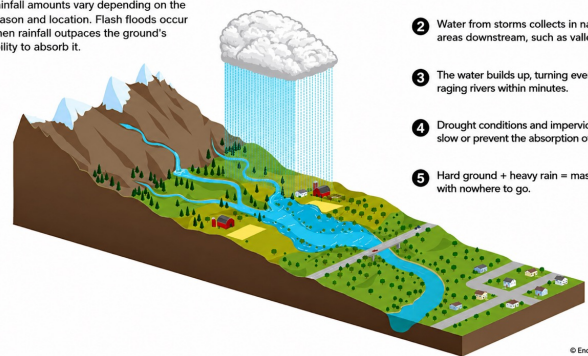


- **Tribal communities in Madhya Pradesh** recently protested against the **Ken-Betwa River Linking Project**, citing displacement, rehabilitation, environmental damage and compensation issues.
- The project proposes **inter-basin transfer of water from the Ken to the Betwa**, primarily benefiting the drought-prone **Bundelkhand region** of Madhya Pradesh and Uttar Pradesh.
- Its key components include the **Daudhan Dam on the Ken River** and a **221-km Ken-Betwa Link Canal** and aims to provide irrigation, drinking water and hydropower.
- The project has an estimated cost of **₹44,605 crore**, with **₹39,317 crore** as **Central support**.
- It is the **only priority river-linking project under implementation** under the National Perspective Plan (NPP).
- **National Perspective Plan (NPP)**: Formulated in **1980** for interlinking rivers by transferring water from **surplus basins to deficit regions** and it comprises **30 links—14 Himalayan and 16 Peninsular**.
- A major concern is the **submergence of forest land in Panna Tiger Reserve**, potentially causing wildlife-habitat loss and displacement.
- **Ken and Betwa**: Both are **right-bank tributaries of the Yamuna**, originating in **Madhya Pradesh** and joining the Yamuna in **Uttar Pradesh**.

- **Flash flood** is a sudden flood of short duration with a high peak discharge, generally caused by intense rainfall over a small area.
- **IMD defines** it as a flood occurring **within 6 hours of the causative event**, such as intense rainfall, cloudburst, dam failure or Glacial Lake Outburst Flood (GLOF).
- Flash floods can develop **within minutes to hours with little warning**, making them highly dangerous.
- **Recent examples** include flash floods that occurred in **Kishtwar, Jammu & Kashmir (2025)** following a cloudburst, while heavy monsoon rainfall caused flash floods and landslides in parts of **Himachal Pradesh, Uttarakhand and Kerala**.

How a flash flood develops

Rainfall amounts vary depending on the season and location. Flash floods occur when rainfall outpaces the ground's ability to absorb it.



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Flash floods

- The **India Meteorological Department (IMD)** recently issued **red and orange alerts in Kerala** for heavy to extremely heavy rainfall, warning of **flash floods and landslides** in vulnerable areas.

Environment & Ecology

Wildlife Institute of India (WII)

- The **28th meeting of the Wildlife Institute of India (WII) Society** was recently presided over by the **Union Environment Minister**.
- **WII** is an **autonomous institution** established in **1982** under the **MoEFCC**, located in **Dehradun, Uttarakhand**.
- It is India's premier institution for **wildlife research, training and management**, offering academic courses and scientific advisory services.
- WII is **governed by a Society** chaired by the **Union Environment Minister**, while its **Governing Body** is chaired by the Secretary, MoEFCC.
- The WII regularly publishes major **scientific assessments**, including the quadrennial **Status of Tigers, Co-predators and Prey in India**, species-specific recovery updates like the **Bringing Back the Cheetah to India** annual reports, and habitat conservation evaluations

Fourth Rhino Census in Dudhwa

- The **4th rhino census (June 2026)** recorded **53 Greater One-Horned Rhinoceroses** in **Dudhwa Tiger Reserve (Uttar Pradesh)**, an increase of **5** from the previous census.
- The **Dudhwa rhino reintroduction programme** began in **1984–85**, with **7 rhinos** translocated from **Assam and Nepal**.
- **Greater One-Horned Rhinoceros (Rhinoceros unicornis)** is native to the **Indian subcontinent** and occurs mainly in **India and Nepal** (Chitwan National Park).
- In India, major populations occur in **Assam, West Bengal and Uttar Pradesh**; key habitats include **alluvial floodplains and riverine grasslands/forests**.
- **Indian Rhino** is listed as **Vulnerable** in **IUCN Red list**, in Appendix I of **CITES** and under **Schedule I** of the **Wildlife (Protection) Act, 1972 (WPA)**.
- Major **Indian habitats** include **Kaziranga**

National Park (Assam), Jaldapara National Park (West Bengal), and Dudhwa Tiger Reserve (Uttar Pradesh).

- Globally, there are **five living species of rhinoceros** in the world divided across Africa and Asia: the White Rhino, Black Rhino, Greater One-Horned (Indian) Rhino, Javan Rhino, and Sumatran Rhino

Borjuli Biodiversity Heritage Site (BHS)

- **Borjuli Wetland in Sonitpur, Assam** has been notified as a **Biodiversity Heritage Site (BHS)** to conserve its unique population of **Oryza rufipogon**, a wild ancestor of cultivated rice.
- It is a **freshwater wetland** in the **Brahmaputra floodplain**, rich in **crop wild relatives (CWR)**.
- **O. rufipogon** has valuable traits such as **pest/disease resistance and tolerance to prolonged flooding and salinity**.
- **BHS** are areas containing **unique, ecologically fragile ecosystems, wild and domesticated species, or habitats with high biodiversity value** that are designated for conservation while allowing **sustainable community use**.
- BHSs are notified by **State Governments under Section 37 of the Biological Diversity Act, 2002**, with conservation involving **Biodiversity Management Committees (BMCs)**.
- Borjuli is an **in-situ conservation site**, supported by **ICAR-NBPGR** and the **Assam State Biodiversity Board**.

National Biodiversity Authority

- The **National Biodiversity Authority (NBA)** recently constituted an **Expert Committee on Invasive Alien Species** (to address their growing **ecological and socio-economic risks**).
- **NBA** is a **statutory body** established in **2003** under the **Biological Diversity Act, 2002**, under the **MoEFCC**.
- **Composition: Chairperson + 16 ex-officio Central Government members + 4 representatives of State Biodiversity Boards + 5 non-official members**.
- All members are appointed by the Central government.
- It implements India's obligations under the **Convention on Biological Diversity (CBD)**

and works for **biodiversity conservation, sustainable use and fair benefit-sharing (ABS)**.

- It regulates access by **foreign individuals/entities** to India's biological resources and associated **research and IPR**.
- It advises States on **Biodiversity Heritage Sites (BHS)** and coordinates with **State Biodiversity Boards (SBBs)** and **Biodiversity Management Committees (BMCs)**.

China's Great Green Wall



- China highlighted its progress in **anti-desertification efforts** called **Three-North Protective Forest or Shelterbelt Program** widely called **“Great Green Wall”**.
- “Great Green Wall,” is a **massive 73-year ecological project** launched in 1978.
- It spans **northwest, north, and northeast China** across **13 provincial-level regions** to stop desert expansion, reduce severe dust storms, and plant billions of trees
- It uses the **straw checkerboard technique**, where straw is placed in grids to **stabilise** sand dunes, reduce wind erosion, retain soil moisture and help vegetation grow and prevent desertification.
- The programme has created about **500,000 sq. km of forested area**, with forest cover in the region rising from 5% in 1978 to about 14% in 2022
- **Desertification** is land degradation in **arid, semi-arid and dry sub-humid areas** caused by climate variations and human activities such as **deforestation, overgrazing and unsustainable agriculture**.
- Other similar projects:

- ➔ **Africa – Great Green Wall:** Launched by the **African Union in 2007**, it aims to create a vegetation belt across the **Sahel**

from **Senegal in the west to Djibouti in the east**.

- ➔ **India – Aravalli Green Wall:** Aims to create a **1,400-km-long and 5-km-wide green buffer** along the **Aravalli range** across Delhi, Haryana, Rajasthan and Gujarat.

Milk production in Gangetic Plains

- A study found that **climate-change-induced heat stress** is reducing bovine milk production in the **trans-Gangetic plains**, especially **Haryana**.
- The **Trans-Gangetic Plains** form the **northwestern sub-region of the Indo-Gangetic Plain**, primarily encompassing the states of Punjab, Haryana, and the Union Territory of Delhi.
- **Temperatures** above 38°C with **relative humidity** above 70% significantly reduce milk yield as animals get heat stressed as it makes it difficult for animals to lose body heat.
- **Buffaloes are particularly vulnerable** because their dark skin absorbs more solar radiation
- The study also notes that **Potential Evapotranspiration (PET)** is also on the rise, lowering milk production in bovines.
- PET is the **maximum amount of water that could evaporate** from soil and plants into the air if enough water were available.
- Essentially, it **measures the “water demand”** or the evaporative power of the atmosphere and shows the **atmosphere’s capacity to dry out soil and plants**.
- **India is the world’s largest milk producer**, contributing about **one-fourth of global milk production**, but most of it is consumed domestically and contributes just mere 0.25% to global exports which is topped by **New Zealand**.
- The dairy sector is overseen by the **Department of Animal Husbandry and Dairying (DAHD)** under the **Ministry of Fisheries, Animal Husbandry & Dairying**, while **FSSAI** regulates milk safety and quality standards.

Eco-sensitive Zone

- The **West Bengal government** moved to **recommend reducing** the proposed **Eco-Sensitive Zone (ESZ)** around the **Mahananda Wildlife Sanctuary** near Siliguri from 5 kilometers to 1 kilometer
- Eco-sensitive zones (ESZ) also called Ecologically Fragile Areas (EFAs) are **areas notified around national parks and wildlife sanctuaries to regulate certain activities and reduce pressure on protected ecosystems** and they function as buffer areas surrounding protected areas.
- The state prepares/proposes the **ESZ proposal**, including the proposed boundary, and submits it to MoEFCC
- They are **notified by the Union Ministry of Environment, Forest and Climate Change (MoEFCC)** under the **Environment (Protection) Act, 1986**, and the extent of an ESZ is not uniform across all protected areas.
- Activities are classified as **prohibited, regulated or permissible**, allowing conservation with limited, regulated development and livelihood activities.

Sulphur Dioxide in Delhi

- A recent analysis found that most sulphur dioxide (SO_2) **around Delhi** comes from **coal-fired power plants** that were exempted from pollution-control rules.
- SO_2 is a **colourless gas with a pungent smell** that dissolves readily in water.
- The major human source of SO_2 is **burning sulphur-containing fossil fuels, especially coal in thermal power plants**; other sources include **metal smelting and industrial processes**.
- Volcanic eruptions** are the main natural source of SO_2 .
- SO_2 can **irritate the respiratory system**, worsen conditions such as asthma, and contribute to **PM2.5 and acid rain**.
- It is also used industrially to produce **sulphuric acid** and in the **paper, pulp, metal-processing and food industries**.

Science & Technology

Interplanetary Coronal Mass Ejections (ICMEs)

- Indian astrophysicists have gained new insights into how **Interplanetary Coronal Mass Ejections (ICMEs)** change as they travel from the **Sun to Earth**.
- ICMEs** are huge eruptions of **magnetised plasma from the Sun's outer atmosphere (corona)** that travel through space.
- When an Earth-directed ICME interacts with Earth's **magnetosphere**, it can cause **geomagnetic storms**, which are major space-weather disturbances.
- These storms can produce **auroras** (Northern and Southern Lights) by disturbing charged particles in the upper atmosphere.
- ICMEs occur more frequently during the **solar maximum**, the period of highest activity in the Sun's approximately **11-year solar cycle**.
- Strong ICME-induced geomagnetic storms can disrupt **satellites, GPS, radio communication, aviation and power grids**, making their study important for **space-weather forecasting**.
- ICMEs generally cool** as they expand while moving away from the Sun, and the new study shows the cooling is not uniform/simple and is **much more complex**.

Direct Seeded Rice

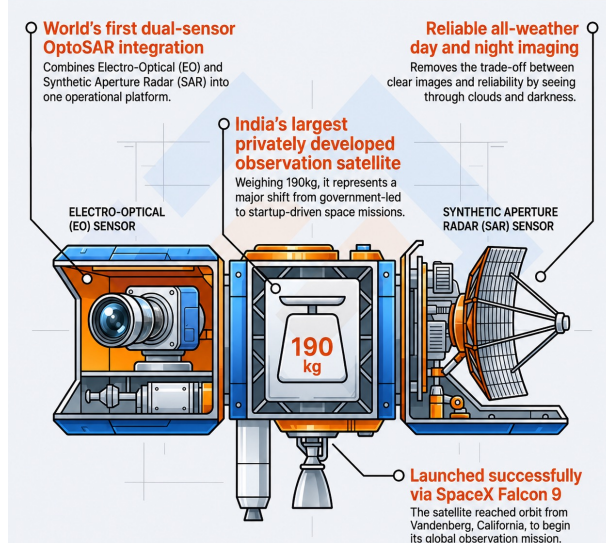
ADVANTAGES	DIRECT SEEDED RICE	DISADVANTAGES
- Increases water productivity - Reduces greenhouse gas emission - Facilitates easy mechanization - Improves soil health - Reduces labour cost		- Poor germination under anaerobic condition - Heavy weed infestation - Low yield under inappropriate management conditions - Lodging - Nematode infestation

- The **Chhattisgarh government** advised farmers to cultivate **oilseeds** and adopt **Direct Seeded Rice (DSR)** to reduce the impact of rainfall uncertainty associated with a possible **El Niño**.

- **DSR** is a rice cultivation method in which **seeds are sown directly in the field**, eliminating nursery raising and transplanting of seedlings.
- DSR is best suited to **medium- to heavy-textured soils** such as loam and clay with good drainage, but is **unsuitable** for light, poorly drained soils.
- It can **reduce water use by up to 50%** because continuous flooding is not required, making it useful during **water scarcity or delayed monsoons**.
- Other benefits include **lower labour and cultivation costs, reduced greenhouse-gas emissions and better conditions for succeeding crops**.
- **Major challenges** include weed infestation, higher seed requirement, damage by birds and pests, crop lodging and uneven crop establishment.

Mission Drishti

Mission Drishti: The Dawn of OptoSAR

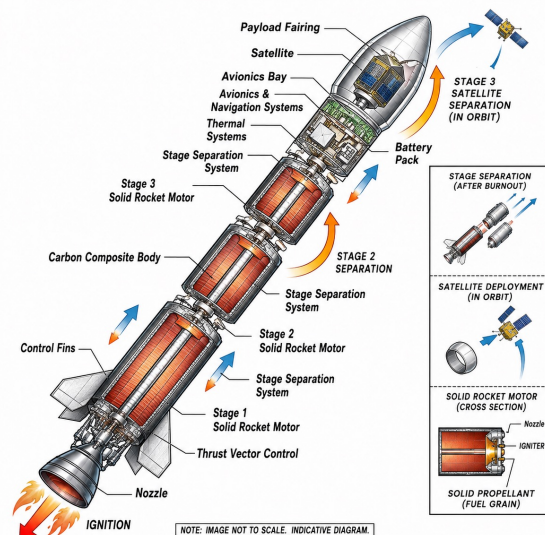


- Bengaluru-based space startup **GalaxEye** announced that communication with **Mission Drishti**, described as the world's first **OptoSAR satellite** and India's largest privately built Earth Observation (EO) satellite launched in May 2026, has been lost.
- **Mission Drishti** combines **Electro-Optical (EO) and Synthetic Aperture Radar (SAR)** sensors on a single satellite.
- **EO sensors** provide high-resolution images in **daylight and clear weather**, while **SAR can image through clouds and in both day and night**, making the two technologies complementary.

- Its applications include **border surveillance, disaster management, defence, infrastructure monitoring, agriculture and insurance**, making it useful for both strategic and civilian purposes.

Mission Aagaman

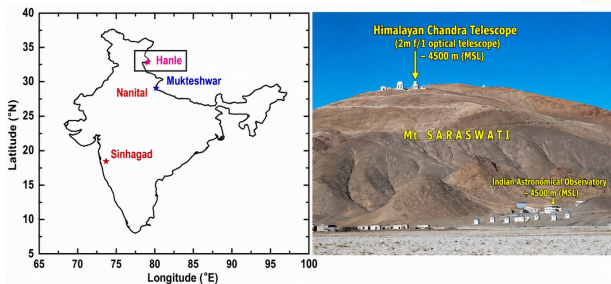
INSIDE INDIA'S FIRST PRIVATE ROCKET | VIKRAM-1



- Hyderabad-based **Skyroot Aerospace** launched the maiden orbital test flight of **Vikram-1**, named **Mission Aagaman**.
- **Vikram-1** is **India's first privately developed orbital launch vehicle** and Mission Aagaman is the **first attempt by an Indian private company** to place multiple customer payloads into orbit.
- The mission is **authorised and facilitated by Indian National Space Promotion and Authorisation Centre (IN-SPACe)**, which promotes and regulates private-sector participation in India's space sector.
- Its main objective is to **demonstrate India's private orbital launch capability** and validate the commercial potential of private launch services under the **Indian Space Policy, 2023**.
- Vikram-1 is designed to place payloads into **Low Earth Orbit (LEO) at around 450 km altitude**.
- The 3-stage rocket's main body/airframe is made primarily from **carbon-composite materials**, making it lighter and strong, unlike the aluminium-titanium alloy steel used by ISRO.
- Its **liquid engine is 3D-printed**, using additive manufacturing to simplify and speed up production.

- The mission carries multiple **Indian and international payloads**, including **SCOPE**, **SOLARAS S3**, a **DCUBED (Germany) technology-demonstration payload** and **Embrace**, a robotic space-debris capture payload.

Himalayan Chandra Telescope



- 25 years of successful operation of the **Himalayan Chandra Telescope (HCT)** at **Hanle, Ladakh**, was recently celebrated.
- HCT** is a **2-metre optical-infrared telescope** located at the **Indian Astronomical Observatory (IAO), Hanle**, at an altitude of about **4,500 m**, and is named after Nobel laureate **Subrahmanyan Chandrasekhar**.
- Hanle** is one of the world's best astronomical sites due to its **clear skies, low atmospheric water vapour and minimal atmospheric disturbance**, making it suitable for optical, infrared, sub-millimetre and millimetre observations.
- HCT is **remotely operated** from **CREST (Centre for Research & Education in Science & Technology)** of the **Indian Institute of Astrophysics (IIA), near Bengaluru**, through a dedicated satellite communication link.
- It is used to study **planets, asteroids, stars, galaxies, comets and exoplanets**, and has contributed to major research including observations of the **TRAPPIST-1 planetary system**.

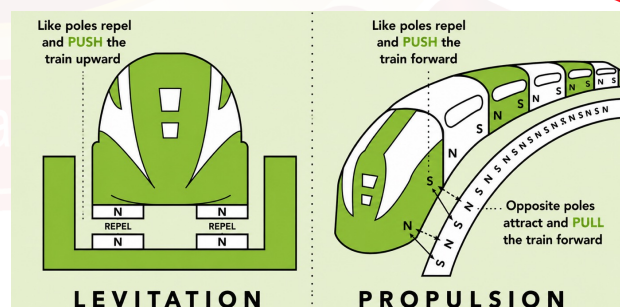
Large Hadron Collider (LHC)

- CERN (European Organization for Nuclear Research)** has switched off the **Large Hadron Collider (LHC)** to begin its **four-year Long Shutdown 3 (LS3)** for maintenance and major upgrades.
- The **LHC** is the world's largest and most powerful **particle accelerator**, operated by **CERN**.

- It is located in a **27-km underground circular tunnel**, about **100 metres below the France–Switzerland border near Geneva**.
- The LHC accelerates **protons and heavy ions to nearly the speed of light** and collides them to study fundamental particles and forces and conditions that existed shortly after the **Big Bang**.
- Its superconducting magnets are cooled to about **-271.3°C (1.9 K)** using liquid helium, making it one of the coldest large-scale scientific facilities.
- The LHC is famous for the **discovery of the Higgs boson in 2012**.
- During LS3, the LHC will undergo upgrades as part of the **High-Luminosity LHC (HL-LHC)** programme, which will increase the number of particle collisions and improve the search for **dark matter and physics beyond the Standard Model**.



Maglev Trains



- Maglev (magnetic levitation)** is a high-speed rail technology in which trains are **lifted, guided and propelled by magnetic fields**, eliminating direct contact between the train and track.

- It uses two main technologies: **Electromagnetic Suspension (EMS)**, which uses **attractive magnetic forces**, and **Electrodynamic Suspension (EDS)**, which uses **repulsive magnetic forces**, often with superconducting magnets.
- **Linear electric motors** built into the guideway propel the train by continuously changing magnetic fields, pulling it forward.
- Since there is **no wheel-rail contact**, maglev has almost no rolling friction, allowing **very high speeds, smoother operation, lower maintenance and less noise**.
- Maglev trains can exceed **400 km/h**; Japan's **SCMAGLEV** holds the world speed record of **603 km/h**, while the **Shanghai Maglev** is a major commercial maglev system.
- A **virtual magnet** uses software to control electric current through **copper coils**, creating a magnetic field similar to that of a permanent magnet.
- It could help EV motors operate without rare-earth magnets such as **neodymium and dysprosium**, reducing dependence on concentrated global supply chains.
- Permanent-magnet motors remain more efficient because they **do not require continuous electricity to maintain their magnetic field**.
- The main limitation is that virtual magnets consume electricity and therefore have **energy losses**, and the technology has not yet matched conventional motors in efficiency and performance.

DiMethyl Ether

- **Dimethyl Ether (DME)** is a synthetic alternative fuel that can be used in **specially designed diesel (compression-ignition) engines** as a substitute for conventional diesel.
- DME has a **high cetane number** showing how fast diesel fuel ignites under pressure inside an engine.
- At normal atmospheric pressure, DME is a **colourless gas**, but it can be stored as a **liquid under moderate pressure**, similar to LPG.
- DME is a **clean-burning fuel**, producing very low **particulate matter (soot)**, **sulphur oxides (SOx)** and **nitrogen oxides (NOx)** compared with conventional diesel.
- India is exploring **indigenous DME production**, including from **coal**, as part of its coal-to-chemicals strategy, with potential applications in **transport and agriculture**.
- Apart from fuel, DME is used as an **aerosol propellant** and as a feedstock for producing **chemicals, plastics and dyes**.

Virtual Magnet

- **Virtual magnet technology** was recently in the news as software-controlled electromagnets are being explored as an alternative to **rare-earth permanent magnets in EV motors**, potentially reducing dependence on critical mineral imports.

Polyendocrine Metabolic Ovarian Syndrome (PMOS)

- **PMOS (Polyendocrine Metabolic Ovarian Syndrome)** is the new name for **PCOS (Polycystic Ovary Syndrome)**.
- The **old name was misleading** because many patients do not actually have ovarian cysts, and the term **wrongly reduced a complex whole-body issue** into a minor reproductive problem.
- PCOS (now referred to as PMOS) is a **common hormonal disorder** affecting **women of reproductive age**.
- The condition involves a **hormone imbalance that disrupts regular ovulation** (the phase in the menstrual cycle when an ovary releases a mature egg), often causing irregular periods, high levels of **male hormones (androgens)**, small **fluid-filled sacs** on the ovaries and **metabolic problems**, particularly insulin resistance.
- PMOS is associated with higher risks of **type 2 diabetes, high blood pressure, abnormal cholesterol levels and cardiovascular disease**.

Note: PCOS and PCOD are different. **PCOD** (Polycystic Ovarian Disease) is a **milder condition where the ovaries release immature or partially mature eggs** that can turn into cysts, typically driven by a lighter hormonal imbalance or lifestyle factors. It is very common and usually manageable with diet and lifestyle adjustments.

ISRO's SOLVE launch vehicle

- **ISRO** successfully conducted the first **static ground test** of the solid motor for the **Sub-Orbital Launch Vehicle for Experiments (SOLVE)** at Sriharikota.
- **SOLVE** is a **low-cost, solid-fuel sub-orbital rocket** developed to test technologies and conduct experiments before full-scale space missions.
- A **sub-orbital rocket reaches** outer space (**crossing the 100 km Kármán line where outer space begins**) but does not travel fast enough sideways to stay in orbit.
- The **rocket goes up, peaks, and falls back to Earth**, going through a few minutes of weightlessness without circling the plane.
- Its main purpose is to test the **Gaganyaan crew module's parachute system**, including its **10-stage parachute deployment sequence** for safe landing.
- It will carry the crew module to about **10–17 km altitude**, where it will experience realistic atmospheric and aerodynamic conditions before parachute deployment.

Defence

INS Trikand



- **INS Trikand** recently foiled a **piracy attempt in the Gulf of Aden**.
- It is a **Talwar-class stealth frigate and guided-missile warship** of the Indian Navy, capable of anti-air, anti-surface and anti-submarine warfare.
- It is regularly deployed in the **Gulf of Aden and Indian Ocean Region (IOR)** for anti-piracy patrols and protection of merchant ships.
- INS Trikand also participated in **Exercise Lamitiye 2026 with Seychelles..**
- The **deployment of INS Trikand reflects India's MAHASAGAR** (Mutual and Holistic Advancement for Security and Growth Across Regions) vision, reinforcing India's role as a preferred security partner and **first responder in the Indian Ocean Region**.

Astra Mk 1 missiles

- **India and Indonesia** recently signed a deal for the supply of **Astra Mk-1 missiles**, marking a step forward in their defence cooperation.
- **Astra Mk-1** is an indigenous **Beyond Visual Range Air-to-Air Missile (BVRAAM)** developed by **DRDO** for the Indian Air Force and Navy.
- It has a range of about **80–110 km**, can engage targets up to **20 km altitude** and travels at around **Mach 4.5**.
- It uses **inertial guidance, mid-course updates and active radar homing** to track and hit targets.

- **Astra Mk-2**, currently under development, is expected to have a longer range of around **200 km**.

Underwater Fiber Optic Sensing System (UFOSS)

- **DRDO** has launched a project to deploy an indigenous **Underwater Fiber Optic Sensing System (UFOSS)** on the Indian Ocean seabed for continuous submarine surveillance.
- **UFOSS** is a network of **underwater acoustic sensors (hydrophones)** connected by **armoured fibre-optic cables** laid beneath the seabed.
- The hydrophones detect **submarine and vessel sounds**, such as propeller and engine noise, and send the signals to shore stations for analysis.
- The system can operate for about **20 years** and is designed to protect the cables from **anchors, fishing activity and sabotage**.
- It will help **detect submarines continuously**, reducing gaps left by occasional naval ship and aircraft patrols and strengthening **anti-submarine warfare (ASW)** capabilities.

Combined Maritime Forces at Kochi

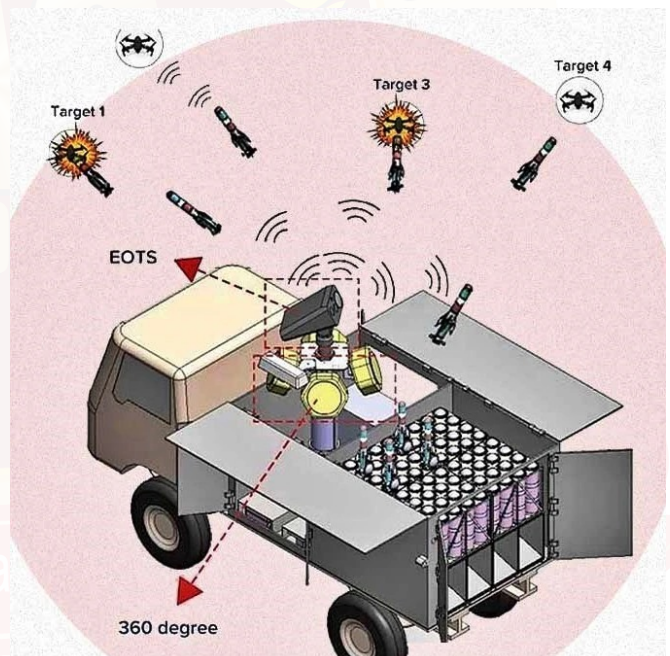
- The **Indian Navy** hosted **Operation Southern Readiness 26-2** at the **Southern Naval Command, Kochi**.
- It is conducted with the **Combined Maritime Forces (CMF)** under **Combined Task Force 154 (CTF 154)**, the CMF's dedicated training task force.
- **Combined Maritime Forces (CMF)** established in 2001 is a multinational naval partnership headquartered in **Manama, Bahrain**, involving **47 countries**.
- Participation is **voluntary**, and members are not bound by a fixed political or military mandate.
- CMF was started to **counter international terrorism at sea** and later **expanded** its role to counter-piracy, counter-smuggling, maritime security and training.
- **India** joined as an **Associate Partner** in 2022 and became a **full member** in November 2023.
- **USA** is a founding member and the CMF Commander is a **U.S. Navy Vice Admiral** and

a **UK Royal Navy Commodore** serving as the Deputy Commander.

- CMF **does not have Russia or China**, but includes Pakistan.

Bhargavastra

- **Bhargavastra** is India's first indigenous **micro-missile-based counter-drone system**, developed by **Solar Defence and Aerospace Ltd. (SDAL)** to destroy individual drones and drone swarms.
- It uses **unguided micro-rockets** with a **20-metre lethal radius** and **guided micro-missiles** with an interception range of up to **2.5 km**.
- It can detect **larger UAVs up to 10 km** and smaller drones up to **6 km** using **radar, EO/IR and passive RF sensors**.
- It combines **hard-kill** (physically destroying drones) with **soft-kill** (electronic jamming), providing layered protection.
- It can operate in **deserts, plains and high-altitude areas above 5,000 m**, offering a potentially **cost-effective alternative to expensive air-defence missiles** against drone threats.



Miscellaneous

Performance Grading Index 2.0:

- **Union Ministry of Education** released the **Performance Grading Index 2.0** for **States/UTs** (PGI-S) and the **Performance Grading Index for Districts** (PGI-D) for the 2025–26 academic year,
- **PGI** is an annual framework that assesses the performance of school education systems across **States and UTs**.
- **PGI 2.0**, an update on the earlier 1.0, does not rank States/UTs; instead, it places them in **grade bands** to identify strengths, weaknesses and progress.
- It has **1,000 points and 70 indicators** covering six domains: **learning outcomes, access, infrastructure, equity, governance, and teacher education & training**.
- It uses data from platforms such as **UDISE+, NAS, PM POSHAN, PRABAND and Vidyanjali**, with **65 of the 70 indicators** automatically populated.
- Grades range from **Utkarsh (highest)** to **Akanshi-3 (lowest)**.
- In 2025–26, **no State/UT reached Utkarsh, Uttam-1 or Uttam-2**, while **Chandigarh** was the only State/UT in Uttam-3 for learning outcomes.

ULLAS Programme

- **Uttarakhand** recently became India's **sixth fully literate state** under **NEP 2020** and the **ULLAS** programme.
- **ULLAS (Understanding Lifelong Learning for All in Society)** is a **Centrally Sponsored Scheme for adult education**, launched by the **Ministry of Education** under **NEP 2020**.
- It targets **adults aged 15 years and above** who missed formal schooling.
- It covers **reading, writing, numeracy, critical life skills and lifelong learning**, mainly through **volunteers**.
- Learning is supported through **regional-language content**, the **DIKSHA portal** and the **ULLAS mobile app**.

- Under the **ULLAS/NEP 2020 framework**, a State is considered **fully literate** when it achieves **95% or more literacy among people aged 15 years and above**.
- The updated list now includes **Mizoram, Goa, Tripura, Himachal Pradesh, Sikkim and Uttarakhand**.

Bharat 6G Alliance (B6GA)

- The **Bharat 6G Alliance (B6GA)** recently **expanded its membership to 90 organisations**, strengthening India's efforts to develop and shape global 6G technology.
- **B6GA** is an **industry-led, government-facilitated platform** supported by the **Department of Telecommunications (DoT), Ministry of Communications**.
- It aims to promote **6G research, intellectual property, domestic manufacturing and Indian participation in global 6G standards**.
- It works with international 6G bodies such as the **Next G Alliance (USA), 6G SNS (Europe), 6G Forum (South Korea), XGMF (Japan), 6G Brasil and ESA**.
- Its work includes **spectrum planning, terahertz communication, 6G testbeds and startup support**, while contributing to global standard-setting through **ITU and 3GPP**.
- **No country** has a full-scale commercial 6G mobile network yet.
- 6G is expected to use **AI-native networks, advanced antennas and higher-frequency/terahertz spectrum** compared to the sub-6 GHz bands and millimetre waves, roughly 24–100 GHz used in 5G.

The 2026 Commonwealth Games

- The **2026 Commonwealth Games** is being held in **Glasgow, Scotland**.
- The **Commonwealth Games began in 1930** as the **British Empire Games**, held in **Hamilton, Canada**; the name changed to Commonwealth Games in **1970**.
- **Glasgow 2026** will be Scotland's **fourth** time hosting the Games, after **Edinburgh (1970, 1986)** and **Glasgow (2014)**.
- The 2026 edition has a **reduced programme of 10 sports**: athletics, swimming, weightlifting,

boxing, judo, artistic gymnastics, track cycling, 3×3 basketball, netball and bowls.

- **Removed from the previous 2022 programme:** badminton, cricket, hockey, squash, table tennis, triathlon, rugby sevens and wrestling, among others.
- **Added/returned for 2026:** 3×3 basketball and bowls are included in the streamlined programme; some sports from 2022 were dropped rather than replaced one-for-one.
- **India** has hosted the Commonwealth Games once, in **Delhi in 2010**.
- The next Commonwealth Games are scheduled for **Ahmedabad in 2030**.

Soil Health Card Scheme (SHCS)

- The **Ministry of Agriculture** recently highlighted the Soil Health Card (SHC) Scheme in promoting scientific soil and nutrient management.
- **SHC Scheme** launched in 2015 as a **Centrally Sponsored Scheme** provides farmers with information on **soil nutrient status and crop-specific fertiliser recommendations**.
- Each card covers **12 parameters** - N, P, K, S, Zn, Fe, Cu, Mn, B, pH, Electrical Conductivity (EC) and Organic Carbon (OC).
- The Soil samples collected from farmers' fields are tested through Soil Testing Laboratories (STLs), mainly under State Government supervision.
- Soil samples are tested **twice a year**, with results managed through the **SHC Portal, mobile app and GIS mapping**.
- Since **2022–23**, it has been integrated into **Rashtriya Krishi Vikas Yojana (RKVY)** under the **Soil Health & Fertility** component.

Pellet guns and shock batons

- Pellet guns and shock batons were recently in the news after **protesters were reportedly injured during a march to Parliament** in Delhi on July 20.
- **Pellet guns** fire cartridges containing multiple **lead pellets** and are intended to disperse crowds, but can cause serious injuries, including **permanent blindness**.

- They were first used in **Jammu and Kashmir during the 2010 unrest**, with their extensive use during the **2016 Kashmir unrest** leading to widespread criticism.
- **Plastic bullets** were subsequently developed as a less-injurious alternative to pellet ammunition.
- **Shock batons** are handheld devices that deliver a **high-voltage, low-current electric shock** to temporarily incapacitate a person and are used by forces such as the **Rapid Action Force (RAF)**.
- In India, pellet ammunition is manufactured at **Ordnance Factory, Ishapore**, while SOPs require security personnel to use **minimum force and aim below the waist** during crowd-control operations.

Kudankulam data leak

- A **ransomware attack** recently led to the **reported leak of data** related to the Kudankulam Nuclear Power Plant (KKNPP) in Tamil Nadu, highlighting cybersecurity concerns around critical infrastructure.
- A **ransomware attack** is a type of **cybercrime** where malicious software locks or encrypts a victim's files, systems, or data.
- The attacker then **demand a monetary payment**, usually in cryptocurrency, in exchange for the decryption key needed to restore access.
- India currently has **7 major operational nuclear power plant sites**: Tarapur, Rajasthan/Rawatbhata, Madras/Kalpakkam, Narora, Kakrapar, Kaiga and Kudankulam, with 24 commercial reactors operated by Gol owned **Nuclear Power Corporation of India Limited (NPCIL)**.
- India primarily uses **Pressurised Heavy Water Reactors (PHWRs)**, supplemented by imported **Light Water Reactors (LWRs)** and **indigenous Fast Breeder Reactors (FBRs)**, structured under a unique three-stage long-term nuclear program.
- Recently, the 500 MWe **Prototype Fast Breeder Reactor (PFBR) located in Kalpakkam, Tamil Nadu**, successfully attained its first criticality
- India's **total installed nuclear power capacity is about 8.88 GW** (3.1% of India's overall domestic electricity generation mix)

- **Jodhpuri Mojari:** It is **handcrafted traditional footwear** from **Jodhpur, Rajasthan**, crafted primarily by **the members of a Jinagar community**; they are entirely handmade, using **only leather from camel, goat, cow and buffalo** and are worn by both men and women, suited the hot climate of Rajasthan.



- **Pithora Painting:** It is a **traditional tribal wall art** that has originated in the **tribal regions of Gujarat**, mainly in Panchmahal and Chhota Udaipur; **done by tribes such as the Rathwa, Bhil, and Bhilala**, who hold a strong belief in nature, spirits, and divine powers.



Places in News

Malaprabha River



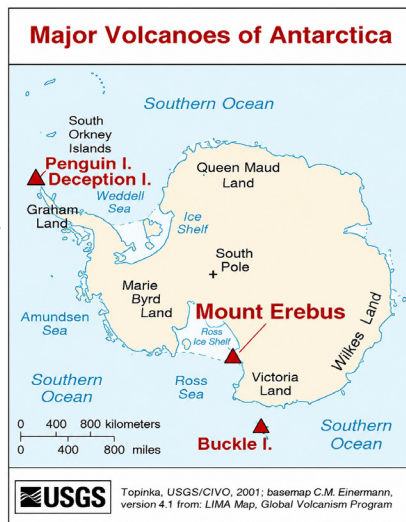
- **Severe drying of Malaprabha** in parts of Karnataka has been reported.
- It is an important **tributary of the Krishna River**, originating at **Kanakumbi in the Western Ghats, Karnataka**.
- The river flows mainly **eastward and northeastward** for about **304 km** before joining the **Krishna River at Kudala Sangama, Bagalkot**.
- Its major tributaries include **Bennihalla, Hirehalla and Tuprihalla**.
- The **Renukasagar (Malaprabha) Dam** has been built across the river.

Mount Erebus

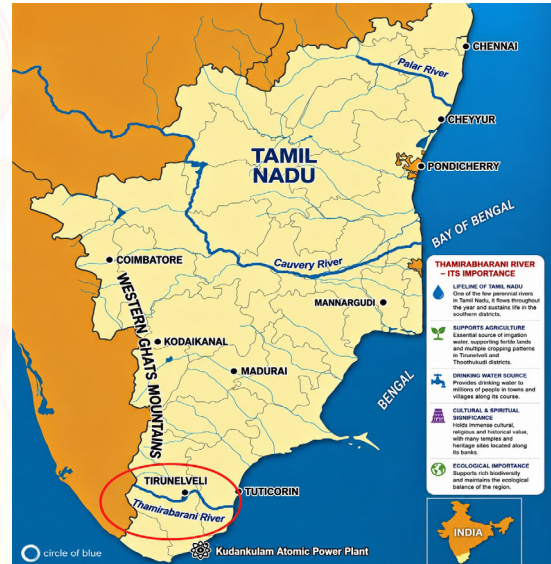
- **Mount Erebus was releasing tiny particles of pure gold into the atmosphere**, estimated to be worth over **US\$2 million annually**.
- It is an **active stratovolcano on Ross Island, Antarctica**, and the **southernmost active volcano in the world**.
- A **stratovolcano**, also called a composite volcano, is a steep, cone-shaped mountain built from many **alternating layers of hardened lava, ash, and rocks**

- At **3,794 m**, **Erebus** is the **second-highest volcano in Antarctica**, after Mount Sidley.

- It is one of the few volcanoes with a **persistent lava lake**, and its eruptions are generally **Strombolian**, meaning relatively small but frequent explosive eruptions.



- Thamirabarani** is a **perennial river of Tamil Nadu**, originating in the **Pothigai Hills of the Western Ghats** and flowing about **128 km** before entering the **Gulf of Mannar**.
- Important dams include **Papanasam, Manimuthar and Servalar**, while major waterfalls include **Agasthiyar Falls** and **Kalyana Theertham**.



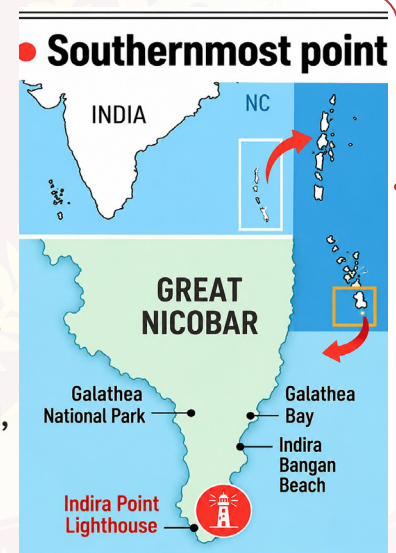
Norwegian Sea

- UK fighter jets recently **intercepted a Russian maritime patrol aircraft** in the Norwegian Sea.
- The **Norwegian Sea** is a **marginal sea of the North Atlantic**, located between **Norway and Iceland**.
- It connects with the **Greenland Sea to the north** and the **North Sea to the south**.
- It is influenced by the **warm Norwegian Current**, an extension of the North Atlantic Current, which helps keep Norway's climate relatively mild.
- The sea is important for **fisheries, shipping and offshore petroleum resources**, and contains deep submarine basins and ridges.



Indira Point

- A **tourist hub** is being developed around the lighthouse at Indira Point.
- Indira Point** is India's **southernmost point**, located on **Great Nicobar Island, Andaman and Nicobar Islands**.
- It lies south of **Galathea Bay**, where a major **transshipment port** has been proposed under the Great Nicobar Island infrastructure project.



Thamirabarani River

- The Madras High Court recently said that **nobody has the right to pollute water bodies** in the name of religion, after clothes and other items were **dumped into the Thamirabarani River** during funeral rituals.

- Its lighthouse is an important **navigation landmark on the Singapore-Colombo maritime route**.
- During the **2004 Indian Ocean tsunami**, the area **subsided by about 4.25 m**, permanently bringing the sea further inland and damaging the lighthouse.

Aral Sea

- A new study found that the **drying of the Aral Sea** has released over **200 teragrams (one trillion gram)** of **carbon** from its exposed lake bed, turning it from a **carbon store into a greenhouse-gas source**.
- The **Aral Sea** is a **salt lake in Central Asia**, between **Kazakhstan and Uzbekistan**, fed mainly by the **Amu Darya and Syr Darya** rivers.
- It began shrinking rapidly after the **1960s**, mainly due to diversion of these rivers for **irrigation**.
- The exposed lake bed now produces **salt and dust**, causing ecological damage and affecting **regional carbon and climate processes**.



Port of Eilat

- Powerful explosions were heard in Eilat, Israel**, a strategic port city on the Red Sea.
- Eilat** lies at the northern end of the **Gulf of Aqaba**, the eastern arm of the Red Sea.
- Eilat Port is Israel's only commercial port on the Red Sea**, giving it strategic importance for maritime trade.
- The city is also a major **tourist destination**, known for its coral reefs, clear waters and scuba diving.
- Eilat has a **hot, dry climate**, with summer temperatures reaching around **46°C**.



Damietta Port

- An unidentified drone recently struck at **Damietta, Egypt**, a major natural-gas hub.
- Damietta Port** is a major **deep-water port on Egypt's Mediterranean coast**, near the northern entrance of the **Suez Canal**.
- It lies near the **Nile Delta** and about **70 km west of Port Said**.
- The **Suez Canal** provides the shortest sea route between **Europe and Asia** and handles about **12% of global trade**.



Mount Toubkal

- Mount Toubkal was recently in the news after an 8-year-old girl from Thrissur, Kerala, became the **youngest Asian to summit it**.
- Toubkal**, at **4,165 m**, is the **highest peak in Morocco and the Atlas Mountains**.
- It is located in the **High Atlas Mountains**, about **60 km south of Marrakech**.
- The mountain lies within **Toubkal National Park**, popular for **trekking in summer and skiing in winter**.



Second Thomas Shoal

- The Philippine military recently accused **China's Coast Guard of damaging a Filipino vessel** near the Second Thomas Shoal.
- Second Thomas Shoal** is a **submerged reef**

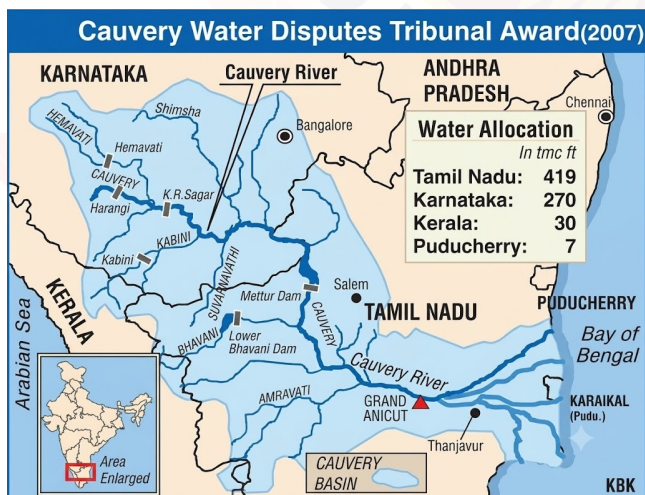
in the Spratly Islands, about 105 nautical miles west of Palawan, within the Philippines' 200-nautical-mile EEZ.



- It is also claimed by **China (Ren'ai jiao) and Vietnam.**
- The shoal lies within China's "nine-dash line" claim, which was rejected by the **Permanent Court of Arbitration in 2016.**
- The Philippines has maintained an outpost there since **1999**, using the **BRP Sierra Madre**, a naval ship deliberately grounded on the reef and occupied by Philippine Marines.

Biligundlu

- **Biligundlu** is an important **interstate Cauvery River gauging station** on the Karnataka–Tamil Nadu border..
- It is the official point where the **Central Water Commission (CWC)** and **Cauvery Water Management Authority (CWMA)** measure river flows for **interstate water-sharing.**
- Cauvery is an **east-flowing inter-State river** originating at **Talakaveri (Brahmagiri Hills, Kodagu, Karnataka)** and draining into the **Bay of Bengal** near **Poompuhar (Tamil Nadu).**
- Shared by **Karnataka, Tamil Nadu, Kerala and Puducherry.**
- **Major tributaries:** Kabini, Hemavati, Harangi, Bhavani, Amaravati, Noyyal, Shimsha, Arkavathi and Lakshmana Tirtha.



Species in News

Bengal Fox

- Researchers in **Tamil Nadu** report **no Bengal fox sightings** in several districts in recent years, raising concerns about its declining population.



- The **Bengal fox (Vulpes bengalensis)**, also called the **Indian fox**, native mainly to the Indian subcontinent and is found across most of **India, as well as Nepal, Pakistan and parts of Bangladesh.**

- It prefers **grasslands, thorn scrub, dry areas and agricultural edges**, rather than dense forests.
- It lives in **underground dens** and is generally **monogamous.**
- It breeds mainly in **December–January**, with **3–6 pups** born after about **50–60 days** of gestation.

Himalayan Yak

- ICAR has developed an **Internet of Things (IoT)-based smart collar** to monitor the health and movement of Himalayan yaks.



- The **Indian yak (Bos grunniens)**, known as the "**ship of the Himalayas**," provides mountain communities with **milk, meat and transport.**
- Yaks are adapted to **high-altitude areas above 8,000 feet** and extreme cold.
- India has around **58,000 yaks**, mainly in **Ladakh**, with others in **Arunachal Pradesh, Sikkim, Himachal Pradesh and Uttarakhand.**
- The **smart collar enables remote monitoring**, making it easier to track yak health and movement in difficult Himalayan terrain.

Indian Grey Hornbill

- The Indian Grey Hornbill has **successfully bred for four consecutive years in Gujarat's Gir forests** after being reintroduced, more than six decades after it disappeared from the region.
- Indian Grey Hornbill (*Ocyrcos birostris*)** is listed as **Least Concern** by the IUCN.
- It is found across much of the **Indian subcontinent**, including **Pakistan, Nepal, Bangladesh and most of India**.
- It prefers **open forests, thorn forests, farmland and urban gardens**, especially areas with **fig trees**.
- Its diet mainly consists of **fruits, especially figs**, along with insects and small animals.
- It is mostly **sedentary**, usually living in pairs or small groups, though larger groups may gather around fruiting trees.



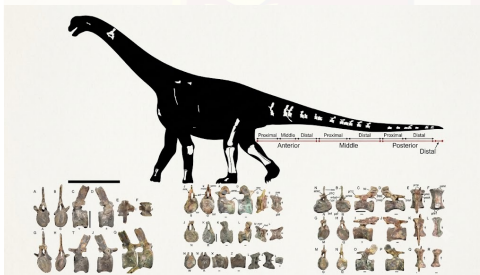
- The **tail spike** may have helped deter predators.

White-Bellied Heron

- The **White-bellied Heron (*Ardea insignis*)** is one of the **world's rarest and most threatened birds**, found mainly along fast-flowing Himalayan rivers.
- It is among the top **100 EDGE (Evolutionarily Distinct and Globally Endangered)** species.
- It is now found only in **India, Bhutan and Myanmar**; it is extinct in **Nepal** and likely regionally extinct in **Bangladesh**.
- In India, only **6–9 individuals** remain, found in the **Noa-Dehing, Lahm and Lohit rivers of Arunachal Pradesh**.
- Lahm River**, a tributary of the Lohit, holds about **70% of India's population**.
- It is protected under **Schedule I of the Wildlife Protection Act, 1972**.



Ceratocaudia Antiqua



- Scientists recently discovered a new **long-necked dinosaur species, Ceratocaudia antiqua**, in **Gujarat's Kachchh Basin**, with a unique horn-like spike on its tail.
- It was identified by researchers from **IIT Bombay and Birbal Sahni Institute of Palaeosciences**.
- It lived about **170–180 million years ago during the Jurassic Period** and was an early member of the **macronarian dinosaurs**, a group of large long-necked dinosaurs.
- Despite being a "giant" group member, **Ceratocaudia** was only about **7 metres long**.
- A partial skeleton was found near **Amrapar, Kutch**, and 3D scanning and CT technology were used to reconstruct it.

Malwi Camel

- The Malwi camel—also called the **white camel**—is a **rare Indian breed** facing severe extinction risks with only 102 animals remaining.
- It is the **smallest of the nine recognised camel breeds** in India, known for its **distinct white coat**, milk yield of 4 to 5 kg per cycle, and native habitat across **Madhya Pradesh and Rajasthan**.
- It is **valued for its strength, endurance** and ability to survive with limited food and water.
- The breed is facing a **decline in population**, mainly due to reduced demand for camels and changes in traditional livelihoods.



Keywords

- **Boss Scam:** SEBI recently cautioned regulated entities and listed firms against a 'Boss Scam'. Boss scam (also known as **CEO fraud** or executive impersonation) is a **cyber attack** where criminals **trick employees** into moving company money or sharing private data by pretending to be a company leader, like a CEO or director.
- **G Minus Two Indo-Pacific architecture:** It is a **strategic framework** where major **Indo-Pacific middle powers cooperate independently** to ensure the region's future is not exclusively dictated by the United States and China. Popularized by prominent geopolitical strategist C. Raja Mohan, the concept **rejects a "G2 duopoly"** (a US-China superpower condominium).
- **Hummus Trail:** It is a colloquial term for a **popular, informal travel circuit across India and Southeast Asia** heavily frequented by **young Israeli tourists and IDF veterans**. They embark on an **extended, months-long backpacking trip known as "Tiul Gadol"** (The Big Trip) to **decompress** from military life, using their discharge bonuses to fund the journey. Some have been traced in India's popular 'Hummus Trail' hotspots.
- **MeriPehchaan:** It is India's **National Single Sign-On (NSSO) platform** that allows citizens to access **thousands of government services** across different departments using **just one username and password**. It **unifies** three major government identification platforms: **Jan Parichay, e-Pramaan, and DigiLocker** into a single secure gateway.
- **eSARAS Platform:** Also called SARAS Aajeevika, is a dedicated digital e-commerce marketplace developed by the **Ministry of Rural Development** under the National Rural Livelihoods Mission (DAY-NRLM) initiative. It provides over 8.62 crore **women Self-Help Group members access to national markets**, institutional marketing support, and logistics.
- **Fusiform Gyrus:** It is an **area under the brain** shaped like a spindle that helps to **recognize faces, objects, and words, and link words to pictures** in your mind: Harm to this area can cause **face blindness**, meaning you cannot recognize people's faces. Recent studies show this area lights up when people hear compound words like "killjoy," helping the **brain picture metaphors and visual ideas**.
- **Amrit Bharat Station Scheme:** Launched by the **Ministry of Railways in December 2022**, the Amrit Bharat Station Scheme aims to **redevelop 1,309 railway stations** with modern facilities, better connectivity and local architectural themes, while promoting **One Station One Product (OSOP)** for local artisans and products.
- **Pickaxe Mountain:** US President Donald Trump repeatedly threatened to strike the **suspected underground nuclear facility** at Pickaxe Mountain, Iran. **Pickaxe Mountain (Kuh-e Kolang)** is located about **220 km south of Tehran**, near the **Natanz nuclear complex**, Iran's major uranium-enrichment site. It is suspected to contain **underground nuclear-related facilities**.
- **Account Aggregator:** It is a **RBI-regulated digital platform** that helps people **securely share their financial information between different financial institutions**. It can share your bank statements with a lender when you apply for a loan, instead of you submitting them manually. The data is shared **only with your consent**, and the **AA does not use or sell your financial information**. They are registered as a **specialised class of Non-Banking Financial Company (NBFC)** under Section 45-IA of the RBI Act.
- **Environmental DNA (eDNA):** DNA traces released by organisms into their surroundings through **skin, scales, hair, faeces, urine, mucus, etc.** By collecting and analysing water, soil or sediment samples, scientists can identify **which species are present without directly seeing or capturing them**. It is useful for **biodiversity monitoring, detecting rare/invasive species and conservation**.

Record Breaking Results

20 Selections from Fortune IAS
Prelims-cum-Mains (PCM) Classroom Program.
Highest ever by an IAS Academy in
Kerala



Kerala Rank 1
SREEJA J S
AIR 57
First Attempt Topper



DIVYA S
AIR 166



HRIDYA S BIJU
AIR 202



ANJANA B
AIR 222



**ARAVIND
ISWARANKUTTY**
AIR 248



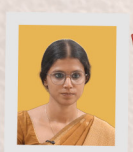
RAJATH R
AIR 348



AMAL KAMPTIYIL
AIR 362
First Attempt
Topper



**HARSHIDAA S
NAIR**
AIR 372



SANDHRA S
AIR 380



**ATHIDHI
KRISHNADEV B**
AIR 451
First Attempt
Topper



**SHEIK MOHAMED
NISHATH M**
AIR 497



**JAHANA
SAREEN V P**
AIR 511



ARUNIMA M S
AIR 558



ASNA ANWAR
AIR 576
First Attempt
Topper



NIDHIN R H
AIR 699



FAIRUZ FATHIMA M
AIR 708



**MOHAMED
HASHIM K**
AIR 713



**MUHAMMED
SUHAIL**
AIR 718



SHIYAD
AIR 743



NANDANA J S
AIR 745



**FORTUNE
IAS ACADEMY**