

FORTUNE Prelims Precise

March 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 (2024) as part of the course study material. **It can be purchased from Fortune IAS Academy for Rs. 75 per issue.**



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March 2026
Monthly Current Affairs
quiz here

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Polity & Governance

Controller General of Accounts (CGA)

- The Controller General of Accounts (CGA) recently launched initiatives to improve accountability in government financial transactions.
- The CGA, under the **Department of Expenditure in the Ministry of Finance**, is the **Principal Accounting Adviser** to the Government of India.
- It prepares **monthly and annual reports** on revenue, expenditure, borrowings, and key fiscal indicators (deficit targets).
- It compiles the **Union Finance Accounts and Appropriation Accounts** on the advice of the **Comptroller and Auditor General of India (CAG) under Article 150**, who then submits it in the Parliament.
- It **formulates policies** on accounting principles and procedures for the **Centre and States**.
- The CGA **manages government payments, receipts and banking arrangements**, and develops financial management systems to improve efficiency.
- It also conducts **internal audits**, monitors the financial performance of **government schemes**, and **ensures accounting standards** across ministries.
- Additionally, it coordinates and tracks follow-up Action Taken Notes (ATNs) of the **Public Accounts Committee** and the **CAG** through its **Audit Para Monitoring System**.

➤ This makes government departments responsible for fixing financial mistakes more prompt.

CAPF (General Administration) Bill, 2026

- The Central Armed Police Forces (General Administration) Bill, 2026 was introduced in the Rajya Sabha.

- It seeks to **formalise the role of Indian Police Service officers** in leadership positions within CAPFs, **despite a Supreme Court direction (Sanjay Prakash & Others vs Union of India (2025))** to progressively reduce such deputations.
- The **Bill mandates** that 50% of Inspector General posts, at least 67% of Additional Director General posts, and 100% of Special DG and DG posts be filled by IPS officers on deputation.
- **The CAPFs** comprise:
 - ✓ The **Border Security Force (BSF)**, which is deployed along the Pakistan and Bangladesh borders;
 - ✓ The **Central Industrial Security Force (CISF)**, which protects airports and critical installations;
 - ✓ The **Central Reserve Police Force (CRPF)**, which is deployed for internal security, law-and-order duties, and in Left Wing Extremism-affected areas;
 - ✓ The **Sashastra Seema Bal (SSB)**, which guards the border along Nepal and Bhutan; and
 - ✓ The **Indo Tibetan Border Police (ITBP)**, which is deployed along the border with China.
- **Currently**, IPS officers occupy 20% of DIG and 50% of IG posts through **executive orders**.
- The CAPFs have around **13,000 Group A officers** and about 10 lakh personnel, and are administered by the **Ministry of Home Affairs** with recruitment conducted through the **UPSC**.

Conversion and SC Status

- The **Supreme Court of India** held that a person professing a **religion other than Hinduism, Sikhism, or Buddhism loses their Scheduled Caste (SC) status** immediately upon conversion.
- SC based its judgment on **the Constitution (Scheduled Castes) Order 1950**.
- The 1950 order, issued **under Article 341** of the Constitution, **identifies Scheduled Castes (SCs)** on a **state-wise basis** and forms the basis for **reservation** in education, employment, and political representation.

- Its **Clause 3 restricts SC status** to persons professing **Hinduism**, which was later extended to **Sikhism** (1956) and **Buddhism** (1990), thereby excluding followers of other religions.
 - The list of SCs can be modified only by Parliament.
- The court also said that they **will get back their SC status on re-conversion** but will require proof of original caste and acceptance by the community.
- However, **for Scheduled Tribes (STs), there is no religion bar** under the Constitution (Scheduled Tribes) Order 1950; **status depends on continued tribal identity** and community **recognition**, not religion alone.

Randomization of EVM-VVPATs



- The **Election Commission of India** has completed the first round of randomisation of **EVMs and VVPATs** for elections in Assam, Kerala, and Puducherry, allocating about 8.85 lakh units.
- To enhance **transparency and confidence** of political parties and voters, the poll authority **randomly distributes** electronic voting machines (EVMs) and voter-verifiable paper audit trails (VVPATs) to different constituencies in a poll-going state.
- **EVMs** are standalone, **battery-operated devices** consisting of a **Ballot Unit** for voters and a **Control Unit** operated by polling officials, ensuring one vote per person and fast counting without any internet connectivity.
- They were developed in India by public sector companies such as **Electronics Corporation of India Limited and Bharat Electronics Limited**.

- EVMs were **first used** on a pilot basis in 1982 in **Paravur** Assembly constituency and later adopted nationwide.
- **VVPAT** machines **attached to EVMs** print a slip showing the chosen candidate for a few seconds, providing a physical audit trail and enhancing voter confidence..
- **VVPAT was introduced in 2013** (pilot) by ECIL and BEL in Noksen Assembly constituency by-election, following a Supreme Court direction, and fully implemented nationwide by 2019.

Transgenders Act amendment

- The **Transgender Persons (Protection of Rights) Amendment Bill, 2026** was passed by Parliament and received Presidential assent on March 30, 2026.
- The Act takes away **transgender people's "right to self-perceived gender identity"** (**Section 4(2) of the 2019 Act**) and **alters the definition of a "transgender person"**.
- The right to gender self-identification was recognised by the Supreme Court in the landmark **National Legal Services Authority v. Union of India** in 2014 as part of personal liberty under Article 21 and freedom of expression under Article 19.
- Based on this **the 2019 Act had defined a transgender person** as one whose **gender differs from their birth assignment**, including trans-men, trans-women (regardless of medical therapy), individuals with intersex **variations**, genderqueer persons, and those with **socio-cultural identities** like kinner, hijra, aravani, and jogta.
- **The latest amendment narrows the definition** and now only includes individuals with socio-cultural identities like **kinner, hijra, aravani, jogta, or eunuch**, those with **intersex** variations, and persons with **congenital variations** in sexual characteristics, chromosomal patterns, or hormone production.
- It also covers those forced into a transgender identity through medical procedures or mutilation, **but explicitly excludes individuals based solely on different sexual orientations or self-perceived identities**.

- The **Section on offences against trans people** also specifies that “compelling” children to “outwardly present a transgender identity”, whether by force, allurements, inducement, or otherwise, would be an offence punishable with **rigorous imprisonment of 10-14 years and with a fine of up to ₹3 lakh.**
- The amendment makes **medical certification mandatory** for identity certificates, removing self-identification.
 - It requires a **District Magistrate** to issue certificates based on recommendations from a **medical board.**

Narcotics Control Bureau (NCB)

- The Narcotics Control Bureau recently **dismantled a darknet-based drug network.**
- NCB was **established in 1986 under the Narcotic Drugs and Psychotropic Substances Act 1985.**

Narcotics are typically plant-based depressants (opiates, cannabis) causing sleep or pain relief, while **psychotropic substances** are often synthetic chemicals (LSD, amphetamines) affecting mental processes

- NCB functions under the **Ministry of Home Affairs** and coordinates drug law enforcement across agencies and implements NDPS and allied laws (Customs Act 1962, Drugs & Cosmetics Act 1940).
- Its role includes **implementing international obligations** like the UN Single Convention on Narcotic Drugs (1961), the UN Convention on Psychotropic Substances (1971), and the **UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988).**
- The public can report drug-related activities via the **MANAS helpline (1933).**

Cabinet Committee on Security

- The **Prime Minister recently chaired** a Cabinet Committee on Security (CCS) meeting on the **West Asia conflict.**
- While cabinet refers to the **full body of senior ministers headed by the PM**, making major policy decisions collectively, **cabinet committee** is the **smaller group** of ministers for **specific areas**, enabling **faster** decisions and its outcomes may be final or sent to Cabinet for approval.

- **The Prime Minister constitutes Standing Committees of the Cabinet** and sets out the specific functions assigned to them.

➔ He can **add or reduce the number of committees.**

- **Under the Transaction of Business Rules**, the Government has constituted **8 Cabinet Committees, most of them headed by the Prime Minister itself.**
- **Cabinet Committee on Security** is headed by the Prime Minister and includes **Home Minister, Defence Minister, Finance Minister, External Affairs Minister** and oversees internal/external security, law and order, defence expenditure (₹1,000 crore+), defence production, R&D, and procurement of security equipment.

Budget passed

- The **Indian Parliament** has approved the **Finance Bill 2026** and the **Appropriation Bill 2026**, marking the **completion of the budgetary process** for FY 2026-27.
- The **Appropriation Bill under Article 114** **authorizes** the government to **withdraw** funds from the **Consolidated Fund of India** to meet its expenditures.
- Expenditures are broadly two types: **voted expenditure** (that requires Lok Sabha approval) and **charged expenditure** (automatic and are not voted upon, e.g., interest payments, salaries of SC judges etc).
- Under **article 113**, every ministry prepares **demands for grants** for the upcoming financial year and is made into the appropriation Bill.
- Once the Appropriation Act is passed, it **cannot be amended in Parliament** to change the amount or purpose of grants or expenditures.
- If the government needs additional funds later, it must seek **Parliamentary approval through a Supplementary Demand for Grants** or use the Contingency Fund, which is later regularized by Parliament.
- The **Finance Bill**, presented alongside the Budget, **introduces or amends taxes, modifies exemptions, and mobilizes revenue.**
- Under the Provisional **Collection of Taxes Act, 2023** the Finance Bill must be passed by both

Houses of Parliament and receive the President's assent **within 75 days of its introduction in the Lok Sabha**.

- While there is no such time limit for Appropriation Bill, if the government expects the Appropriation Bill to **take longer than April 1st** to pass, it passes a **Vote on Account (article 116)** to withdraw enough money to keep the country running for a few months until the full bill is enacted.

👉 During the Budget Session, the **guillotine procedure** is sometimes used to fast-track multiple financial proposals together for timely approval.

- Both the Appropriation Bill and the Finance Bill are categorized as **Money Bills** under **Article 110** of the Constitution

Economic Stabilisation Fund

- The Centre has allocated ₹57,381 crore to create an **Economic Stabilisation Fund** to buffer against global shocks like crises or supply chain disruptions
- **ESF** was set up by using a **supplementary demand for grants**, which is a parliamentary approval to spend money beyond what was originally budgeted.
- A Supplementary Grant is an **additional amount of money sought by the government from Parliament** during a financial year **over and above the original budgeted allocation**.
- The money was **transferred between different government accounts** (inter-account transfers) to create the ESF.
- This allowed the government to **pool existing funds** from various departments and budgets **without raising additional borrowing and impact the fiscal deficit for the financial year 2025-26**, which will remain within the Revised Estimates (RE).
- In the RE of 2025-26, the fiscal deficit has been estimated at par with the Budget Estimates of 2025-26 at **4.4 per cent of GDP**.

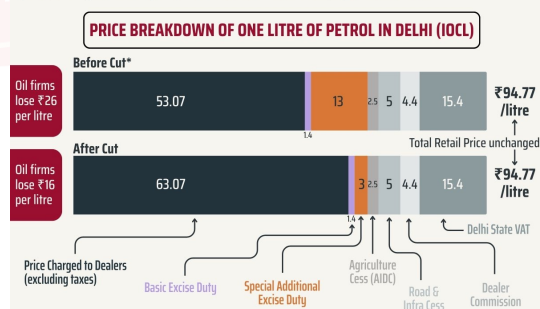
Economy

Fuel Excise Duty Cut

- Centre has cut **special excise duties** on petrol and diesel by ₹10 per litre to ease the financial burden on state-run oil companies amid high global crude prices.
- **Special excise duty (SED)** is a levy imposed by the central government on certain petroleum products in addition to the regular central excise duty.
- Unlike GST, which is an **ad valorem tax** (levied as a percentage of the value), the SED is a **specific duty**, charged as a fixed amount per litre, and does not go to the divisible pool shared with states.
- The revenue from SED goes entirely to the central government and is **outside the divisible pool** that is shared between centre and states.
- India **imports 85%** of its crude in dollars, making the rupee-dollar rate crucial.
- A **barrel of crude oil—159 litres**—is used to calculate per-litre costs to which **refining, freight, and insurance** add ₹3–5/litre.
- At retail, taxes make up 40–55% of the pump price.
- Interestingly, the government **imposed new export duties** on **petroleum products**, specifically ₹21.5 per litre on diesel and ₹29.5 per litre on **aviation turbine fuel (ATF)**.
- These levies on exports are designed to **capture the “windfall” profits made by private refiners** selling fuel abroad when international prices are high.

Anatomy of Petrol Price

Government slashed the Special Additional Excise Duty by Rs 10 per litre to offset surging global oil prices, allowing oil marketing companies to recover costs while keeping retail rates frozen



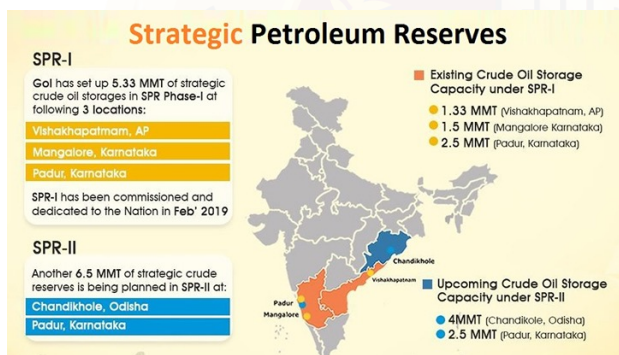
Source: PPAC, IOCL; Ministry of Petroleum & Natural Gas

*Data as of March 16, 2025 via the IOCL website

Variable Rate Repo (VRR) Auctions

- The Reserve Bank of India (RBI) recently injected ₹55,837 crore **transient liquidity into the banking system** through three-day variable rate repo (VRR) auction.
- A Variable Rate Repo (VRR) auction is an RBI tool to **inject liquidity** into banks by lending money against government securities for a short period.
- The VRR interest rates are determined via **competitive bidding** on the e-Kuber platform.
- **Banks bid** the amount and rate they are willing to pay, and the RBI accepts bids from highest to lowest until the auction target is met
- The lowest accepted rate becomes the **cut-off**.
- Conversely, Variable Rate Reverse Repo (VRRR) auctions **absorb excess liquidity**, allowing banks to **park surplus funds with the RBI and earn interest**, with rates also set through competitive bidding.

Strategic Petroleum Reserves (SPRs)



- The government said that India maintains an actual petroleum stock cover of around **60 days**, which includes crude oil, refined products like petrol and diesel, and dedicated strategic reserves.
- The **Strategic Petroleum Reserve (SPR)**, managed by the **Indian Strategic Petroleum Reserves Limited (ISPRL)**—a wholly-owned subsidiary of the Oil Industry Development Board—currently holds about **3.372 million tonnes (MMT)** of crude, or roughly 64% of total storage capacity.
- These reserves are stored in three underground caverns at **Visakhapatnam (1.33 MMT)**, **Mangaluru (1.5 MMT)**, and **Padur (2.5 MMT)**, and are designed to provide around **9.5 days of supply** during any disruption in imports or price shocks.

- Globally, the idea of strategic reserves was first proposed in **1973 after the global oil crisis**.
- India, being the **world's third-largest consumer of crude oil**, depends on imports for over **88% of its crude requirement**, making SPRs vital for energy security and to stabilize the domestic market during global supply disruptions.

• **Note:**The **International Energy Agency (IEA)** recommends that countries should hold oil stocks equivalent to at least 90 days of their net oil imports. IEA members are obligated to maintain these levels of reserves; India is not a full member of the grouping but an associate member. This 90-day reserve holding can include strategic reserves, as well as commercial inventories.

GI Tagged Karbi Anglong Ginger

- Assam achieved a milestone with the first export of its GI-tagged **Karbi Anglong ginger** to London.
- Valued for its aroma, fibre content, and pungency, the ginger carries a **Geographical Indication (GI) tag** which links a product's quality to its origin.
- **GI tags** are granted by the **Geographical Indications Registry** located in Chennai and functions under the Controller General of Patents, Designs, and Trade Marks under the **GI Act, 1999** and remain valid for **10 years**, renewable thereafter.
- The export was facilitated by the **Agricultural and Processed Food Products Export Development Authority (APEDA)**, a statutory body under the **APEDA Act, 1985**.
- India has over **650 GI tagged products** with **Uttar Pradesh** being the leading GI state with 74 GI-tagged products followed by **Tamil Nadu** leading second with 69 GI-tagged products.

Fiscal Health Index 2026

- NITI Aayog released the **Fiscal Health Index (FHI) 2026** for **FY 2023-24**, assessing state-level fiscal performance.
- The index compares across 28 states, including **18 General Category and 10 NE/Himalayan states**.

- The index classifies Indian states into **four categories**—Achiever, Front Runner, Performer, and Aspirational—based on **five core pillars**: Quality of Expenditure, Revenue Mobilisation, Fiscal Prudence, Debt Index, and Debt Sustainability
- **Odisha** tops the rankings, followed by **Goa** and **Jharkhand**, with Gujarat and Maharashtra in the top five.
- **Punjab, West Bengal, and Kerala** remain at the bottom.
- **High-ranking states** show strong tax mobilisation, low deficits, moderate debt, and adequate capital outlay.
- **Aspirational states** like West Bengal, Kerala, Andhra Pradesh, and Punjab face high deficits, debt, and interest burdens.
- Among NE/Himalayan states, **Arunachal Pradesh and Uttarakhand** are Achievers; Assam, Meghalaya, Mizoram, Sikkim, and Tripura are Performers; Himachal Pradesh, Manipur, and Nagaland are Aspirational.
- The ECA, 1955, empowers **both the Central and State governments** to regulate the production, supply, distribution, and stock limits of certain commodities to ensure availability at fair prices.
- The **Centre** can notify **essential commodities** and intervene in **inter-state trade**, while **states can issue orders** to control storage, distribution, or prices **within their jurisdiction**, particularly to prevent hoarding or black marketing.
- Essential commodities **include** foodstuffs, cattle fodder, coal, iron and steel, textiles, drugs, and other items notified by the Centre.
- The Act has been **amended** in 2020 to **allow regulation only under extraordinary circumstances**, such as war, famine, sharp price rise, or natural calamities, ensuring that essential goods remain accessible to the public.

Central Warehousing Corporation (CWC)



- The Central Warehousing Corporation (CWC) celebrated its 70th Foundation Day recently.
- CWC, a **Navratna Central Public Sector Enterprise (CPSE)**, is a statutory body established under the **Warehousing Corporations Act, 1962**.
- Its aim is to provide reliable, cost-effective, value-added, integrated warehousing and logistics solutions in a socially responsible and environment friendly manner.
- It falls under the **Ministry of Consumer Affairs, Food & Public Distribution**.
- CWC achieved its highest-ever turnover of ₹2,776.88 crore and Profit Before Tax (PBT) of ₹711.60 crore during FY 2024–25, compared to ₹2,303.81 crore turnover and ₹590.36 crore PBT in FY 2023–24.
 - A dividend of ₹160.10 crore has been proposed and paid for the year.

The Bureau of Energy Efficiency (BEE)

- The **Bureau of Energy Efficiency (BEE)** celebrated its 25th Foundation Day.

MAJOR SUB- INDICES	MINOR SUB- INDICES
1. Quality of Expenditure	1.1 Total Developmental Expenditure/Total Expenditure
	1.2 Total Capital Outlay/ GSDP*
2. Revenue Mobilisation	2.1 State Own Revenue/ GSDP*
	2.2 State Own Revenue/ Total Expenditure
3. Fiscal Prudence	3.1 Gross Fiscal Deficit/ GSDP*
	3.2 Revenue Deficit/ GSDP*
4. Debt Index	4.1 Interest Payments/Revenue Receipts
	4.2 Outstanding Liabilities/ GSDP*
5. Debt Sustainability	5.1 Growth Rate of GSDP* - Growth Rate of Interest Payments

* GSDP at current prices for the year 2023-24

The Essential Commodities Act (ECA), 1955

- The Centre used the **Essential Commodities Act (ECA)** to **prioritise natural gas** for households (PNG), vehicles (CNG), and LPG production amid LNG shortages caused by the West Asia conflict.
- **India imports about half its natural gas**, mostly from Qatar and the UAE, and **relies on imports for 60% of LPG**.

BharatNet Project

- The Indian government announced that it has connected over 2.15 lakh Gram Panchayats through the **BharatNet project**
- The BharatNet project, led by the **Ministry of Communications**, aims to provide **high-speed, affordable broadband connectivity** to all **Gram Panchayats (GPs)** and rural areas in India, bridging the digital divide.
- It is primarily funded through the **Digital Bharat Nidhi (DBN)** and was initially executed by **Bharat Broadband Network Limited (BBNL)**, a Special Purpose Vehicle, which was **merged** into Bharat Sanchar Nigam Limited (**BSNL**) in 2022 to improve execution efficiency
- **Complementary initiatives** include
 - **Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA)**, which promotes digital literacy in rural households
 - **National Broadband Mission (NBM)**, including NBM 2.0 launched in 2025, which accelerates digital infrastructure development through initiatives like the **Centralized Right of Way (RoW) Portal** and **GatiShakti Sanchar**

Digital Bharat Nidhi (DBN), formerly the Universal Service Obligation Fund (USOF), is primarily funded through a **5% levy on the Adjusted Gross Revenue (AGR)** of telecom companies. These contributions are mandated under the **Telecommunications Act, 2023**, and are credited to the **Consolidated Fund of India** before being allocated to DBN for enhancing digital connectivity in rural and urban areas.

International Relations

Commission on the Status of Women (CSW)

- The **UN Commission on the Status of Women (CSW)** concluded its 70th session at UN headquarters, where 190 member states adopted **Agreed Conclusions**.
- The CSW, part of the **UN Economic and Social Council (ECOSOC)**, established in 1946 is the principal global intergovernmental body dedicated exclusively to promoting gender equality and women's empowerment.
- CSW consists of **45 UN Member States**, elected by the Economic and Social Council (ECOSOC) for **four-year terms** on an equitable geographical basis
- It sets **Global Standards** by formulating policies, standards, and norms that define the rights of women and girls globally.
- The CSW have organized **four major World Conferences on Women**, with the last, most significant one held in Beijing in 1995 leading to the **landmark Beijing Declaration**.
- The CSW produces **one set of agreed conclusions annually** during its main session, focusing on a **specific priority theme**, with the 2026 theme as **Ensuring and strengthening access to justice** for all women and girls.
- These **non-binding** negotiated outcomes provide **concrete recommendations to governments and stakeholders** to accelerate gender equality and women's empowerment
- India **was elected to the CSW** for a four-year term that ran from 2021 to 2025.

Commission on International Religious Freedom

- India's Ministry of External Affairs (MEA) has **rejected** the latest **report** of the United States Commission on International Religious Freedom (**USCIRF**), calling it biased and based on selective narratives.
- USCIRF is an **independent, bipartisan agency** of the legislative branch that **monitors religious freedom worldwide** and provides **policy recommendations to the U.S. government**.

- It was **created in 1998 under the International Religious Freedom Act** to monitor and promote freedom of religion or belief (FoRB) globally and to **ensure international adherence to religious freedom standards** based on global human rights principles, including **Article 18 of the Universal Declaration of Human Rights**.
- The 9 USCIRF **Commissioners are appointed by the President** and key Congressional leaders from both political parties (thus, bipartisan)
- The **commission has repeatedly criticised India's religious freedom situation** in its reports.
 - India has rejected these assessments, arguing that USCIRF relies on **questionable sources and selective narratives** and lacks credibility.

Assistance Mission in Afghanistan (UNAMA)

- The **United Nations Security Council** has extended the mandate of the United Nations Assistance Mission in Afghanistan for **three months** instead of the usual one-year period.
- UNAMA is a **UN Special Political Mission** tasked with **assisting the people of Afghanistan** which was **established on 28 March 2002** by **United Nations Security Council Resolution 1401**.
- Its original mandate was to support the **implementation of the Bonn Agreement** (December 2001) and also serves as a **key international diplomatic platform to engage with the Taliban authorities**.
- The **Bonn Agreement** was a United Nations-sponsored pact establishing the **political framework for Afghanistan** following the US-led overthrow of the Taliban.
- It created the **Interim Authority**, planned a transitional government, and set a **roadmap for a new constitution** and future democratic elections.



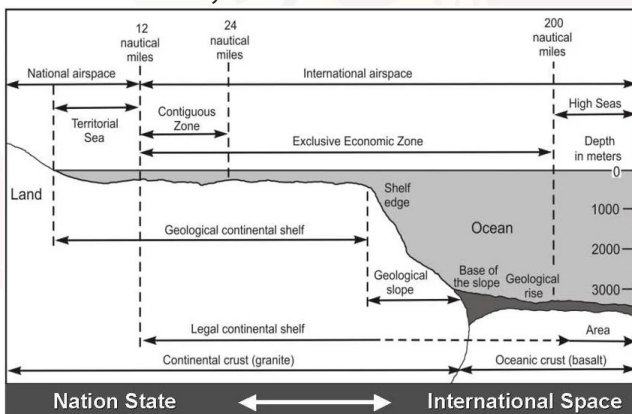
GCC resolution in UN



- **India**, a non-permanent member of the UN Security Council (UNSC) for 2025–26, **co-sponsored a Gulf Cooperation Council (GCC) resolution** demanding an immediate halt to Iranian attacks on GCC nations and the Strait of Hormuz.
- The GCC is a **political and economic union of six Arab states**—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE)—established on **May 25, 1981**, to promote cooperation, security, and economic integration, with headquarters in **Riyadh**.
- The **Supreme Council**, composed of heads of state of GCC members, makes decisions unanimously, while the **Ministerial Council consists of foreign ministers**.
- **Yemen** is not a full member of the Gulf Cooperation Council (GCC) but maintains membership in several specialized, technical GCC-affiliated institutions.
- The UNSC, established in 1946 as **one of six principal UN organs**, has 15 members—**five permanent** (China, France, Russia, UK, US) with veto powers, and **ten elected for two-year terms**.
- It **maintains international peace** through binding decisions, conflict resolution, sanctions, military authorizations, peacekeeping, admitting new members, and recommending ICJ judges.

UNCLOS and IRIS Dena

- An **Iranian warship IRIS Dena** was sunk by a US submarine while returning from the International Fleet Review 2026 at Visakhapatnam.
- The ship was sunk **40 nautical miles (roughly 75 km) off** the southern coast of Sri Lanka, near the city of **Galle** which is beyond the territorial waters of Sri Lanka but within the **Exclusive Economic Zone (EEZ)** under United Nations Convention on the Law of the Sea (UNCLOS).
- UNCLOS sets **rules for ocean use**, including navigation, resource rights, and environmental protection.
- It divides the sea into **four main zones**: **Territorial Sea** (up to 12 nm, full sovereignty, with foreign ships allowed innocent passage), **Contiguous Zone** (12–24 nm, coastal state can enforce laws on customs, taxation, immigration, and pollution), **Exclusive Economic Zone (EEZ)** (up to 200 nm, exclusive rights to resources, but freedom of navigation), and **High Seas** (beyond EEZ, open to all states).
- It was **adopted in 1982** and **entered into force in 1994** with 168 parties including the European Union.
- UNCLOS establishes mechanisms like **the International Tribunal for the Law of the Sea (ITLOS)** for resolving maritime disputes and also **creates the International Seabed Authority (ISA)** to regulate w resources in areas beyond national jurisdiction.
- **India, Sri Lanka, and the USA** are parties to UNCLOS, though the USA has signed but not ratified it fully.



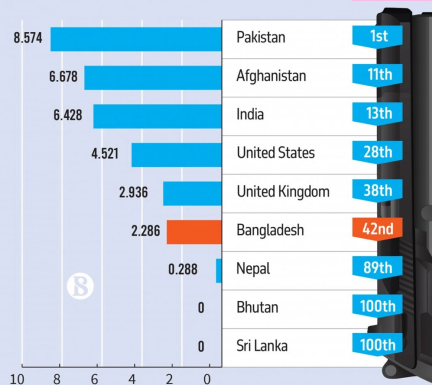
Global Terrorism Index 2026

- The **Global Terrorism Index (GTI) 2026**, published by the Sydney based **Institute for Economics and Peace (IEP)**, measures the impact of terrorism in **163 countries** based on a **5-year weighted average** of data concluding in 2025..
- It uses data from **Dragonfly's TerrorismTracker database**, which maintains detailed and structured records of terrorist incidents reported worldwide since January 2007.
- **Dragonfly**, headquartered in **London**, is a **geopolitical and security intelligence service** company that provides risk analysis to organizations.
- Index reveals that **global terrorism deaths dropped 28% to 5,582**, with incidents down 22% in 2025, reaching the lowest levels since 2007
- **Pakistan ranked first** with the highest terrorism impact, **India 13th** (score 6.428) also shows high impact.
- The **Sahel** accounted for over 50% of global terrorism deaths, making it the epicentre of terrorism.
- In the **West**, fatalities rose 280% (57 deaths), driven by ideological extremism and political terrorism, with **Islamic State (IS)** and affiliates causing nearly 17% of attacks.
- Most radicalised minors had histories of neglect or abuse, and 93% of Western fatal attacks were carried out by lone-wolf actors.

GLOBAL TERRORISM INDEX 2026

Selected countries' scores out of 10

(A lower score indicates lower impact of terrorism)



Globe Network

- The **Committee Meeting of the Global Operational Network of Anti-Corruption Law Enforcement Authorities (Globe Network)** was recently held in New Delhi.
- Established under the **Riyadh Initiative** during Saudi Arabia's G20 Presidency in 2021, Globe Network is a global platform of specialised anti-corruption authorities operating under the **UN Convention Against Corruption (UNCAC)**.
- Globe Network has **135 member countries, 250 member authorities, and 18 observers** including EUROPOL, the World Bank, and the International Association of Anti-Corruption Authorities.
- In India, the **Ministry of Home Affairs** serves as the central authority, with **CBI and Enforcement Directorate** as member agencies.
- Supported by the **UNODC**, it enables practitioner-level cooperation for investigation, prosecution, and recovery of corruption proceeds.

International Atomic Energy Agency (IAEA)

- Amid growing concerns over nuclear non-proliferation, the **International Atomic Energy Agency** held talks with **Rosatom**, Russia's state nuclear energy corporation recently.
- IAEA is an **intergovernmental organisation** that seeks to **promote the peaceful use of nuclear energy** and to inhibit its use for any military purpose, including nuclear weapons.
- It was **established in 1957 as the world's "Atoms for Peace" organisation within the UN**, and governed by its own founding treaty - the Statute of the IAEA.
- It **reports to both the UNGA and the UNSC** and is **headquartered at the UN Office at Vienna, Austria**.
- In 2005, **it was awarded the Nobel Peace Prize** for its work for a safe and peaceful world and it has **181 member states, with India being one of the founding members of it**.
- Its **primary goal is to ensure that nuclear energy is not diverted for weapons purposes** and it works with its Member States and multiple partners worldwide to promote the safe, secure, and peaceful use of nuclear technologies.

The US-Israel War on Iran

- A massive U.S.-Israel joint military offensive against Iran called **Operation Epic Fury (aka Operation Genesis or the Israeli-led Operation Roaring Lion)** was launched on February 28, 2026.
- The **campaign reportedly aims** to destroy Iran's nuclear potential, naval infrastructure, and security apparatus, resulting in the **elimination of Supreme Leader Ali Khamenei** and widespread regional conflict.
- In retaliation, Iran has **blocked the strategic Strait of Hormuz**, attacking all the US flagged vessels passing through it.
- Iran also extended air borne drone and missile attacks **targeting US based military installations in the Persian Gulf** region such as Kuwait, UAE, Bahrain, Saudi Arabia and Qatar.



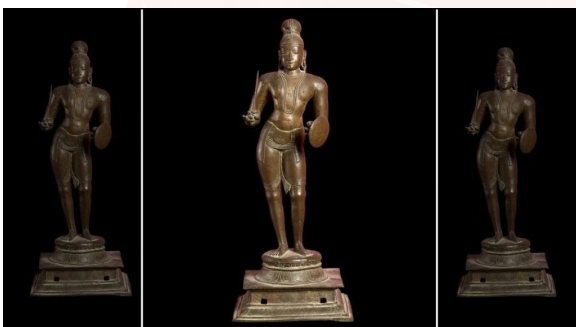
History & Culture

Porcelain



- A recent shipwreck off Singapore, carrying a large **cargo of blue-and-white porcelain**, provides insights into **Chinese ceramic craft** during the **Yuan dynasty (1279–1368 CE)**, a period under the Mongol Empire.
- **Porcelain—also called china**—is a fine, vitrified pottery made from **kaolin (china clay), feldspar, and quartz**, which distinguishes it from coarser, porous earthenware.
- It was first made in a primitive form during the **Tang dynasty (618–907 CE)** and perfected during the Yuan dynasty.
- There are **three main types: hard paste** (high-fired and highly durable), **soft paste** (fired at lower temperatures), and **bone china** (incorporates up to 50% bone ash).
- **India's ceramic crafts** include Jaipur Blue Pottery (Rajasthan), Chunar Glaze Pottery (Uttar Pradesh), Larnai Black Pottery (Meghalaya), and Black Clay Pottery of Nizamabad (Telangana), all GI-tagged and distinct for their unique materials, finishes, and traditional techniques

Alvar Bronze statue



- The **Ashmolean Museum (Oxford)** will return a **16th-century bronze idol** of Saint Thirumangai Alvar to India after verifying its provenance.
- In India, **bronze art, often made via lost-wax casting** (wax model → clay mold → metal casting → finishing), is used for worship icons, processional deities, lamps, and decorative objects.
- Thirumangai Alvar (8th century CE) was the **last of the 12 South Indian Alvar saints**, revered for his immense contribution to **Vaishnavism**.
- Born as **Neelan**, a warrior chieftain, he converted to become a devout poet-saint, composing **six key works, including Periya Thirumoli**, forming part of the **4,000 Divya Prabandham**, often praised as “**Narkavi Perumal**”
- Known for his significant **renovations of the Srirangam Ranganathaswamy Temple**, building walls and mandapams.
- He is considered an **avatar** of Lord Vishnu's Sharanga bow and known for his significant **renovations of the Srirangam Ranganathaswamy Temple**.

Kalinjar Fort



- The hill region surrounding the Kalinjar Fort in Banda, UP was officially declared a **National Geo-Heritage Site** by the Geological Survey of India (GSI) recently.
- The site is **part of the Vindhya mountain range** and the **Ken river** flows through it.
- Historical documents indicate that a strategic fort was **established during the Gupta period (4th-6th century)** and later, it **came under the Chandela dynasty (9th-13th century)** and became one of their capitals.
- **Mahmud Ghaznavi, Qutubuddin Aibak, and Humayun attacked it and wanted to win it but could not succeed** and finally, in **1569 AD, Akbar won this fort** and gifted it to Birbal and in **1812 this fort came under the British**.

- It houses mosques, temples, palaces, and stepwells and one of the main attractions of Kalinjar is the **Neelkanth Temple** features a **blue-stone Shiva Lingam** and a massive multi-armed sculpture which was built by Chandela ruler Paramaditya Dev.
- **National Geo-Heritage Sites** are unique, rare geological, geomorphological, or paleontological sites (caves, fossils, rock formations) **designated for conservation**, largely managed by the Geological Survey of India (GSI).

Kamakhya Temple



- A new **Amrit Bharat Express** is facilitating devotees to visit **Maa Kamakhya temple** in Guwahati, Assam.
- It is **one of the most revered Hindu pilgrimage sites** dedicated to **Shakti** worship and is situated on Nilachal Hill along the southern bank of the Brahmaputra River.
- It is **dedicated to Goddess Sati** also called Maa Kamakhya, an **incarnation of goddess Durga and the consort of Lord Shiva** and is one of the **most revered centres of Tantric practices**.
- It had been modelled out of a combination of **two different styles**, namely, the traditional **Nagara and Saracenic**, or Mughal style of architecture and is **named as the Nilachala Style of Architecture**.
- It is regarded as **one of the oldest of the 51 Shakti Peethas** in India and **Ambubachi Mela** is **one of the major festivals** of this temple which is held every year to commemorate the yearly menstruation of Goddess Kamakhya.
 - According to mythology, **Shakti Peethas** mark the locations where **body parts of Goddess Sati** fell after the cosmic event associated with her self-immolation.

Guru Angad Dev



- India paid tributes to the **second Sikh Guru, Shri Angad Dev** on the occasion of his Jyoti-Jyot Diwas (death anniversary).
- Guru Angad (31 March 1504 – 29 March 1552) was born with the **birth name of Lahna** the village of **Matte-di-Sarai in Ferozpur district of Punjab**, India who was the second Sikh Guru.
- He promoted **Gurmukhi** script, spread Guru Nanak Dev's teachings, **improved literacy through schools** at Khadur Sahib, encouraged physical and mental well-being, **composed 62 hymns in 10 Ragas**, and consolidated the **Langar** tradition. started by Guru Nanak Dev Ji.

Prambanan Temple



- **India and Indonesia** are collaborating to restore the Prambanan Temple complex in **Sleman, Yogyakarta, Java**.
- Built in the **9th century**, it's **Indonesia's largest Hindu temple**, dedicated to the **Trimurti**— Shiva, Vishnu, and Brahma.
- Buried for centuries, it was rediscovered in the 19th century and became a **UNESCO World Heritage Site in 1991**.
- Its **architecture** blends **Javanese** traditions with South Indian (**Pallava**) influences.

Geography

Avalanche



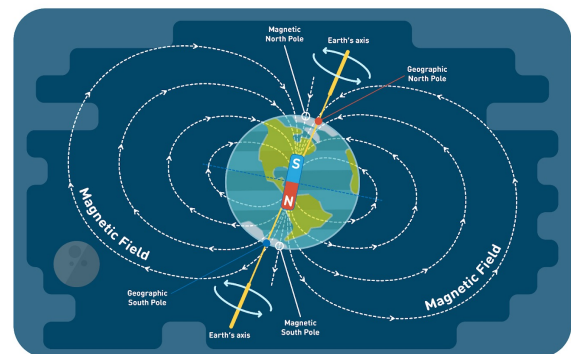
- Avalanche at **Zojila Pass** claims seven lives, prompting scrutiny of traffic management and safety regulations on the perilous **Srinagar-Leh highway**.
- **Avalanches are sudden releases of snow, ice and rocks** down the mountainsides, burying any people, animals and infrastructure in their path.
- The **Himalayas** contain the **third-largest accumulation of ice and snow** on Earth, after the two poles.
- The Himalayas **expand their height every second** as the Indian tectonic plate thrusts 1.77 inches of its vast mass under the Tibetan plate every year.
- Friction between the two enormous plates causes **immense quantities of potential energy to build up, triggering avalanches**.
- Rising winter **temperatures**, and **heavy traffic** along the highways further destabilize snowpacks, increasing the risk and impact of avalanches.

- Zojila Pass is located in the **Zaskar Range** of the Himalayas, within the Union Territory of **Ladakh** in India
- Situated at an elevation of **11,580 feet (3,529 metres)**, **Zoji Pass** carries the **main route leading from Srinagar in the Kashmir valley eastward to Leh**, in Ladakh union territory, and on to Tibet.

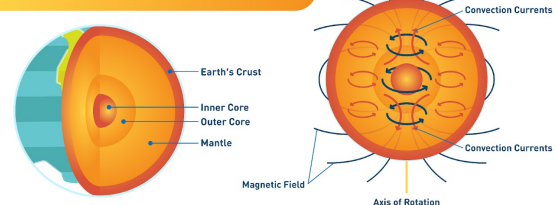
➤ **Ladakh** has only two major road connections with the rest of India – through the **Srinagar-Kargil-Leh axis via Zojila and the Manali-Leh route**.

Magnetic Field Reversals

EARTH MAGNETIC FIELD



Earth's Inner Core Currents

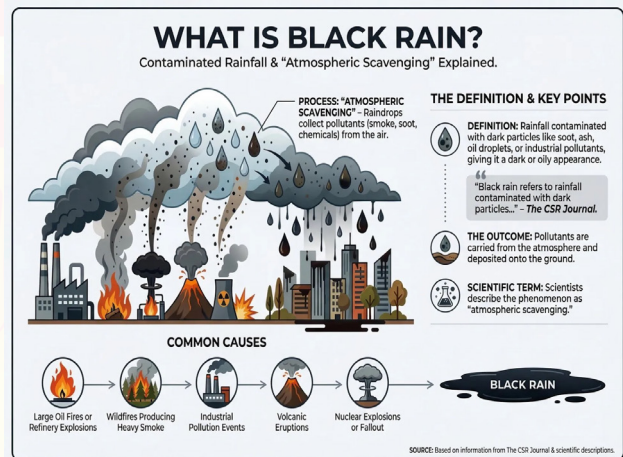


- A recent study has suggested that **magnetic pole reversals** on Earth may last **much longer than previously believed**.
- Magnetic pole reversals are **natural, non-periodic events** where Earth's magnetic north and south poles swap places.
- Earth's magnetic poles are the **points where the planet's magnetic field lines converge**.
- The generator behind Earth's magnetic field is the **liquid nickel-iron outer core**, roughly 1,800 miles below the surface, where electrical currents create the field.
- Normally, the **geographic North Pole** corresponds to a **magnetic south pole** and the **geographic South Pole** to a **magnetic north pole**.

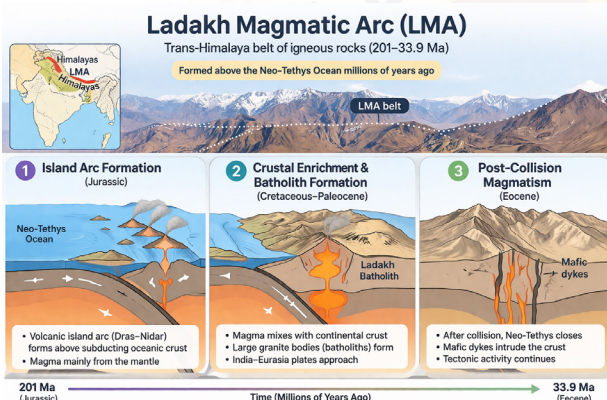
- During a **magnetic pole reversal** (or geomagnetic reversal), the north and south magnetic poles swap places, meaning compass directions would reverse.
- This process does **not happen instantly**, rather, the magnetic field gradually weakens, becomes disorganized, and then realigns in the opposite direction.
- For decades, **geologists believed** that geomagnetic reversal happened relatively quickly, **on the order of 10,000 years**.
- **Research** using deep-sea sediment cores from the North Atlantic, indicates that a **reversal 40 million years ago** during the Eocene epoch **lasted between 18,000 and 70,000 years**.
- Currently, **the geographic North Pole is a magnetic south pole**, and the geographic South Pole is a magnetic north pole.

- Over time, this **magma formed volcanic islands**, large granite bodies (**batholiths**), and mafic **dykes**, recording the region's tectonic evolution from an island-arc setting to post-collision magmatism after the Indian and Eurasian plates collided.
- Essentially, the **LMA is a geological record of ancient volcanic and tectonic activity in Ladakh**.

Black Rain



Ladakh Magmatic Arc



- Scientists have traced the **evolution of the Ladakh Magmatic Arc (LMA)** in the Trans-Himalaya of North-West India, formed 201–34 million years ago between the **Jurassic and Eocene periods**
- A **magmatic arc** is a **chain or belt of volcanoes and igneous rocks** that forms above a **subduction zone**, where one tectonic plate sinks (subducts) beneath another.
- As the **subducting plate melts in the mantle**, magma rises to the surface, creating volcanoes, plutons, and other igneous formations.
- Magmatic arcs are **usually curved and are often found along the edges** of continents or island chains, marking regions of intense volcanic and tectonic activity.
- The **LMA originated** when the Ladakh region, then above the Neo-Tethys Ocean, experienced **subduction**—giant slabs of oceanic crust sank into the mantle, melting and generating magma.

- After Israeli airstrikes on oil facilities in Tehran and Alborz, residents reported **black rain**—rain contaminated with soot, ash, oil, and industrial pollutants.
- It appears **oily and dark**, has a bitter **petroleum smell**, and is viscous to touch.
- The particles may carry toxic compounds like **polycyclic aromatic hydrocarbons (PAHs)**, heavy metals such as **nickel (Ni)** and **vanadium (V)**, and **per- and polyfluoroalkyl substances (PFAS)**, posing health risks such as skin burns, eye irritation, respiratory issues, and long-term lung damage or cancer.



Environment & Ecology

Nationally Determined Contribution (2031-2035)

- The Union Cabinet approved **India's updated NDC for 2031-2035** to submit to the UNFCCC.
- NDCs are **five-year climate action plans** under the **Paris Agreement (Article 4)**, outlining emission reduction and adaptation targets.
- India met its 2015 targets nearly a decade early.

NDC 3.0 Targets for 2035:

- Emissions Intensity:** Cut GDP emissions intensity by 47% from 2005 levels.
- Non-Fossil Power:** 60% of installed power capacity from non-fossil sources.
- Carbon Sink:** Add 3.5-4 billion tonnes CO₂ equivalent via forests and trees.

The Paris Agreement, adopted in 2015, seeks to limit global warming well below 2°C, preferably 1.5°C.

Small steps

India's third set of nationally-determined contributions (NDCs) makes small upgrades to the last one

	NDC-1	NDC-2	NDC-3	PROGRESS
Year of announcement	2015	2022	2026	
Target year	2030	2030	2035	
Goal 1: Reducing emissions intensity (emissions per unit GDP)	33-35% from 2005 levels	45% from 2005 levels	47% from 2005 levels	36% reduction achieved by 2020
Goal 2: Share of non-fossil electricity sources	40%	50%	60%	52% in February 2026
Goal 3: Creating additional carbon sinks (forests, trees)	2.5 to 3 bn tonnes over 2005 stock	2.5 to 3 bn tonnes over 2005 stock	3.5 to 4 bn tonnes over 2005 stock	2.3 bn tonnes created by 2021

Nagoya Protocol

- India has submitted its First National Report (NR1) on the implementation of the Nagoya Protocol to the Convention on Biological Diversity Secretariat.
- The Nagoya Protocol on **Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS)** to the Convention on Biological Diversity is a **supplementary agreement to the Convention on Biological Diversity**.
- It was **adopted on 29 October 2010 in Nagoya, Japan** and entered into force on 12 October 2014, 90 days after the deposit of the fiftieth instrument of ratification and **India ratified it in 2012**.

- It provides a **transparent legal framework for the effective implementation of the fair and equitable sharing of benefits** arising out of the utilization of genetic resources.
- It **applies to genetic resources and traditional knowledge (TK)** associated with genetic resources and to the benefits arising from their utilization that are covered by the CBD.
- Note: The **Convention on Biological Diversity (CBD)** is the **international legal instrument** for "the **conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits** arising out of the utilization of genetic resources" that has been **ratified by 196 nations at the 1992 Rio Earth Summit**.

Anavaran Portal

- The **Forest Survey of India (FSI)**, under the Ministry of Environment, Forest and Climate Change, has stopped its **Anavaran-Deforestation Alert System**, operational in pilot phase since January 2024.
- Using **satellite data and machine learning**, it issued **forest loss alerts** to states every 15 days for targeted inspections.
- Based on **Google Earth Engine with Sentinel-2 images** and integrated **Sentinel-1 Synthetic Aperture Radar (SAR)** for all-weather monitoring, it was similar to global systems like **Terra-I in Latin America**.
- FSI, established in **1981** and headquartered in **Dehradun**, also publishes the biennial India State of Forest Report (ISFR).
- Sentinel-1 and Sentinel-2** are core, freely available **polar-orbiting satellite** missions developed by the **European Space Agency (ESA)** for the **Copernicus programme**.
- Sentinel-1 uses radar (SAR)** for 24/7 all-weather imaging of land/ocean, while **Sentinel-2 provides high-resolution optical imagery** for land monitoring.

Poppy cultivation

- The issue of **illegal poppy cultivation** was raised in the Chhattisgarh Assembly.

- India is one of the few countries that legally grows **opium poppy (Papaver somniferous)**, the source of opium gum containing alkaloids like **morphine**—a critical pain reliever for terminal patients—and **codeine**, used in cough syrups.
- Under the **Narcotic Drugs & Psychotropic Substances Act, 1985**, the Central Government regulates opium cultivation for medical and scientific purposes.
- It notifies licensed tracts for growing and **General Conditions**—including a Minimum Qualifying Yield (MQY)—every year, mainly in **Madhya Pradesh, Rajasthan, and Uttar Pradesh**.
- The Gwalior based **Central Bureau of Narcotics (CBN)**, under the Department of Revenue, **Ministry of Finance, issues licenses, measures fields to prevent over-cultivation, and ensures farmers tender all opium to the CBN at government-fixed rates** through designated weighment centres.
- Poppy plant seeds called **khus khus** are used to produce **poppseed oil** for cooking and industrial uses, **poppy straw** from dried stalks for alkaloid extraction, and dried **Pods/flowers for decoration**.

Cassava Brown Streak Disease

- A recent study warns that over a third of Africa is at risk of **Cassava Brown Streak Disease (CBSD)**, caused by **Cassava Brown Streak Virus (CBSV)** and **Ugandan Cassava Brown Streak Virus (UCBSV)**.
- First seen in **mid-20th century East Africa**, it has spread from **coastal Tanzania, Kenya, and Mozambique inland to Uganda, Malawi, Rwanda, Burundi, and the DRC, reaching higher altitudes**.
- Transmitted mainly by the whitefly **Bemisia tabaci**, CBSD causes leaf, stem, and root necrosis, often destroying crops.
- **Control** involves clean cuttings or resistant varieties.
- **Cassava (Manihot esculenta Crantz)** is a staple for ~800 million people.
- There's a **risk of spreading** to Asia and Latin America via infected planting material.

Jumpstart approach in conservation

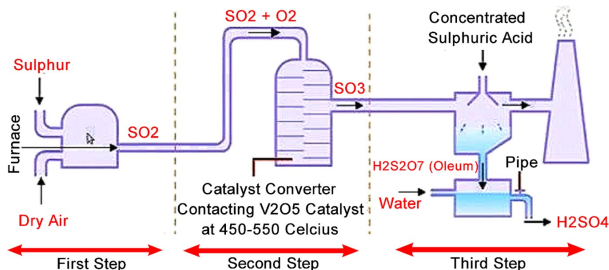


- A Great Indian Bustard (GIB) chick hatched in Gujarat using the **“Jumpstart Approach”**, an **ex-situ to in-situ conservation method**.
- Since Gujarat had only **a few females and no males**, natural breeding was not possible.
- The method involves **replacing infertile eggs in the wild with fertile eggs** produced in captivity.
- A **fertilized egg from Rajasthan was transported** and placed in a wild female's nest in Kutch, which incubated and hatched it.
- The critically endangered **Great Indian Bustard (Ardeotis nigricaps)**, also called **Godawan**, is one of the heaviest flying birds and a **flagship species** of India's grasslands.
- Once widespread in arid and semi-arid regions, it is now restricted to **Rajasthan, Gujarat, Maharashtra, Andhra Pradesh, and Karnataka**.
- It belongs to the **Otididae** family, shows **sexual dimorphism**, and males have a **gular pouch** for booming mating calls (audible up to 500 m).
- It breeds in the **monsoon**, laying **one egg**, with slow reproduction (one egg every 1–2 years).

Science & Technology

Oleum

Sulphuric Acid Manufacturing Process



- A major **oleum (aka fuming sulfuric acid)** leak at a chemical unit in Palghar, Maharashtra, forced the evacuation of over 2,600 people.
- Oleum, a mix of **sulfur trioxide (SO₃)** in concentrated **sulfuric acid (H₂SO₄)**, forms dense white fumes on contact with moist air.
- Highly corrosive and a strong dehydrating agent, it can irritate eyes, skin, and the respiratory tract; large leaks produce fine sulfuric acid mist hazardous over wide areas.
- Produced via the **Contact Process**, oleum is used in sulfuric acid production, explosives like **TNT**, and organic chemistry.

OPU-IVF-ET Technology



- Scientists at the **Indian Veterinary Research Institute (IVRI), Bareilly**, produced five healthy **Sahiwal calves** from a single donor cow using **OPU-IVF-ET** technology (**Ovum Pick-Up, In Vitro Fertilization, Embryo Transfer**).
- **OPU-IVF-ET Procedure:**
 - **Ovum Pick-Up (OPU):** Eggs are retrieved non-surgically from ovarian follicles using transvaginal ultrasound.

➤ **In Vitro Fertilization (IVF):** Eggs are matured in the lab (~24 hours) and fertilized with specialized semen to form embryos.

➤ **Embryo Transfer (ET):** Embryos are implanted into a synchronized surrogate or cryopreserved for future use.

- IVRI achieved **over 47% blastocyst (early embryo stage) rates**, with non-stimulated egg recovery and the ability to cryopreserve embryos, enabling one elite cow to produce many offspring annually.
- **Sahiwal cows**, a prized indigenous **Zebu breed from Punjab and Haryana**, yield ~12 litres of high-quality milk per day, are heat-tolerant, and hardy.

SRY Gene Screening

- The **International Olympic Committee (IOC)** now requires **SRY gene** screening for all female elite athletes.
- The **SRY gene (Sex-determining Region Y)** is a segment of DNA found on the **Y chromosome** that acts as a biological switch for male development.
- It triggers **testes formation**, which produces testosterone, leading to male traits like muscle growth and body hair.
 - **Without it (as in XX females)**, the embryo develops female reproductive organs.
- The screening test ensures fair competition by **identifying athletes with male-level physiological advantages**.
- It is a **one-time test** for international-level athletes, with exceptions for conditions like **Complete Androgen Insensitivity Syndrome (CAIS)**, where athletes cannot process testosterone and remain eligible for the female category.

AI Tokens

- The AI industry is increasingly shifting toward **tokenomics**, where the **cost per token** has become a key metric for global competition among models.
- The AI industry is thus now competing based on **how cheaply and efficiently models process text**.

- Tokens are the **smallest units of data processed by Large Language Models (LLMs)**; unlike humans who read full words, **AI breaks text into tokens**, which may be a single character, a whole word, or part of a word.
- The **cost per token** matters because every task (chatting, coding, translation) uses tokens
- **Different languages need different numbers of tokens**, and each model can only handle a limited amount at once (called the **context window**).
- By processing tokens, AI understands language structure, which helps it generate correct sentences and code.

Understanding LPG and LNG

- India is facing a significant energy crisis as the West Asia war has disrupted 54% of its LPG and 30% of its LNG supplies through the Strait of Hormuz.

Liquefied Petroleum Gas (LPG):

- It is a **flammable mixture of hydrocarbon gases**, primarily **propane and butane** which is produced as a **byproduct of crude oil refining** and natural gas processing.
- It is stored in pressurized cylinders at room temp, heavier than air (sinks to the ground) and **transported mostly by road/trucks in cylinders/tankers** and has a **higher risk of fire** if leaked (accumulates).
- It is **extensively used as cooking fuel in households (cylinders)** also used for **high-heat processes like metal cutting, welding, and food processing**.

Liquefied Natural Gas (LNG):

- It is **primarily methane** that has been **cooled to extremely low temperatures (below -160°C) through a cryogenic process** and it is **liquefied mainly for long-distance transport across oceans** where pipelines are not feasible, as its liquid volume is 600 times smaller than its gaseous form.
- It is **stored in specialized cryogenic tanks, lighter than air** (disperses quickly) and **transported mostly by specialized cryogenic ships** and generally **safer than LPG**.
- It **fuels gas-based power plants**, acts as a primary bridge to move natural gas from producing countries to consuming countries and can also be **converted back to gas for PNG (households) and CNG (transport)**.

Biologics

- The Union Budget 2026 announced the **Biopharma SHAKTI** strategy to boost domestic production of **biologics and biosimilars** and promote non-animal testing models.
- **Biologics** are complex medicines made from **living organisms** (such as proteins, vaccines, or antibodies) using biotechnology, and are used to **treat diseases** like cancer and autoimmune disorders.
- They are **large, structurally complex**, usually given via injection/IV, highly sensitive to environmental conditions, and enable **targeted (precision) treatment** but may trigger immune responses.
- **Biosimilars** are highly similar versions of already approved biologics, developed after the original product's patent expires, with **no meaningful difference in safety or effectiveness**.
- Unlike biologics (original products), biosimilars are typically **more affordable alternatives** but not exact copies due to the complexity of living systems

NavIC's Atomic Clock Failure

- ISRO recently reported that the **atomic clock on the IRNSS-1F satellite has failed**, leaving only three satellites of the NavIC constellation in function.
- Atomic clocks, using **Rubidium or Cesium vibrations**, are vital for navigation, as tiny timing errors can cause meter-level location inaccuracies.
- **NavIC** (Navigation with Indian Constellation), originally called **IRNSS** the (Indian Regional Navigation Satellite System), is **India's independent, regional satellite navigation system**.
- The **primary goal** is to provide reliable position, navigation, and timing services over India and a region extending approximately **1,500 km around its borders**, ensuring strategic independence from foreign systems like the American GPS.
- NavIC is **designed as a constellation of 7 operational satellites** 3 satellites in geostationary orbit (GEO) and 4 in inclined geosynchronous orbit (GSO).

📡 A **minimum of four satellites** is needed to provide continuous, accurate 3D real-time positioning, velocity and timing (PVT) services over India.

- The **first-generation satellites**, like IRNSS-1A, launched in July 2013, that used 3 **Swiss-made SpectraTime rubidium clocks** each, similar to those used by Europe's Galileo system, have all failed.
- Due to failures, ISRO has been launching **replacement satellites (NVS series)** to maintain the constellation.
- The new generation **NVS series satellites** (starting with NVS-01, launched in May 2023) use **indigenous rubidium atomic clocks** developed by ISRO's **Space Application Centre, Ahmedabad**.
- **NavIC offers two services: Standard Positioning Service (SPS)** for civilian use, interoperable with GNSS, and **Restricted Service (RS)**, an encrypted channel for authorized users including the military, using **L1 (1575.42 MHz), L5 (1176.45 MHz), and S Band (2498.028 MHz)**.

HALEU-Thorium Fuel

- A study in Current Science questions the use of **High-Assay Low-Enriched Uranium-Thorium (HALEU-Thorium) fuel** in India's reactors, which had been proposed earlier.
- India's nuclear program mainly uses **Pressurised Heavy Water Reactors (PHWRs)** with natural uranium fuel and heavy water (deuterium oxide, D₂O) as coolant and moderator.
- **High-Assay Low-Enriched Uranium (HALEU)** is uranium enriched to 5–20% Uranium-235, higher than the 3–5% in conventional fuel.
- **HALEU-Thorium** combines enriched uranium with thorium, which can produce fissile Uranium-233 for long-term energy.
- The U.S. commercial version, **Advanced Nuclear Energy for Enriched Life (ANEEL)**, is designed for advanced reactors and **Small Modular Reactors (SMRs)**, offering higher energy output and less radioactive waste.
- But study by **Bhabha Atomic Research Centre (BARC) scientists** says that HALEU-Thorium can reduce the effectiveness of **shutdown rods**—safety devices made of neutron-absorbing materials that quickly stop the nuclear reaction—**requiring major reactor redesigns**, making it impractical for immediate use.

Extracellular RNA

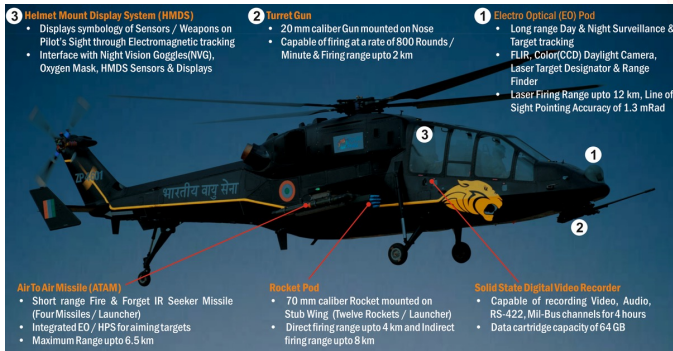
- Recently, scientists reported that extracellular RNA (**exRNA**) **from bacteria** can persist in disinfected drinking water.
- exRNAs are RNA molecules outside cells, found in fluids like blood and saliva, and include **coding RNAs**, which carry instructions to make proteins (like mRNA), and **non-coding RNAs**, which regulate genes or assist in protein synthesis (like tRNA, rRNA, miRNA).
- They may be **free or carried by proteins or vesicles** like exosomes.
- exRNAs **mediate cell-to-cell communication**, aiding immune responses, tissue repair, and development.
- They are studied as **biomarkers**—biological indicators of health or disease—since cancer cells can release exRNAs to promote tumor growth.

Waste Foundry Sand

- The **Institute of Indian Foundrymen (IIF)** and **CSIR-Central Road Research Institute (CSIR-CRRI)** partnered to use **waste foundry sand (WFS)** in road construction.
- A **foundry** is a factory that **produces metal castings** by melting metal, pouring it into a mold, and allowing it to solidify to create specific shapes
- Waste Foundry Sand (WFS) is the **leftover sand from metal casting in foundries** after it has been **used to mold or shape molten metal**.
- It is typically **high-quality silica sand**.
- Its **type and properties** depend on the casting process and the binder used:
 - **Clay-bonded sand** – common in iron and steel foundries.
 - **Chemically bonded sand** – used for cores requiring high strength.
- WFS is **generated in large amounts** and can cause **environmental problems** if disposed of, but it can be reused in road construction, bricks, and other sustainable applications.

Defence

LCH Prachand



- The President of India recently undertook a sortie in the indigenous **Light Combat Helicopter (LCH) Prachand** at Air Force Station Jaisalmer.
- **Prachand**, developed by **Hindustan Aeronautics Limited (HAL)**, is India's first indigenously designed combat helicopter for high-altitude and battlefield operations.
- It is a **multi-role attack helicopter** capable of air-to-air and air-to-ground missions, including anti-armour and counter-insurgency.
- **Prachand (LCH)** is the only attack helicopter capable of operating and landing at **5,000 m (16,400 ft)**, making it ideal for the Himalayan region.
- It is equipped with a **20 mm gun, 70 mm rockets, Helina/Dhruvastra anti-tank missiles, and Mistral-2 air-to-air missiles.**
- With features like **low radar/IR signature, narrow fuselage and crash-worthy design**, it ensures survivability.
- It has a **top speed of 268 kmph, range of 550 km, and a service ceiling above 6,500m.**

Sukhoi Su-30MKI

- An **Indian Air Force (IAF) Sukhoi-30MKI fighter** jet tragically crashed at Inglong Ekopi Hill in Assam during a routine training mission.
- It is a **heavy, all-weather, long-range, 4.5-generation two-seater multirole air superiority fighter** which serves as the primary strike and air defense platform for the Indian Air Force.

- It was **originally designed by Russia's Sukhoi Corporation** and in India it is manufactured under license by **India's Hindustan Aeronautics Limited (HAL)** at its Nashik facility.
- The Sukhoi Su-30MKI is a **twin-engine fighter aircraft** powered by two **Saturn AL-31FP** afterburning turbofan engines, which feature thrust vector control for superior maneuverability and is also equipped with **PESA radar** which offers high-power performance for long-range detection.
- It reaches a **maximum speed of Mach 2 (2120kmph)** at high altitude, and roughly 1,400kmph at low altitude
- It can **carry nuclear capable BrahMos-A supersonic cruise missile**, massive 8,000 kg combat payload, including **Astra (BVR), R-77, and Kh-59 missiles.**
- The IAF has nearly **260 Su-30MKIs in inventory** as of January 2020.



Operation Sankalp

- Amid rising tensions in West Asia, Indian Navy warships under **Operation Sankalp** are on standby for **Humanitarian Assistance and Disaster Relief (HADR).**
- Launched in 2019, it ensures the safety of Indian-flagged vessels and secure passage through the **Strait of Hormuz, Gulf of Oman, and Gulf of Aden**, while countering piracy in the **Indian Ocean Region (IOR).**
- It reinforces India's role as a **First Responder** and is backed by the **Maritime Anti-Piracy Act, 2022.**
- The **Maritime Anti-Piracy Act, 2022** provides the legal framework to define piracy, prosecute offenders (including on the high seas), and impose penalties, thereby supporting naval operations like Operation Sankalp.

Exercise in News

Exercises	Participants	Force	Description
Sea Dragon	Multinational	Navy	India participated in the United States Navy-led anti-submarine warfare (ASW) exercise near U.S. island territory Guam, Micronesia, Western Pacific. Other forces from Australia, Japan and New Zealand also participated.
Cold Response	Multinational	Military	Norwegian-led military winter exercise held every two years. It is a biennial NATO military exercise . The participants came from 14 nations: Norway and Finland, the United States, the United Kingdom, Germany, the Netherlands, France, Italy, Canada, Spain, Türkiye, Sweden, Denmark, Belgium, and NATO.
LAMITIYE 2026	India-Seychelles	Military	The 11th edition was held at Seychelles Defence Academy. 'LAMITIYE' meaning ' Friendship ' in the Creole language is a biennial training event and has been conducted in Seychelles since 2001.
IONS Maritime Exercise (IMEX) TTX	Multinational	Navy	IMEX Table-Top Exercise (TTX) was conducted under the framework of the Indian Ocean Naval Symposium (IONS) at the Maritime Warfare Centre in Kochi . Representatives from Bangladesh, France, Indonesia, Kenya, Maldives, Mauritius, Myanmar, Seychelles, Singapore, Sri Lanka, Tanzania, and Timor-Leste took part in the exercise.



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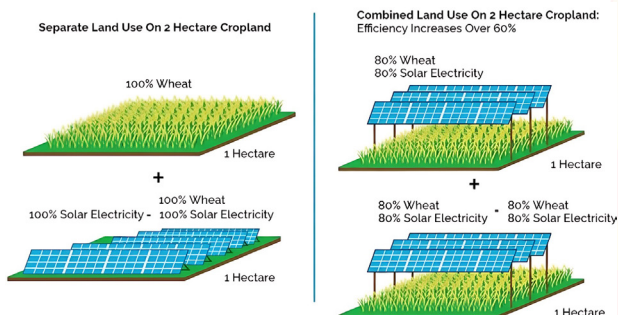


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Agri-photovoltaics (agriPV)



- In the **Union Budget 2026–27**, the outlay for the **Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM)** scheme nearly doubled to ₹5,000 crore, with plans for a **National Agri-photovoltaics Mission** targeting **10 gigawatts (GW)** capacity.
- **Agri-photovoltaics (AgriPV)** enables dual land use by integrating solar panels with agriculture, creating a microclimate that benefits shade-tolerant crops.
- Panels are installed above or between crops, improving farmer income, conserving water, and protecting crops from extreme weather.
- As of 2026, around **50 pilot projects** exist, with plans to scale up under **PM-KUSUM 2.0**.

National Dental Commission

- The Government of India has constituted the **National Dental Commission (NDC)** under the **National Dental Commission Act, 2026**, replacing the **Dental Council of India (DCI)**.
- It is the apex statutory body regulating dental education, professional conduct, and institutional standards, aiming to improve quality and access to affordable oral healthcare.
- The commission will consist of **33 members**, headed by a Chairperson and includes 8 ex-officio members and 24 part-time members
- The NDC is supported by three boards—**education, assessment and accreditation**, and **ethics and registration**—and is responsible for framing regulations, evaluating institutions and workforce, promoting research, and regulating fees in private dental colleges.

Stockholm Water Prize 2026

- **Kaveh Madani** has won the **2026 Stockholm Water Prize**, the world's most prestigious water-related award.
- Established in 1991 by the **Stockholm Water Foundation**, it is presented annually during **World Water Week** by the Swedish King and is often called the "Nobel Prize for Water."
- The prize honors contributions to water conservation, management, and sustainability, promoting innovation and awareness of global water challenges.
- Notable Indian winners include **Rajendra Singh (2015)**, **Bindeshwar Pathak (2009)**, and **M.A. Chitale (1993)**.

Kavach 4.0 System

- The Union Railway Minister informed that **Kavach 4.0** has been deployed over **1,452 route km** on the **Delhi–Mumbai and Delhi–Howrah corridors**.
- **Kavach**, India's indigenous **Automatic Train Protection (ATP) system**, was developed by the **Research Designs and Standards Organisation (RDSO)** in collaboration with three Indian vendors.
- It was created to achieve **zero-accident targets** by automatically controlling train speeds and preventing collisions.
- Key Features of Kavach:
 - **Prevention of Collisions:** Prevents head-on and rear-end collisions, as well as Signal Passing At Danger (SPAD).
 - **Automatic Braking:** Automatically applies brakes if the loco pilot fails to do so in hazardous situations or over-speeding.
 - **High-Speed Support:** Useful for high speeds and foggy weather.
 - **Safety Standards:** Certified to Safety Integrity Level 4 (SIL-4), representing high reliability.
- It uses **RFID tags, onboard locomotive equipment, and radio towers** for real-time monitoring of train position and speed, triggering brakes in case of danger.

- Compared to earlier versions (primarily Version 3.2), **Kavach 4.0 is designed for** large-scale, high-density network deployment, offering higher speed capabilities, better precision, and improved integration with existing infrastructure.
- **Lucknow based RDSO**, established in **1957** is the sole **Research and Development (R&D) wing** of the Ministry of Railways and acts as a **technical advisor and consultant** to the Railway Board, Zonal Railways, and Railway Production Units, focusing on the design, standardization, and modernization of railway technology.

World Happiness Report

- The **World Happiness Report 2026**, backed by the UN, notes that heavy social media use is harming youth well-being.
- Published by the **University of Oxford's Wellbeing Research Centre** with Gallup and the UN Sustainable Development Solutions Network, it ranks countries based on life evaluations (0–10 scale) from about **100,000 people across 140 countries**.
- Rankings consider factors like **GDP per capita, life expectancy, social support, freedom, generosity, and corruption**.
- **Finland, Iceland, Denmark, Costa Rica, and Sweden** rank highest, while **Afghanistan, Sierra Leone, Malawi, and Zimbabwe** rank lowest.
- **India improved to 116th in 2026 (from 118th in 2025)**.

Jnanpith Award

- Tamil lyricist and author **R. Vairamuthu** has been selected for the **Jnanpith Award 2025**, India's highest literary honour.
- Instituted in **1961** by a private, non-profit **Bharatiya Jnanpith trust**, it is awarded annually for **lifetime contribution to literature** across languages listed in the **Eighth Schedule (and English)**.
- Initially given for a single work, since **1982** it recognizes overall contribution.
- First awarded in **1965 to G. Sankara Kurup**, it includes a **cash prize, citation, and a bronze Saraswati statuette**, and is conferred by the President of India.

- Importantly, the Jnanpith Award is **not a government award**.
- The selection and funding for award is by **Bharatiya Jnanpith trust**, a research and cultural organization **founded in 1944 by the industrialist Sahu Shanti Prasad Jain and his wife, Rama Jain**
- The **President of India presents it ceremonially**, which adds to its recognition.

Sahitya Akademi Award

- The Sahitya Akademi announced its **annual awards for 2025**.
- They are annual literary honours given in **24 languages** (22 in the Eighth Schedule + English and Rajasthani) for the most outstanding books of literary merit.
- Established in **1954**, they recognize **original works published in the previous 5 years** by Indian citizens across genres like poetry, novels, drama, and essays, with **one award per language**, carrying a **plaque, shawl, and ₹1 lakh**.
- The **Sahitya Akademi**, inaugurated by the Government of India under the **Ministry of Culture** and registered as a society under the **Societies Registration Act, 1860**, is the apex body for literary promotion, dialogue, and publication in India, and the only institution working across **24 Indian languages**.

GI-Tagged Joha Rice

- The **Agricultural and Processed Food Products Export Development Authority (APEDA)** has facilitated the first export consignment of 25 metric tonnes of GI-tagged Joha rice from Assam to the United Kingdom and Italy.
- Joha rice is an **indigenous aromatic rice variety from Assam** -- received the Geographical Indication status in 2017. Known for its **distinct fragrance, fine grain texture and rich taste**, the variety is increasingly gaining recognition in premium domestic and international markets.
- Other key **GI-tagged rice** includes **Basmati** (North India), **Chak-Hao** (Manipur), **Gobindobhog** (West Bengal), **Kalajeera** (Odisha), **Katarni** (Bihar), **Navara/Pokkali** (Kerala), and **Wada Kolam** (Maharashtra), **Thooyamalli Rice** (Tamil Nadu) ensuring authenticity and regional protection

Broadcast Audience Research Council (BARC)

- The **Ministry of Information and Broadcasting (I&B)** ordered the **Broadcast Audience Research Council (BARC)** to stop publishing **Television Rating Points (TRPs)** for news channels till further notice.
- This is due to “**unwarranted sensationalism**” and speculative reporting of the **Israel-Iran conflict**.
- **TRP**, which measures TV program viewership, is **calculated weekly by BARC** using “**BAR-O-meters**” in 45,000 panel households to guide advertisers.
- It guides advertisers in buying ad spots.
- **Established in 2010** as per **Telecom Regulatory Authority of India (TRAI)** recommendations, BARC is a **joint industry body**—broadcasters (60%), advertisers (20%), and media agencies (20%)—operating under I&B Ministry guidelines

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Places in News

Malawi



- India has dispatched 1,000 metric tonnes of rice as humanitarian assistance to Malawi after a severe drought triggered by the El Niño caused a major food crisis.
- Malawi is a **south-east African country bordered by Zambia**, the United Republic of Tanzania and Mozambique.
- ★ The capital of **Malawi is Lilongwe**.
- It is narrow and **landlocked** but has a **750-kilometre-long border with Lake Malawi** (also called Lake Nyasa).
- Lake Malawi is the **third largest lake** in Africa after Lake Victoria and Lake Tanganyika, spanning a length of 568 km and a width of between 16 and 80 km.
- The **East African Rift Valley** runs through the country from north to south.
- The main ethnic groups are the Chewa, Tumbuka, Yao and Ngoni.

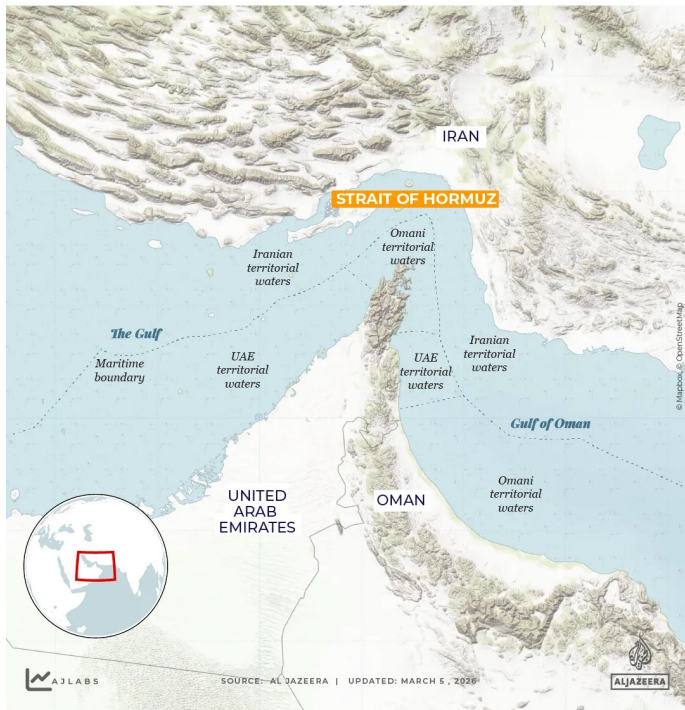
The Strait of Hormuz

- Rising tensions involving Iran, Israel, and the U.S. have put the **Strait of Hormuz** under focus due to risks to oil and LNG supply.

- It is a narrow waterway between **Iran and Oman's Musandam Peninsula**, linking the **Persian Gulf to the Gulf of Oman**.
- The strait is about **33 km wide at its narrowest** and ~50 km at its entrance/exit, with shipping lanes passing through **Iranian and Omani territorial waters**.
- Around **20 million barrels of oil per day (≈20% of global supply)** and about **20% of global LNG (mainly from Qatar)** transit through it, making it a critical global energy chokepoint.

Straits of Hormuz

The 39km (24-mile) Strait of Hormuz is the world's most critical oil chokepoint, linking the Gulf to the Gulf of Oman. It is the only route to the open ocean for Gulf-based exporters and handles one-fifth of global oil and LNG.



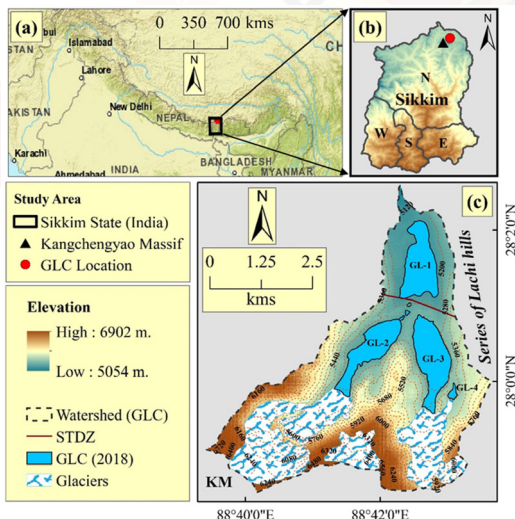
- Tourism to **Gurudongmar Lake** in North Sikkim is reviving after disruption caused by the **South Lhonak Lake GLOF**.
- A **Glacial Lake Outburst Flood (GLOF)** is a sudden release of water from a glacial lake, caused by the failure of natural barriers like ice or moraines, leading to severe downstream flooding.
- Located at **17,800 ft (5,430 m)**, Gurudongmar Lake is one of the highest lakes in India and the world, and a key source of the **Teesta River**.
- Situated north of the **Khangchengyao Range** and surrounded by snow-clad mountains, it is a freezing alpine lake and a sacred site for **Buddhists, Sikhs, and Hindus**, named after **Guru Padmasambhava (Guru Rinpoche)**.

Sulawesi Island



- A **hand stencil** in a limestone cave on **Sulawesi (Indonesia)** has been dated to **67,800 years ago**, making it the **oldest known rock art**.
- Sulawesi, formerly called **Celebes**, is the **world's 11th largest island**, located between the **Asian and Australian continental shelves**.
- Its unique shape with five peninsulas formed due to **tectonic plate collisions**, and it has **13 freshwater lakes**, including **Lake Matano**, the deepest in Southeast Asia.

Gurudongmar Lake



Veerangana Durgavati Tiger Reserve



- Madhya Pradesh has begun setting up a **soft release Boma** at **Veerangana Durgavati Tiger Reserve (VDTR)**, marking India's third cheetah site.
- A **boma** is a **fenced enclosure used to temporarily hold and acclimatize wild animals** before releasing them into the wild.
- Located in the **upper Vindhyan range**, the reserve lies on a plateau and connects to forests extending toward **Bandhavgarh National Park**.
- It is the **7th tiger reserve in Madhya Pradesh**, named after **Rani Durgavati**, spans parts of the **Narmada and Yamuna basins**, and includes **Singorgarh Fort**.
- The vegetation is mainly **dry deciduous**, with species like **teak, saja, dhaora, ber, and amla**.

Lviv's Historic Architectural Ensemble



- A Russian drone strike damaged a residential building in the **UNESCO-listed historic centre of Lviv**, near the Bernardine Monastery.
- **Lviv**, in western **Ukraine** on the **Roztochchya Upland**, has historically been the cultural centre of **Galicia**.
- The city features **distinct ethnic quarters** (Armenian, Jewish, Ukrainian, Polish) and a unique blend of **Eastern European styles with Italian Renaissance and Austrian Baroque influences**, earning UNESCO World Heritage status in **1998**.

Energy Facilities in Middle East

- Critical **energy infrastructure** across the Middle East in Iran, Saudi Arabia, Qatar, the UAE, and Bahrain is under intense attack with drone and missile strikes

- **Kharg Island** is a vital Iranian coral island in the northern Persian Gulf that acts as the nation's primary oil export terminal, handling ~90% of its crude exports.

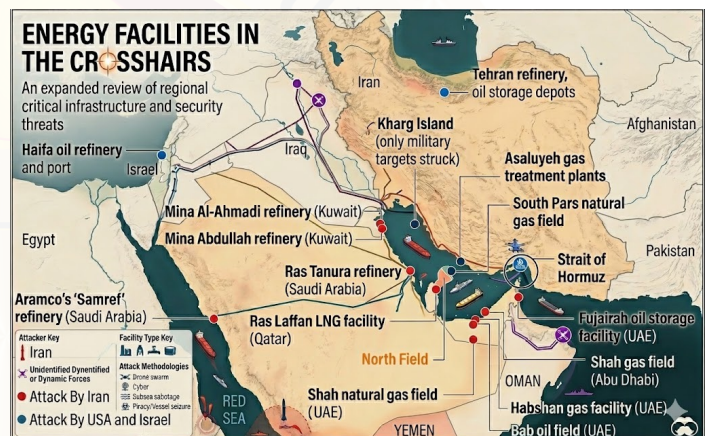
➤ Measuring ~8x4 km, its deep waters allow supertankers to dock, supported by large storage facilities.

➤ It is unique for having natural freshwater.

- Ras Laffan is the **world's largest Liquefied Natural Gas (LNG) export hub**, housing major liquefaction plants and export terminals and is **located in Northeastern Qatar, along the Persian Gulf coast**.

- South Par Gas Field is the **world's largest natural gas field, shared between Iran (South Pars) and Qatar (North Field)** located beneath the Persian Gulf.

➤ It is one of the **world's biggest proven natural gas reserves** and consists of **multiple offshore platforms and processing units** for extraction.



Roopkund Lake



- **Roopkund Lake (Skeleton Lake)** in Uttarakhand is famous for **hundreds of human skeletons** visible when the ice melts, first reported in **1942**.
- Research shows the remains belong to **over 300 people from different time periods and ancestries**, not a single event.
- Some date to around **800 CE (likely linked to a deadly hailstorm during a pilgrimage)**, while others are from later periods, including groups with **Mediterranean origins**, making the mystery more complex.
- The site combines **science, legend (Nanda Devi pilgrimage story), and mystery**, and remains an important **trekking and cultural location** in the Himalayas

Solomon Islands



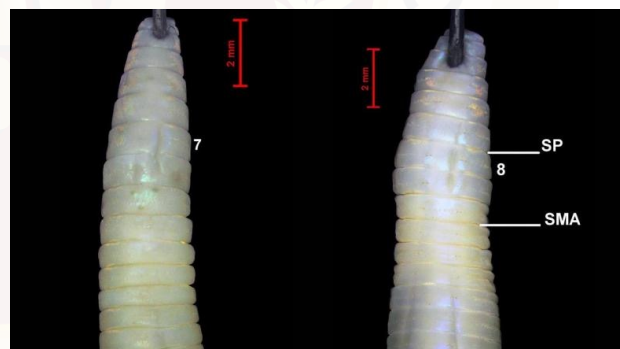
- Recently, a 6.7-Magnitude earthquake hit Kirakira in Solomon Islands.
- Solomon Islands is an **archipelagic state situated in the south-west Pacific Ocean**, approximately 2,000 kms to the northeast of Australia.
- Once a British protectorate, **it achieved independence as a republic in 1978** and it **extends over nearly 1000 islands comprising nine main island groups** with the **capital, Honiara** located on Guadalcanal, the largest island.
- The country is **mainly mountainous and covered in forests**, although it has some extensive plains and has **ethnic groups such as Melanesian 93%, Polynesian 4%, Micronesian 1.5%, other 1.5%**.

Forest Owlet



- The **forest owlet (Athene blewitti)** has been spotted in **Kuno National Park (Madhya Pradesh)** after 113 years.
- A rare, small, **diurnal owl endemic to India**, it was rediscovered in **1997 in Maharashtra** after being thought extinct.
- It inhabits **dry and moist deciduous forests** of central India, found in parts of **Madhya Pradesh, Maharashtra, and Gujarat**.

New Earthworm Species



- Researchers discovered two new earthworm species in the **Western Ghats: Moniligaster girishi**, endemic to tropical evergreen forests, and **Drawida reynoldsi**, from montane grasslands, notable for its sausage-like internal structures and two-lobed atrium.

Jungle Cat



- A Scientific Reports study estimates **India's jungle cat (Felis chaus)** population at 1.57–4.59 lakh, the first national estimate.
- Also called **swamp or reed cat**, it prefers wetlands, grasslands, and reed-filled habitats, hunts rodents and birds, is active at dawn/dusk, and can **swim to catch fish**.

The Dual-Sex Crab (Vela carli)



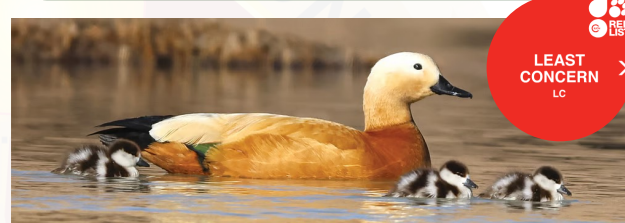
- Researchers have discovered a **freshwater crab** with **gynandromorphy** in **Silent Valley National Park (Western Ghats)**.
- **Gynandromorphy** is a rare biological condition in which a single organism has both male and female physical characteristics.
 - **Different body parts show different sexes** (e.g., one side male, the other female).
 - It usually occurs due to **errors in cell division** during early development.
- The species, from the **Gecarcinucidae** family, is **endemic to the Central Western Ghats**.
- While gynandromorphism is known in butterflies and birds, this is the **first recorded case in Gecarcinucidae crabs**.

Striped Hyena (Hyaena hyaena)



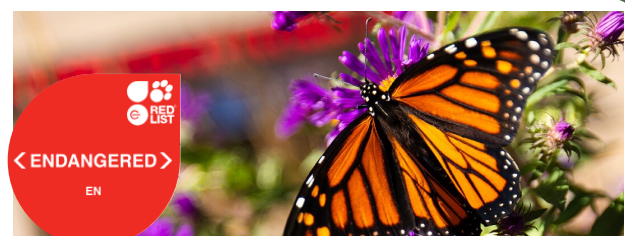
- **Striped Hyena** is a medium-sized, **nocturnal carnivore**—the only hyena in the Indian subcontinent—is a key scavenger and hunter of small prey, found in arid regions across Africa, the Middle East, and Central & South Asia.
- India is a major stronghold, including **Rajasthan, Gujarat, Maharashtra, and Madhya Pradesh**.

The Ruddy Shelduck



- Residents of **Mudh village (Ladakh)** have protected the **Ruddy Shelduck (Tadorna ferruginea)** for over two decades, helping fledglings reach the **Indus River**.
- Also called the **Brahminy duck**, it is a **migratory waterfowl**, with **Ladakh as its only breeding site in India**.
- Found across **Europe, Central Asia, and Africa** (wintering in South Asia), it inhabits **rivers, lakes, marshes, and high-altitude regions up to 4,800 m**.
- It has **orange-brown plumage with a pale head** and is highly adaptable, with migratory populations crossing the **Himalayas and Gobi Desert**.

Monarch Butterfly



- The Monarch butterfly (*Danaus plexippus*), known for its bright **orange-red wings and long migrations** (1,200–2,800 miles) to central Mexico, saw a 64% increase in Mexican forests.
- Native to **North and Central America**, it is also found in **South America, Australia, Hawaii, and parts of Asia, including India.**
- Its decline is mainly due to the loss of **milkweed**, the sole food for its caterpillars.

- A **koala population rebound in southeastern Australia** is improving genetic diversity, helping avoid extinction risks.
- The **koala (*Phascolarctos cinereus*)** is a **marsupial**, often called a “koala bear,” though not a true bear.
- It lives in **eucalyptus forests**, depends on these trees for food and shelter, is **slow-moving and sleeps up to 18 hours a day**, and shows **sexual dimorphism.**

Red-Crowned Roofed Turtle



- The Red-crowned Roofed Turtle (*Batagur kachuga*), once common in the Ganga, is now limited to **shrinking habitats in India, Bangladesh, and Nepal.**
- **India’s three large Batagur turtles**—*Batagur kachuga* (Critically Endangered, Ganga), *Batagur baska* (Critically Endangered, Brahmaputra & Ganga), and *Batagur dhongoka* (Endangered, northeast)—are **freshwater, omnivorous species and bio-indicators** of river health.

Beaver



- Study shows **beavers** can help reduce carbon dioxide release by engineering riverbeds.
- Beavers are **semi-aquatic herbivorous rodents**, the **second-largest in the world** after capybara, found in **North America, Europe, and Asia**, living in freshwater habitats.
- Known as “**ecosystem engineers**,” they build dams using wood, mud, and stones, creating wetlands and reshaping landscapes.
- They have **stout bodies, flat tails, and strong incisors** for cutting wood.
- Beavers are **not native to India today**, with no existing wild populations.
- Though they **historically occurred in northern regions**, they disappeared due to habitat loss and hunting.
- The last recorded presence, the “**Manipur beaver**,” **dates back to 1905**, after which it became regionally extinct.

Koala



Keywords

1. **Morung Education System:** Traditionally, the Morung was a **Naga community space** where elders taught **culture, history, and life skills** through **storytelling**. Today, it **also includes academic subjects** like mathematics and science, blending education with folk songs, games, and storytelling to develop **both knowledge and practical skills in children**.
2. **Legacy Thrust Territories:** After officially declaring India “**Naxal-free,**” the **Home Ministry** has revised the **classification** of left-wing extremism (LWE) affected districts, replacing “**most affected**” with “**LWE affected,**” “**districts of concern,**” and “**legacy and thrust districts.**” totalling 38 districts. **Bijapur** (Chhattisgarh) and **West Singhbhum** (Jharkhand) are currently the “LWE Affected Districts,” while **Kanker** (Chhattisgarh) is listed as a “District of Concern”.
3. **Force Majeure:** Force majeure, meaning “**superior force**” in **French**, is a contract clause excusing a party from obligations when uncontrollable events prevent performance. Companies in Qatar, Kuwait, and Bahrain invoked it after **shipping disruptions** through the Strait of Hormuz, allowing temporary suspension, partial/full release, or adjustment of obligations.
4. **The Blue Book protocol:** The “Blue Book” protocol is a **confidential, comprehensive manual** issued by the **Ministry of Home Affairs (MHA)** that outlines strict security, logistics, and ceremonial arrangements for visits by top constitutional authorities, including the President, Vice-President, and Prime Minister. **Political controversies** often arise when top state leadership (like Chief Ministers) fail to follow the protocol by not receiving the President or Prime Minister upon their arrival.
5. **Vayu Baan Project:** ‘Vayu Baan’ is India’s **first helicopter-launched drone**, designed under the **indigenous Air-Launched Effects (ALE) programme** to integrate unmanned aerial systems with manned helicopters. Once released mid-flight, it unfolds wings, powers up propulsion, and can switch between intelligence gathering and kamikaze-style strikes. The project is led by the **IAF’s Directorate of Aerospace Design** in Gandhinagar.
6. **E-commerce Moratorium:** It is a global **WTO agreement** since 1998 prohibiting customs duties on electronic transmissions (e.g., software, streaming, e-books). Renewed periodically for two years, it aims to **keep digital trade free**, but **officially lapsed** on March 31, 2026, after WTO members failed to reach consensus at the 14th Ministerial Conference (MC14) in Yaoundé, mainly due to **objections from developing nations** including India citing revenue loss.
7. **SWAYATT Initiative:** Launched in **2019**, the SWAYATT Initiative (Startups, Women and Youth Advantage through e-Transactions) aims to **democratize government procurement** by enabling startups, women entrepreneurs, youth, MSEs, SHGs, and last-mile sellers to participate directly through the **Government e-Marketplace (GeM)**.
8. **Earth Hour 2026:** Organized by **World Wide Fund for Nature (WWF)** globally and WWF-India with the Ministry of Environment, Forest and Climate Change in India, Earth Hour **marked 20 years** of the global movement encouraging people to switch off lights for an hour (8:30 PM to 9:30 PM local time) to raise awareness about climate change and energy conservation. **Started in Sydney in 2007** as a symbolic lights-out event, the theme for Earth Hour 2026 was “Give an Hour for Earth.”
9. **Terminal High Altitude Area Defense (THAAD):** It is a mobile U.S. missile defence system, developed by Lockheed Martin, that **intercepts short- to intermediate-range ballistic missiles** during their terminal phase using powerful X-band radar. It uses **hit-to-kill technology** (kinetic impact instead of explosives) and can engage targets at ranges of about **150–200 km**.
10. **Yellow Line:** It is a de facto demarcation in the **Gaza Strip**, marked by **yellow-painted concrete blocks**, showing the limit of **Israeli military withdrawal** under the October 2025 ceasefire. It separates areas **under Israeli control (about 58% of Gaza)** from Palestinian-controlled areas and functions as a buffer zone, with its movement deeper into Gaza **causing displacement and increased Israeli military presence**.

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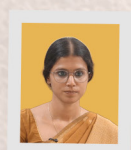
RAJATH R
AIR 348



AMAL KAMPIYIL
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NISHATH M**
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SAREEN V P**
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ARUNIMA M S
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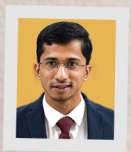
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AIR 576
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NIDHIN R H
AIR 699



FAIRUZ FATHIMA M
AIR 708



**MOHAMED
HASHIM K**
AIR 713



**MUHAMMED
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