

FORTUNE Prelims Precise

November 2025



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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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November 2025
Monthly Current
Affairs quiz here

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Stray Dog Menace

- The Supreme Court gave directions to control stray dog menace under the Prevention of Cruelty to Animals Act and Animal Birth Control Rules.

The Prevention of Cruelty to Animals Act, 1960 (PCA Act)

- The act lists 16 acts of cruelty (beating, overloading, mutilation, phooka/doom dev, etc.).
- It **restricts exhibition** of trained animals; bears, monkeys, tigers, panthers, lions banned in circuses since 1998; 2017 notification banned all circus animals except dogs & horses (with conditions).
- It established the **Animal Welfare Board of India (AWBI)** in 1962 (under the Ministry of Fisheries, Animal Husbandry & Dairying), and the **Committee for the Purpose of Control and Supervision of Experiments on Animals (CPCSEA)** for regulating animal experiments.
- In **Animal Welfare Board of India vs A. Nagaraja (2014)** the Supreme Court banned Jallikattu and bullock-cart races, and read animal dignity into **Article 21** of the Constitution and **Article 51A(g)** (Fundamental Duty to have compassion for living creatures)

Animal Birth Control (ABC) Rules, 2023

- Issued under the PCA Act, it mandates **municipalities & panchayats** to conduct **sterilisation + vaccination** through AWBI-approved organisations.
- Follows **CNVR method (Catch-Neuter-Vaccinate-Return)** and prohibits relocation outside the original area.
- It acknowledges street dogs as **“community animals,”** requiring Resident Welfare Association (RWAs) to consult with local bodies to designate feeding spots.

Constitution 131st Amendment Bill

- The Central Government withdrew the Constitution (131st Amendment) Bill 2025 that sought to bring UT of **Chandigarh** under **Article 240 of the Constitution**.
- Chandigarh is a **Union Territory** with Legislature and the **joint capital of Punjab and Haryana** (since Punjab Reorganisation Act, 1966).
- The **Governor of Punjab** currently holds additional charge as the **Administrator** of Chandigarh.
- The Article 240 of Indian Constitution **empowers the President** to make regulations for “peace, progress and good government” of specified UTs.
- This **includes** Union territory of the Andaman and Nicobar Islands; Lakshadweep; Dadra and Nagar Haveli and Daman and Diu; and Puducherry when its Legislative Assembly is dissolved or suspended.
- Such regulations have the **same force as an Act of Parliament** and can repeal/amend existing laws.
- Including Chandigarh would enable **appointment of a separate full-time Administrator/Lieutenant Governor** (like Delhi, Puducherry, J&K, etc.).
- Historically, Chandigarh was created as a joint capital after Haryana was carved out of Punjab in 1966.
- **Rajiv-Longowal Accord (1985):** Promised transfer of Chandigarh to Punjab in lieu of Hindi-speaking areas in Punjab to Haryana (remained unfulfilled).

National Legal Services Authority (NALSA)

- President Droupadi Murmu nominated Justice Vikram Nath, the second senior-most judge of the Supreme Court, as Executive Chairman of the **National Legal Services Authority (NALSA)**, while Chief Justice of India Surya Kant nominated Justice Jitendra Kumar Maheshwari as Chairman of the **Supreme Court Legal Services Committee (SCLSC)**.

- This was in keeping with the **established convention** that these posts are held by the second and third senior-most judges respectively.
- **NALSA** is the apex body for providing free legal services to weaker sections, organising Lok Adalats, and promoting legal awareness in India.
- Constituted under the **Legal Services Authorities Act, 1987** to give effect to **Article 39A** of the Constitution (which mandates free legal aid to ensure equal access to justice).
- It is **headquartered at the Supreme Court** and headed by the **CJI as Patron-in-Chief**.
- The **hierarchical structure** comprises State Legal Services Authorities (headed by the Chief Justice of the High Court as Patron-in-Chief, with the senior-most High Court judge as Executive Chairman), District Legal Services Authorities (chaired by the District Judge), and Taluk-level committees.

Special Leave Petition (SLP)

- The J&K and Ladakh High Court held that **dismissal of a Special Leave Petition (SLP)**, the High Court's order **remains as it is** and does **not become** a Supreme Court-approved order.
- A **Special Leave Petition (SLP)** is a request made to the Supreme Court under **Article 136** asking for permission to appeal against a judgment or order of any court or tribunal in India, used only in exceptional situations to prevent injustice.
- It is an **extraordinary discretionary power** only available for SC in India..
- This is different from the **regular appeals** provided under Articles **132–134** from High Court decisions.
- Article 136 is not a matter of right but a tool used sparingly to prevent **grave injustice**.
 - 👉 In **civil cases**, SLP is allowed only when there is a **substantial question of law** or an issue of **general public importance**.
 - 👉 In **criminal cases**, SLP is granted only in **special and exceptional circumstances** showing **grave injustice**.
- In the current case, the High Court noted that when the SC dismisses an SLP, it simply means the **SC chose not to examine the lower court's order**, and such dismissal cannot be treated as the Supreme Court approving the High Court's decision.

Digital Personal Data Protection (DPDP) Rules, 2025

- The Government has notified the **Digital Personal Data Protection (DPDP) Rules, 2025** to implement the DPDP Act, 2023.
- The Act applies to all **digital personal data processed in India**, including data collected online or offline and later digitised, and also to processing done **outside India** if it relates to offering goods or services to individuals in India.

What is covered under DPDP Act?

1	2	3
Data principals (Individuals)	Indian Businesses and Organizations	Foreign Entities (in scope)
Any natural person in India whose digital personal data is processed	Companies and entities that collect or process digital personal data inside India	Non-Indian organizations that offer goods/services to people in India or profile people in India

4	5	Exclusions
Data Fiduciaries and Data Processors	Significant Data Fiduciaries	Non-digital records, purely personal/ domestic processing, and statutorily exempted government uses
Entities that decide how/why data is processed (fiduciaries) and those acting on their instructions (processors)	Large platforms or data-intensive services with extra obligations (e.g., appoint officer, conduct DIAs)	

- Data Fiduciaries must give a **clear privacy notice** at the time of consent, explaining the data collected, purpose of use, rights of the Data Principal, and complaint mechanisms, available in English or any of the **22 Eighth Schedule languages**.
- They must also take **parental/guardian consent** before processing a child's or a disabled person's data, avoid processing that may cause harm, and are **prohibited from behavioural monitoring or targeted advertising towards children**.
- It introduces a **Consent Manager** which is an **entity or platform that helps manage and record the consent of Data Principals (individuals)** for the processing of their personal data to be **established or approved by the government or regulatory authority**.

- The Rules operationalise the **Data Protection Board**, to be appointed by the central government, by detailing its procedures for handling complaints, enforcing compliance, and overseeing Data Fiduciaries.
- The Rules operationalised **Section 44(3) of the DPDP Act** which amends RTI Section 8(1)(j) to remove the “larger public interest” exception regarding personal information sought under RTI.

Geological Survey of India (GSI)

- The Geological Survey of India (GSI), **established in 1851** to find coal for the Railways, recently began its **175th-year commemoration**.
- Its origin traces to **Sir Thomas Oldham**, Chief of the Irish Geological Survey, who arrived in Calcutta on 4th March 1851.
- GSI’s main **functions** include creating and updating national geoscientific data and assessing mineral resources through ground, airborne, and marine surveys, mineral prospecting, geotechnical and geo-environmental studies, natural hazard assessments, glaciology, and seismotectonic research.
- Headquartered in **Kolkata**, it has six regional offices (Lucknow, Jaipur, Nagpur, Hyderabad, Shillong, Kolkata) and State Units across India.
- GSI is an attached office of the **Ministry of Mines**.

Juvenile Justice Boards

- The India Justice Report (IJR), released by Tata Trusts in collaboration with civil society organizations highlights major gaps in the juvenile justice system.
- Under **Section 4 of the Juvenile Justice Act, 2015**, every district must have a **Juvenile Justice Board (JJB)**, a quasi-judicial body established to deal with children in conflict with law.
- JJB can direct reformatory measures, counselling, probation, or placement in **Child Care Institutions (CCIs)**.
- For **children below 16**, the JJB always decides the outcome (rehabilitative measures, probation, or CCI placement).

- For **children aged 16–18** accused of heinous offences, the JJB first assesses whether the child can be tried as an adult:
 - ☞ If yes, the case is transferred to an adult court.
 - ☞ If not, the JJB decides the verdict and rehabilitation.
- JJB will be composed of a **Principal Magistrate** and **two social workers (at least one woman)**
- IJR findings show **one in four JJBs** operate without full benches, and **55% of cases remain pending**.
- Despite the mandate for every JJB to have an attached legal services clinic, 30% of the 437 responding boards reported having none.

Ex-Post Facto Green Clearances

- The **Supreme Court**, by a **2:1 majority**, recalled its **Vanashakti** judgment (May 2025) that had barred **post-facto environmental clearances (ECs)**.
- **Ex post facto EC** is when a project **gets environmental clearance after it has already started**, instead of getting it **before starting**, to retrospectively legalise the violation.
- According to **Environment Impact Assessment (EIA) Notification 2006** under Environment (Protection) Act, 1986, certain categories of projects like mining, industrial expansion, and real estate need **prior EC**: Category ‘A’ assessed by **MoEFCC**, Category ‘B’ by **State EIA Authorities**.
- Due to widespread violations, a 2017 EIA notification allowed **limited ex post facto ECs** for projects violating EC requirements until 14 March 2017.
- Later a 2021 Office Memorandum (OM), provided a framework including **conditional ECs, demolition, penalties, bank guarantees, and restoration plans**.
- The **Vanashakti judgment** had held that granting retrospective clearances (ex post facto) in any form to regularise illegal constructions was clearly illegal
- However, the court now noted that strictly invalidating all ex post facto ECs and ordering mass demolitions could **create more pollution and harm public interest**.

- The Court reasoned that demolishing a large number of constructions at once may be impractical and environmentally damaging, so a **nuanced approach is needed** rather than blanket invalidation.

SC on Presidential Reference

- A five-judge Constitutional Bench of the Supreme Court gave its opinions to the **16th Presidential Reference** under **Article 143**.
- It held that courts **cannot impose fixed timelines** on the President or Governors for disposing of State Bills, **nor assume “deemed assent”** after a court-set deadline.
- On **April 8, 2025**, a 2-member Supreme Court bench in the **State of Tamil Nadu vs Governor of Tamil Nadu** ruled the Governor’s delay on 10 state bills unconstitutional, declaring them deemed assented and giving future 3-month timelines.
- This led to a **Presidential Reference** questioning the court’s power to impose such timelines through 14 questions to the Court on May 15, 2025.

Key points:

- **Governor’s powers (Art. 200):** SC opined that a Governor cannot keep a Bill pending indefinitely; if assent is withheld, it **must be returned** to the State Legislature.
- **Discretion:** Governors have **discretion in assenting** to Bills and are **not bound by Cabinet** advice under Article 200, since binding advice would make it impossible for a Governor to return a Bill for reconsideration.
- **After reconsideration,** the Governor must either grant assent or reserve the Bill for the President.
- **Deemed Assent:** SC opined that ‘deemed assent’ is unconstitutional, as the Constitution does not provide for automatic approval of Bills
- **Judicial review:**
 - ☞ While the Governor has **immunity under Article 361**, Courts can review **prolonged and unexplained inaction** by a Governor.
 - ☞ **Decisions** of the President under Article 201 and of the Governor on assent are **not justiciable**, but their inaction is.

☞ Courts cannot review **Bills**, only enacted laws.

- **Timelines:** No “one-size-fits-all” deadlines; Article 200’s “**as soon as possible**” cannot be judicially fixed.
- **Article 143:** The President need not seek SC’s opinion every time a Bill is reserved.
- **Opinion overruling the Judgment:** The advisory opinion can “overrule, if necessary”, according to an earlier Presidential Reference in **Special Courts Bill (1978)**.



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Classification of India's Forex Framework

- The International Monetary Fund (IMF) is expected to change the way it classifies India's exchange rate regime to **"crawling peg"**.
- Countries adopt different **exchange rate strategies** to manage their foreign exchange and stabilize their economy:
- Currencies can be managed as **fixed/pegged** (tied to another currency with central bank maintaining the rate), **pure float** (market-determined with minimal intervention), or **managed float** (mostly floating but central bank intervenes to limit volatility).
- Crawling peg is a variant of managed float where the currency is pegged to another currency or a basket but **allowed to adjust gradually over time** (small, pre-announced steps or in response to inflation differences).
- It combines stability of a fixed rate with flexibility to adapt.
 - 👉 Countries with Forex volatility and economic instability may use this combination of a fixed and floating rate model to minimize the effects of economic dislocation, manage inflation expectations, and prevent uncontrolled currency devaluation.
 - 👉 IMF had in 2023 classified India's exchange rate regime as a **"stabilized arrangement" from a floating arrangement** in its **Article IV report**, which means that the **rupee mostly floats**, but the **RBI intervenes frequently** to limit large swings.
- If the IMF now calls it a **crawling peg**, it signals that the **rupee is increasingly being managed in a structured way**, with **gradual adjustments over time** rather than occasional interventions.

Note: The **Article IV report** is the IMF's **annual assessment of a member country's economy**, conducted under **Article IV of the IMF's Articles of Agreement (founding legal document of the IMF)**.

Capital Gains Account Scheme (CGAS)

- The **Ministry of Finance** has notified the **Capital Gains Accounts (Second Amendment) Scheme, 2025**, introducing changes to the **Capital Gains Account Scheme, 1988**.
- A **capital gain** is the profit earned from the sale or transfer of a capital asset such as property, land, shares, jewellery, or certain investments.
- Depending on the **holding period**, the gain is classified as either short-term or long-term, and the applicable tax rules differ accordingly.
- Under **Section 54 of the Income Tax Act**, if you make a capital gain, you can avoid paying tax on that gain by reinvesting it in another residential property.
- However, there are **time limits**: either buy a new property within 1 year before or 2 years after the capital gain, or construct a new property within 3 years of capital gain.
- When someone cannot immediately complete the purchase or construction the **Capital Gains Account Scheme (CGAS)** allows taxpayers to deposit the gains within these timelines, so they still qualify for tax exemption.
- The 2025 amendment allows **private banks to offer CGAS accounts**, and accepts **electronic payments including UPI**.
- It also **simplifies holding periods** to 1 year and 2 years.

Electronics Development Fund (EDF)

- Recent reports reveal that, with **₹257.77 crore** invested, the Electronics Development Fund (EDF) has **supported 128 startups nationwide**.
- The **Electronics Development Fund (EDF)**, managed by the **Ministry of Electronics and IT (MeitY)** with contributions from the government and industry, aims to **promote R&D, innovation, and manufacturing in electronics** in India.
- It aims to strengthen the ecosystem by acting as a **fund of funds** i.e.: supporting funds that **provide risk capital to startups and companies** engaged in developing cutting-edge technologies.

- EDF has invested in **eight Daughter Funds** which have made further investments of ₹1,335.77 crore across 128 startups and ventures.
- The supported startups have generated **over 23,600 high-tech jobs** and created or acquired **368 intellectual properties (IPs)**.

Protection of Plant Varieties Act

- The Ministry of Agriculture is celebrating the **Silver Jubilee of the Protection of Plant Varieties and Farmers' Rights (PPV&FRA) Act, 2001**.
- The Act was passed to comply with India's obligations under the **WTO's TRIPS Agreement** (which mandates protection for plant varieties) and to acknowledge the contribution of farmers as conservers and breeders.
- The Act has a unique **Dual Protection approach** that gives exclusive rights to plant breeders for new varieties that are **distinct, uniform, and stable (DUS)**, while still allowing farmers to use, save, and share seeds.
 - ☞ This is unlike a **patent that gives** the inventor **full exclusive rights**, so **no one can use, sell, or reproduce it** without permission, including farmers.
- The Act established the **Protection of Plant Varieties and Farmers' Rights Authority** headquartered in New Delhi.
- Its key objectives are to grant exclusive **IP rights to plant breeders**, recognize and **reward farmers conserving traditional varieties**, protect **farmers' rights to save and exchange seeds**, encourage **research** in plant breeding, and maintain the **National Register of Plant Varieties (NRPV)**.
- The Act **allows researchers to freely use any protected variety** for experimentation and mandates a Benefit Sharing Mechanism where farmers or communities who contributed genetic material or traditional knowledge used to develop a registered variety **must receive a share of the benefits** derived from its commercialization, ensuring equity.
- Under the PPV&FRA Act, the government provides **financial incentives of up to ₹15 lakh** to promote the conservation of seed varieties.

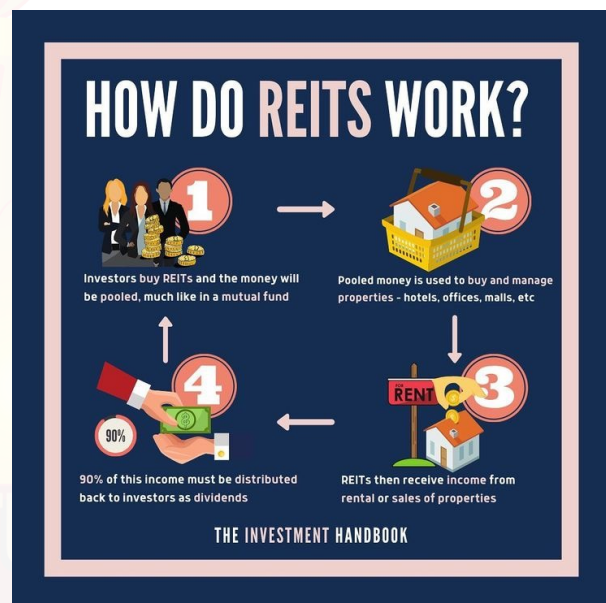
Adjusted Gross Revenue (AGR)

- The SC clarified that the Union government can comprehensively assess and reconcile all Adjusted Gross Revenue (**AGR dues of Vodafone-Idea**) up to the financial year 2016-17.
- **AGR** is defined as the profits of telecommunications operators from telecom and non-telecom services, consisting of interest earnings, funds and dividend increases.
- **The AGR dispute began in 1999**, when the telecom sector shifted to a revenue-sharing model, requiring operators to **pay licence fees and spectrum usage charges** based on **Adjusted Gross Revenue (AGR)**.
- The **core disagreement** was over what counts as AGR.
 - ➔ **Department of Telecommunications (DoT)'s view:** AGR should include **all revenues**, including non-telecom income such as interest, dividends, rent, sale of assets, etc.
 - ➔ **Telecom operators' view:** AGR should include **only telecom revenue**, not unrelated income.
- In 2019, the Supreme Court upheld the DoT's broader definition, creating heavy financial liabilities.
- Under industry pressure, the **government later amended the AGR rules in 2021** to exclude non-telecom income, easing future burdens.
- However, this relief did **not apply to past dues**, which remained payable as per the 2019 judgment.

India's Labour Reforms

- India has implemented the four Labour Codes— **Wages (2019), Industrial Relations (2020), Social Security (2020), and Occupational Safety & Health (2020)**—to simplify compliance and improve worker welfare.
- Fixed Term Employees (FTEs) will now receive the **same benefits as permanent workers**, including leave, medical cover, and **gratuity after just 1 year**.

- For the first time, **gig and platform workers** are officially recognised, and aggregators must contribute **1–2% of revenue** to welfare funds; a **portable Aadhaar-linked UAN** will help workers access benefits anywhere.
- The Codes also strengthen **gender equality**, mandate equal pay, allow women to work night shifts and in all roles with safety measures, and require grievance panels to include women.
- Salaries must be paid by the **7th of every month**, and overtime must be paid at **twice the normal rate** with consent.
- The Labour Codes face **criticism** for weakening worker protections by **allowing firms with up to 300 employees to lay off staff** without prior approval, **restricting union formation and strikes**, and thereby reducing collective bargaining power.
- Gig worker benefits are seen as **symbolic** since they receive recognition but no guaranteed social security, only a welfare fund based on aggregator contributions.
- **Many provisions exclude small establishments**, leaving most informal workers uncovered, while enforcement of safety and gender-related rules remains weak.
- When SEBI **reclassified REITs as equity instruments**, it means that REIT units are now officially treated like **shares of a company** for regulatory, investment, and accounting purposes.
- **Earlier**, SEBI placed REITs under a **hybrid category** because they were considered a mix of regular income (like from debt instruments like bonds) and potential capital gains (like equity).
- The **hybrid category had restrictions** which limited retail and institutional investment.



Real Estate Investment Trusts (REITs)

- **SEBI reclassified REITs as equity instruments** which will make them more accessible and attractive to both retail and institutional investors
- **Equity instruments** are financial assets representing **ownership in a company**, like shares. Investors can earn **dividends** or **capital gains**, but also bear the risk of **loss if the company performs poorly**.
- A **REIT (Real Estate Investment Trust)** is a trust **registered with SEBI** that owns large **income-generating properties** like offices, malls, or warehouses and allows ordinary people to invest in them without buying property directly.
 - 👉 Investors **pool their money**, the trust manages the buildings, and the **rent earned** from these properties is distributed as regular income.
 - 👉 REIT units are **listed on the stock exchange**, so they can be bought and sold just like shares.

Foreign Portfolio Investment (FPI)

- Foreign portfolio investors (FPIs) **resumed buying Indian equities in October**, ending a three-month stretch of continuous selling.
- FPI refers to **investments by foreign entities in Indian financial assets** such as stocks, bonds, mutual funds etc **without direct ownership or management control**.
- **Regulated by SEBI**, a foreign investor can hold **up to 10% of an Indian company's paid-up capital**; beyond this, the investment is classified as Foreign Direct Investment (FDI).
- FPIs form **part of the capital account** in India's Balance of Payments, providing liquidity and capital inflows to financial markets, but are **often called "hot money"** due to their high volatility and tendency to exit during economic uncertainty.

- **FPIs differ from FDI** in that they do not involve management participation and primarily aim for short-term capital gains, whereas FDI is focused on long-term strategic interests and direct ownership of assets..

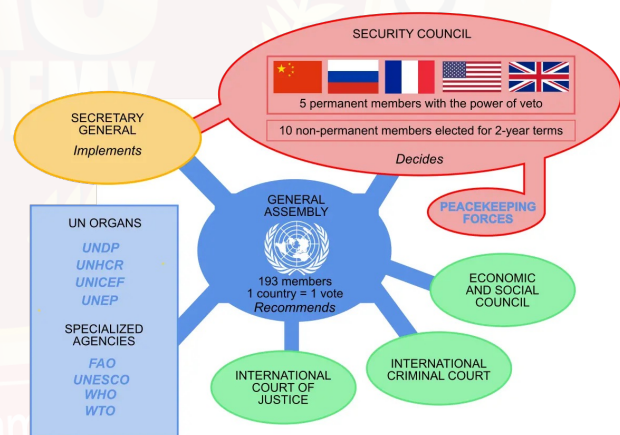
Crop Production Estimates 2024–2025

- India's final crop production estimates for 2024–25 show the **highest foodgrain increase in a decade**, rising by **106 million tonnes** to **357.73 million tonnes**.
- Rice (1,501.84 lakh tonnes) and wheat (1,179.45 lakh tonnes) hit record levels, while maize and **Shri Anna** (millets) saw their strongest growth in 10 years.
- Oilseed output grew by over **8%**, driven by soybean and groundnut.
- India is the **second largest rice** and **wheat** producer following China.
- The United States remains the world's largest **maize producer**, followed by China and Brazil and India ranks around 5th.
- India is the **world's largest millet producer**, with Rajasthan being the leading state, accounting for about 27% of national production, primarily growing pearl millet (bajra), followed by Karnataka (ragi) and Maharashtra (jowar)
- The **Self-Reliance in Pulses Mission** significantly boosted pulse production through better seeds, technology, cluster farming, FPOs, and assured MSP procurement.
- **NOTE:** Mission for "Aatmanirbharta in Pulses" (Self-Reliance in Pulses) is a **centrally sponsored scheme** to achieve self-sufficiency in pulse production, boost farmer income, and cut import reliance.

International Relations

United Nations Secretary-General

- The UN has started the process to **elect its next Secretary-General (SG)** to succeed Antonio Guterres after 31 December 2026.
- The SG, under **Article 97 of the United Nations Charter**, is the chief administrative officer, **heads the United Nations Secretariat**, and serves as diplomat, advocate, civil servant, and spokesperson for global ideals.
- The **UN Secretary-General** is elected in two steps: the **15-member UN Security Council** recommends a candidate (requiring at least 9 votes and no veto from permanent members), and the **193-member General Assembly** then elects the candidate by a simple majority (**more than half of the votes cast** by members present and voting).
- Nominations are invited by the **Presidents of the UN General Assembly and UNSC**.
- The SG **oversees** staff, budgets, operations, chairs the United Nations System Chief Executives Board for Coordination (CEB), and can bring issues threatening international peace to the Security Council.
- Calls have been made for the first **woman SG**.



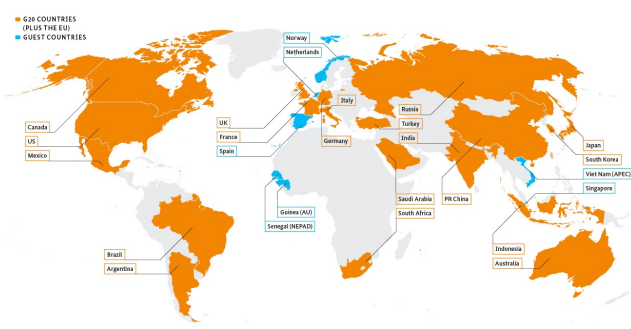
South Africa G20 Summit 2025

- The G20 Summit 2025 recently **concluded in Johannesburg, the first G20 summit ever hosted on African soil**..

- The Group of Twenty (G20) is the world's premier forum for **international economic cooperation, representing 85% of global GDP, 75% of world trade**, and two-thirds of global population and it includes 19 major economies plus the EU and African Union.
- It was created after the **Asian Financial Crisis in 1999** and elevated to Leaders' Summit level after the global financial crisis 2008 - 2009.

Key Highlights of the Summit:

- **Adoption of the G20 Leaders' Declaration (despite U.S. boycott):** Reaffirmed commitment to multilateralism, climate action, debt relief, and sustainable development.
- **ACITI Partnership (Australia-Canada-India Technology & Innovation):** India launched a new trilateral framework for cooperation in critical technologies, AI, supply chains, and clean energy.
- **India's Proposals Accepted:** Global Traditional Knowledge Repository, skills multiplier for Africa, global satellite data partnership, healthcare response team, and anti-drug-terror nexus initiative.
- **G20 Troika for 2025-26:** Brazil (past), South Africa (current), and the United States (incoming) to guide G20 continuity.



Three types of GSPs:

- **Standard GSP:** For low and lower-middle income countries. This means a partial or full removal of customs duties on two thirds of tariff lines. **Beneficiaries: Bangladesh, India, Indonesia etc.**
- **GSP+:** The special incentive arrangement for **sustainable development and good governance.**
 - ☞ It slashes these same **tariffs to 0% for vulnerable low- and lower-middle income countries** that implement 27 international conventions related to labour and human rights, environmental and climate protection, and good governance.
 - ☞ **Beneficiaries:** Armenia, Bolivia, Cabo Verde, Kyrgyzstan, Mongolia, Pakistan, The Philippines and Sri Lanka.
- **EBA (Everything But Arms):** The special arrangement for least developed countries, providing them with duty-free, quota-free access for all products except arms and ammunition.

European Court of Justice

- **The Court of Justice of the European Union (CJEU)** has ruled that **same-sex marriages** performed in any member state **must be respected throughout the bloc.**
 - ☞ It came into debate due to **Poland's** constitution limiting marriage to a union between a man and a woman
- The **Court of Justice of the European Union (CJEU)** is the EU's highest judicial authority, ensuring uniform interpretation and application of EU laws across all member states.
- It settles **disputes** between EU institutions, member states, and sometimes individuals or companies, can strike down EU laws that violate treaties, and ensures that national courts correctly implement EU rules.
- Headquartered in Luxembourg, it consists of **two courts:** the **Court of Justice**, which deals with appeals and questions from national courts, and the **General Court**, which handles cases brought mainly by individuals and companies

Generalized System of Preferences (GSP)

- A European Union delegation is examining **Pakistan's Generalised GSP+ status** amid concerns over **election-related irregularities and reported human rights violations** affecting minority groups.
- GSP is a set of **EU rules allowing exporters from developing countries to pay less or no duties** on their exports to the European Union.
- It helps **developing countries to alleviate poverty and create jobs** based on international values and principles, including labour and human rights.

Codex Alimentarius Commission (CAC)

- India has been unanimously re-elected to the **Executive Committee** of the **Codex Alimentarius Commission (CAC)**, securing a leadership role for the Asia region until 2027.
- Established in 1963 by the **Food and Agriculture Organization (FAO)** and **World Health Organization (WHO)**, the CAC sets international food standards to protect consumer health and ensure fair trade.
- It has **189 members** (188 countries + 1 organization (The EU)) and is headquartered in **Rome**.
- The **Executive Committee** oversees management, strategic planning, and standards development.
- India, a CAC member since 1964, has also chaired the **Codex Committee on Spices and Culinary Herbs** since 2014, with the **Spices Board of India** as secretariat, contributing to the Codex Strategic Plan 2026–2031 with SMART performance indicators.

International Maritime Organization (IMO)

- India has been re-elected to the **International Maritime Organization (IMO) Council** for the 2026–27 biennium with the highest votes in **Category B**, which includes the 10 nations with the largest interest in international seaborne trade.
- The IMO, a **UN specialized agency** established in 1948 and operational since 1958, regulates shipping and prevents marine pollution.
- It has **176 member states** and three associate members, with headquarters in **London**; India joined in 1959.
- The **IMO Council, elected for two-year terms**, supervises the organization between Assembly sessions, sets maritime policies, and ensures a fair regulatory framework.
- The IMO Council has **three membership categories**:
 - Category A** includes 10 states with the largest interest in providing international shipping services (China, Greece, Italy, Japan, Liberia, Norway, Panama, Republic of Korea, United Kingdom, United States);

- Category B** comprises 10 states with the largest interest in international seaborne trade (Australia, Brazil, Canada, France, Germany, India, Netherlands, Spain, Sweden, United Arab Emirates);
- Category C** consists of 20 states not in A or B but having special interests in maritime transport, ensuring global geographic representation.

Colombo Security Conclave (CSC)

- India recently hosted** the 7th Colombo Security Conclave (CSC) in New Delhi, where **Seychelles was inducted as the 6th full member** & Malaysia as a guest participant.
- CSC is a **regional security grouping of Indian Ocean nations** focused on cooperative responses to common maritime and transnational security challenges.
- The Founding documents and CSC Secretariat were formalised in Colombo, August 2024.
- It originated in 2011 as the **India - Sri Lanka - Maldives** Trilateral Maritime Dialogue and expanded to include **Mauritius (2022)**, **Bangladesh (2024)** and **Seychelles** became a full member in 2025.
- It **focuses on 5 security pillars**: Maritime Safety & Security, Counter-Terrorism & Radicalisation, Transnational Organised Crime, Cybersecurity & Critical Infrastructure Protection, HADR (Humanitarian Assistance & Disaster Relief).

Major Non-NATO Ally (MNNA)

- Recently, the United States has officially designated **Saudi Arabia** as a Major Non-NATO Ally (MNNA).
- A Major Non-NATO Ally (MNNA) is a U.S. designation for countries with **close strategic ties to its armed forces**.
 - While it does **not offer NATO-style mutual defense**, it provides **special military and financial benefits** unavailable to other non-NATO nations.
- Currently 21 nations** have MNNA status: Argentina, Australia, Bahrain, Brazil, Colombia, Egypt, Israel, Japan, Jordan, Kenya, Kuwait, Morocco, New Zealand, Pakistan, the Philippines, Qatar, South Korea, Thailand, Tunisia and now Saudi Arabia.

- They receive **priority access** to U.S. military equipment, can host U.S. war reserve stockpiles, collaborate on defence R&D, and allow their firms to bid for U.S. Department of Defense repair and maintenance contracts.
- MNNA status was **created in 1987** during the Ronald Reagan era with the first MNNAs being Australia, Egypt, Israel, Japan, and South Korea.
- **Afghanistan** was made an MMNA in 2012 but removed in 2021 after Taliban take-over.
- **India** is not an MMNA but holds **Major Defence Partner** status since 2016, giving enhanced access to U.S. defence technology, trade priority, and closer R&D and security collaboration while retaining **strategic autonomy**.

History & Culture

Sirpur Archaeological Site



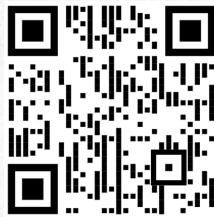
- **Chhattisgarh** plans to nominate **Sirpur site in Mahasamund** for UNESCO World Heritage status.
- Sirpur, a 5th–12th century **multi-religious city on the Mahanadi River**, thrived under the **Panduvanshi and Somavamshi dynasties** and hosts Hindu temples (Shaiva and Vaishnava), Buddhist viharas, and Jain monuments.
- Excavations revealed 22 Shiva temples, five Vishnu temples, 10 Buddhist viharas, and three Jain viharas.
- Key highlights include the **7th-century brick Lakshmana Temple** with intricate carvings, the **Surang Tila Complex** with Shiva and Ganesha shrines on a high terrace, and the 8th-century **Teevardev Buddha Vihara** blending Buddhist and Hindu iconography.

Guru Tegh Bahadur

- The **350th anniversary** of Guru Tegh Bahadur was observed at Delhi's Red Fort.
- Born **Tyag Mal** in 1621, he was the **ninth Sikh Guru** and **son of Guru Hargobind Sahib**, and **father of Guru Gobind Singh**.
- Known as **Tegh Bahadur** ("brave swordsman"), he displayed valor in the **1635 Battle of Kartarpur** and **founded Anandpur Sahib**.



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- A poet and spiritual leader, he contributed over **100 hymns to the Guru Granth Sahib**.
- In 1675, he was **executed by Mughal Emperor Aurangzeb** for defending religious freedom, earning the title **Hind-di-Chadar (Shield of India)**.

NOTE: **Battle of Kartarpur** was a significant military engagement that occurred in 1635, in Kartarpur (present-day Punjab, India). It was fought between the Sikh forces (Akali Sena) led by the sixth Sikh Guru, Guru Hargobind, and the Mughal Empire forces commanded by Kale Khan, and a former Sikh general, Painede Khan.



- Under the Prime Minister's **Jan Man Scheme**, the Centre has sanctioned a Rs 9 crore development program for the **Maram Naga tribe**.
- The Maram Naga are a significant **Tibeto-Burman tribal group** within the larger Naga people, primarily **residing in the Senapati district of Manipur**.
- They speak the **Maram language (using Roman script)**, practice **shifting (Jhum) cultivation** as their main occupation, and celebrate major **festivals** like **Punghi** (July), **Kanghi** (December), and **Mangkang** (April, dedicated to women)
- The **Jan Man Scheme** is a centrally sponsored scheme under the Ministry of Tribal Affairs aimed at the **development of tribal and marginalized communities** in tribal areas.
- The Maram Nagas maintain an **age-old monarchy**.
- While most have embraced **Christianity**, some still follow a traditional animistic religion.

Piprahwa Relics



Maram Naga Tribe



- Recently, a portion of the holy Piprahwa relics of Lord Buddha, brought from India, was enshrined at Thimpu's prominent monastery, **Tashichhodzong Bhutan**.
- The Piprahwa Relics are a collection of sacred artifacts discovered in 1898 at the **Piprahwa Stupa in Uttar Pradesh** and it is the site believed to be associated with **ancient Kapilavastu, the homeland of Gautama Buddha**.
- These relics, unearthed by British colonial engineer **William Claxton Peppé in 1898** and an inscription in Brahmi script on one of the caskets links the relics directly to the **Sakya clan, to which Buddha belonged**.

- India classifies the relics as ‘AA’ antiquities, granting them the highest level of legal protection.

Ramman Festival



- The President of India received a Ramman mask and a book on the Ramman Festival, celebrated in late April at Saloor-Dungra, Uttarakhand.
- The festival is dedicated to the local deity Bhumiya Devta.
- Originating 500 years ago, it features Ramayana-based theatrical performances with 18 Bhojpatra masks and was inscribed as UNESCO Intangible Cultural Heritage in 2009.

Moh Juj



- The Assam Assembly passed the Prevention of Cruelty to Animals (Assam Amendment) Bill, 2025, allowing the traditional buffalo fight, Moh Juj.

- Moh Juj was introduced by 30th Ahom king Swargadeo Rudra Singha around 200 years ago.
- The term is a combination of “moh” (buffalo) and “juj” (fight)
- Celebrated in Ahatguri village during Magh Bihu, the sport showcases the animals’ strength and training.
- However, the 2014 Animal Welfare Board of India vs. A. Nagaraja. Supreme Court ban on bull taming and races as well as 2024 Gauhati HC ban on buffalo and bulbul fights under Prevention of Cruelty to Animals Act 1960 and the Wildlife Protection Act 1972, had stopped this tradition.

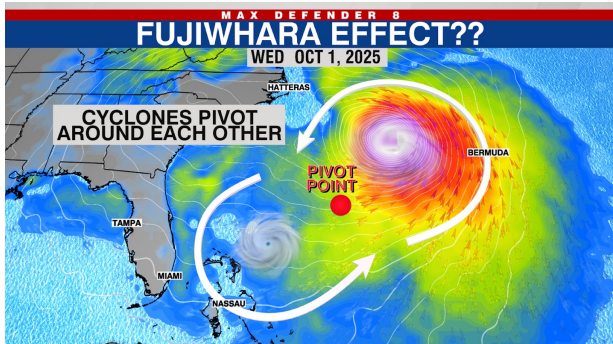
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Fujiwhara Effect



- Two potential cyclonic storms are forming in the Bay of Bengal, with global forecast models indicating a possible **Fujiwhara interaction** between them.
- The Fujiwhara effect occurs when **two cyclonic storms in the ocean form in the same region and their wind circulations start interacting with each other** in the middle to upper layers of the atmosphere.
- This interaction of winds **creates a bond between the two storms**, through which they start influencing each other.
- The influence **could be weak or strong** and could lead to either of the storms gaining wind speeds and strength or both storms dissipating.
- In **rare cases, the two systems could merge**, especially when they are of similar size and intensity, to form a bigger storm.
- The Fujiwhara effect was identified by **Sakuhei Fujiwhara**, a Japanese meteorologist in 1921. The first known instance of the effect was in 1964 in the **western Pacific Ocean when typhoons Marie and Kathy merged**.

Typhoon and Super Typhoon

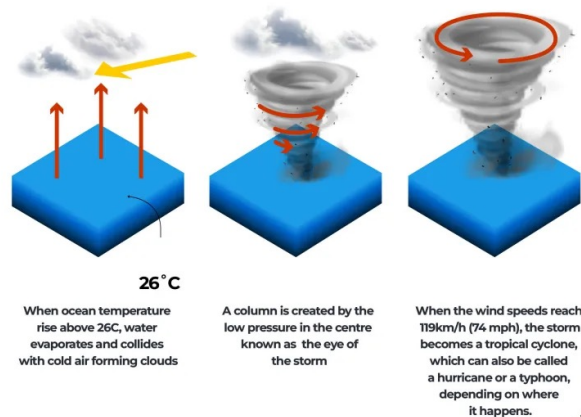
- **Typhoon Kalmaegi**, one of the strongest typhoons on record to hit Vietnam, brought torrential rains and destructive winds.
- Another **Super Typhoon Fung-wong**, known locally as **Uwan**, struck the Philippines in less than a week after Kalmaegi.

- With **winds reaching 185 km/h and gusts up to 230**, Fung-Wong triggered floods, landslides, and mass evacuations.
- **“Typhoon” is the term used for powerful storms** that form in the western Pacific and southeastern Indian Ocean.
- A tropical cyclone must reach winds of at **least 64 knots or 74 miles (119 km) per hour** in order to be considered a typhoon.
 - ☞ It will be considered a super typhoon with winds typically ≥ 150 mph (241 km/h)

CLIMATE

The birth of a tropical cyclone

As warm air rises from Equatorial ocean waters, an area of lower air pressure is formed. As this cycle gains momentum and strength, it begins to swirl, creating a tropical cyclone, which can also be called a hurricane or a typhoon.



© Mapbox, © OpenStreetMap
Source: NASA, Met Office UK | September 25, 2022

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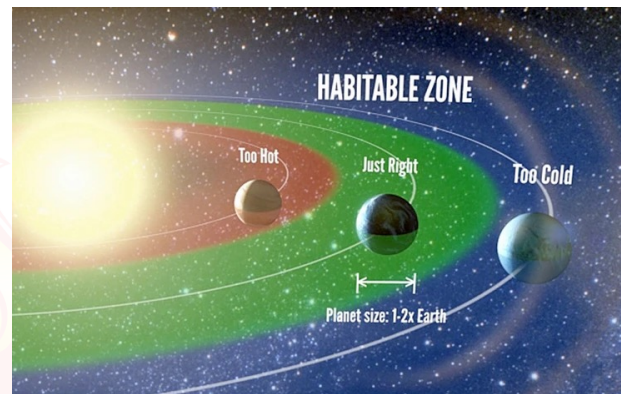
Lake Tefe



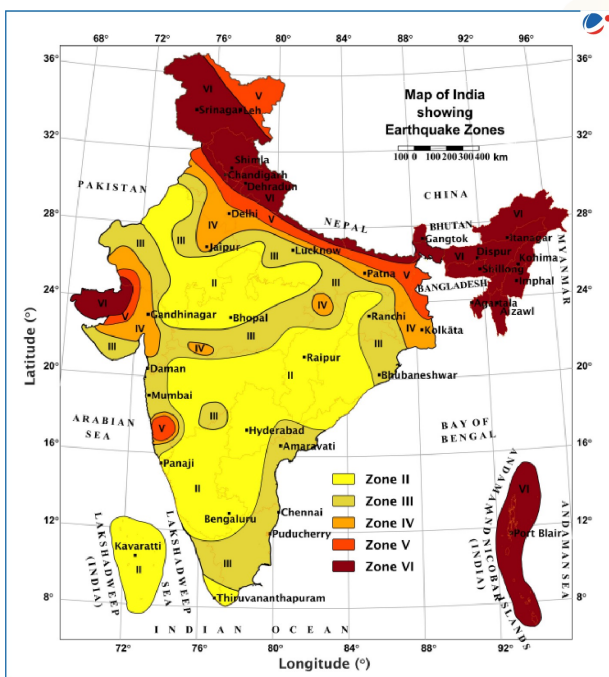
- **Amazonian lakes like Lake Tefe in Brazil** are being transformed into simmering basins as severe heatwaves and drought grip the region.
- The **shallow waters of Lake Tefé**, which were only two metres deep, reached 41°C. The extreme drought that affected the **lake in 2024 reduced its area by 75%**.

- Hundreds of river dolphins turned up dead in the lake including **pink river dolphins (Inia geoffrensis)** and **tucuxi river dolphins (Sotalia fluviatilis)**.
- Many **fish**, especially Amazonian species, have **narrow temperature tolerances**, making even small increases deadly.
- Higher temperatures also **reduce dissolved oxygen**, adding to their stress.

The Rare Earth Hypothesis



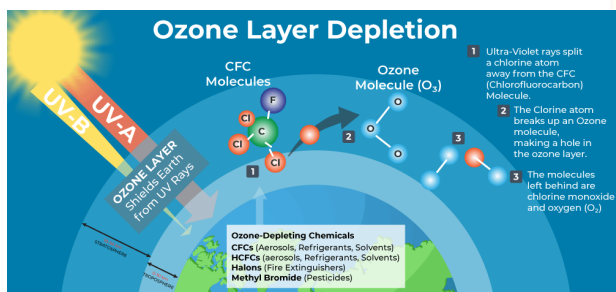
India's seismic zonation map



- Recent data from **NASA's Kepler** and **James Webb Space Telescopes (JWST)** show **Earth-sized planets in habitable zones are common**, but **conditions for complex life are extremely rare**.
- The **Rare Earth hypothesis** argues that while simple microbial life may be abundant, the specific combination of factors needed for complex organisms are extremely rare.
- **Proposed by Peter Ward and Donald Brownlee in 2000**, the Rare Earth hypothesis argues that **Earth's unique combination of factors**—stable galactic location, suitable star, plate tectonics, a large moon, and protective atmosphere and magnetic field—makes complex life extremely rare.
- **Earth is thus considered a "Goldilocks planet,"** with just the right conditions for complex life, making similar planets in the universe extremely rare..

- India's **updated 2025 seismic zonation map** places the entire **Himalayan arc** in the new **highest-risk Zone VI**, with **61% of the country** now in moderate to high hazard zones.
- The revision **accounts for long-unruptured fault segments**.
- The new code introduces an **"exposure window"** using the **PEMA (Population, Exposure, Mitigation, and Assessment) method**, factoring in population, infrastructure, and vulnerability to reflect both hazard and community impact.
- The Himalayas face major reclassification, while the **southern peninsula sees minor changes due to stable tectonics**.

Antarctic Ozone Hole Shrinks



- NASA scientists report that the **2025 Antarctic ozone hole has improved**, ranking as the fifth smallest since 1992, averaging 18.71 million sq km.
- This recovery is attributed to the long-term success of the **Montreal Protocol**, a 1987 global treaty that **phased out ozone-depleting substances** like Chloro Fluro Carbons, used in products like refrigerators and aerosols and has been universally ratified..
- The **ozone layer** in the stratosphere acts as a shield against harmful UV rays, protecting crops and human health from skin cancer and cataracts.
- Ozone holes form over polar regions due to **depletion of stratospheric ozone by chlorine and bromine** from CFCs and halons.
- Extremely low winter temperatures **create polar stratospheric clouds**, enabling reactions that **convert halogens into ozone-destroying forms**, while the stable **polar vortex** traps them.
- When **spring sunlight returns**, UV activates these halogens, rapidly depleting ozone.
- **Antarctica sees a larger hole** due to colder temperatures and a stronger vortex, whereas the Arctic is warmer with a disrupted vortex, so depletion is milder.

Graded Response Action Plan GRAP

- The Delhi government has invoked **GRAP Stage III** after the Air Quality Index (AQI) crossed **400 (Severe)**.

- The **Graded Response Action Plan (GRAP)** is a dynamic, stage-wise pollution control framework for Delhi-NCR, implemented by the **Commission for Air Quality Management (CAQM)** along with Central Pollution Control Board (CPCB), Delhi govt., and National Capital Region states (adjoining districts of Haryana, UP and Rajasthan).

- It ensures coordinated action aligned with **NCAP** targets.
- GRAP has four stages linked to AQI levels— **Stage I: Poor (201–300)**, **Stage II: Very Poor (301–400)**, **Stage III: Severe (401–450)**, **Stage IV: Severe+ (>450)**.
- The **Commission for Air Quality Management (CAQM)**, established in 2021 under the **Commission for Air Quality Management in National Capital Region and Adjoining Areas Act, 2021**, is a statutory body responsible for coordinating air pollution control across the NCR and nearby areas.

Fight against pollution

A look into the city's Graded Response Action Plan to fight air pollution

<p>STAGE 1 MODERATE-TO-POOR QUALITY AIR (PM_{2.5} above 61µg/m³ or PM₁₀ above 101µg/m³)</p> <ul style="list-style-type: none"> ● Mechanized sweeping, washing roads with water ● Enforcing ban on firecrackers, increased scrutiny of vehicles for pollution standards 	<p>STAGE 2 VERY POOR AIR (PM_{2.5} above 121 µg/m³ or PM₁₀ above 351 µg/m³)</p> <ul style="list-style-type: none"> ● Ban on diesel generators ● Parking fee to surge by 3-4 times ● Stop use of coal/firewood in eateries ● Urge people with respiratory or cardiac problems to stay inside 	<p>STAGE 4 EMERGENCY (also known as severe+, PM_{2.5} above 300 µg/m³ or PM₁₀ above 500µg/m³)</p> <ul style="list-style-type: none"> ● Ban entry of trucks (except for essential items) ● Halt construction work ● Begin odd-even road scheme for private vehicles
<p>STAGE 3 SEVERELY POLLUTED AIR (PM_{2.5} above 250µg/m³ or PM₁₀ above 430µg/m³)</p> <ul style="list-style-type: none"> ● Increase frequency of road cleaning and washing ● Shut down of brick kilns ● Restrictions on operation of coal-based power plants in NCR 		

BEGINNING FROM OCT 15
 Some of these measures will already kick in from October 15. These are: **1 BAN ON DIESEL GENERATORS** | **2 WASHING OF ROADS** | **3 NIGHT PATROLS AT HOT SPOTS**

Climate Change Performance Index (CCPI) 2026

- India has slipped from **10th to 23rd** in the latest **Climate Change Performance Index (CCPI)**, published by **Germanwatch**, **New Climate Institute**, and **Climate Action Network International**.
- The index evaluates countries across **GHG emissions, renewable energy, energy use, and climate policy**.
- Denmark topped the rankings, followed by the UK and Morocco.
- India fell from a **high to medium performer** due to being one of the world's largest producers of oil, gas, and coal.

- It scored **medium** in emissions, policy, and energy use, but **low** in renewable energy. Among G20 nations, **China (54th), Russia (64th), the US (65th), and Saudi Arabia (67th)** ranked among the worst performers.

UN Water Convention



WATER
CONVENTION





- Bangladesh has become the **first South Asian country** to join the **UN Water Convention (2025)**, which strengthens cooperation on transboundary water management.
- The **UN Water Convention** (formally **Convention on the Protection and Use of Transboundary Watercourses and International Lakes**) is a **legally binding global treaty**.
- It promotes the **sustainable and cooperative management of shared rivers, lakes, and groundwater** between countries.
- It was adopted in Helsinki in 1992 and entered into force in 1996 and is served by **The United Nations Economic Commission for Europe (UNECE)**.
- Originally regional, the Convention became open to **all UN member states after 2016**, encouraging but not replacing specific bilateral or multilateral water treaties.
- India has **not signed or ratified the UNECE Water Convention** primarily because it favors **bilateral diplomacy** to resolve water issues and due to concerns about sovereignty and federal structure limitations.

The **UNECE** is one of five regional commissions under the UN's Economic and Social Council (**ECOSOC**), established in 1947 to promote pan-European economic integration and cooperation. UNECE has **56 members** that includes countries from Europe, North America, former Soviet Republics and Israel.

CITES convention

- A committee of **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)** has recommended India pause permits for importing endangered animals to zoos and rescue centres.

- The **CITES, adopted in 1973 and effective from 1975** with 185 members including **India (since 1976)**, is an international agreement ensuring that trade in wild animals and plants does not threaten their survival.
- Administered by the **United Nations Environment Programme (UNEP)** in Geneva, it is **legally binding** but implemented via national laws, with member nations reviewing species every 2–3 years at the **Conference of the Parties (COP)**.
- Species are listed in three appendices: **Appendix I** (threatened with extinction, trade prohibited), **Appendix II** (not yet threatened but regulated trade allowed), and **Appendix III** (species a country seeks help to control trade), with trade regulated through permits and certificates.

CITES APPENDICES		
Appendix I Commercial international trade is generally prohibited 704 species & 30 subspecies of animals 395 species, 4 subspecies, & 12 varieties of plants 	Appendix II Commercial and non-commercial international trade is allowed through issuance of permits and certificates 5,466 species & 16 subspecies of animals 33,764 species of plants 	Appendix III Commercial and non-commercial international trade is allowed; complements domestic measures to control trade 372 species & 22 subspecies of animals 134 species & 1 variety of plants 

NGT on endosulfan

- The **National Green Tribunal (NGT)** has directed the **Central Pollution Control Board (CPCB)**, Kerala SPCB, and Plantation Corporation of Kerala to trace missing barrels of the banned pesticide Endosulfan.
- Endosulfan** is banned in India under the **Insecticides Act, 1968**.
 It was also listed under the **Stockholm Convention on Persistent Organic Pollutants (POPs)**, making its production, use, and trade globally restricted.

- Established under the **National Green Tribunal Act, 2010**, the **NGT** provides speedy disposal of environmental cases within six months and has **five benches—New Delhi (principal), Bhopal, Pune, Kolkata, and Chennai**.
- It handles **civil cases** involving substantial environmental questions and claims for relief

under laws listed in **Schedule I**.

- **Water (Prevention & Control of Pollution) Act 1974** and **Water Cess Act 1977**
 - **Forest (Conservation) Act 1980**
 - **Air (Prevention & Control of Pollution) Act 1981**
 - **Environment (Protection) Act 1986**
 - **Public Liability Insurance Act 1991**
 - **Biological Diversity Act 2002.**
- The **NGT can review its decisions**, which can be further challenged in the **Supreme Court** within 90 days..

COP30 – UN Climate Summit 2025

- The **30th Conference of the Parties (COP30)** to the **UN Framework Convention on Climate Change (UNFCCC)** was held in Belém, Brazil, marking a decade since the Paris Agreement.
- COP30 reviewed Paris Agreement progress, strengthened emission targets, and negotiated finance and adaptation frameworks.

Key initiatives include

- **Belém Package** (29 decisions to accelerate global climate action),
 - **Just Transition Mechanism** (support for economies moving from fossil fuels),
 - **Global Implementation Tracker and Belém Mission to 1.5°C** (monitoring each country's Nationally Determined Contribution (NDC) alignment)
 - **Belém Health Action Plan** (help countries build climate-resilient and low-carbon health systems.)
 - **Tropical Forests Forever Facility** (incentives for forest conservation)
 - **New Collective Quantified Goal** (commitment to scale global climate finance toward \$1 trillion per year by 2035),
 - **Global Goal on Adaptation** (measurable resilience targets)
 - **Belém 4x Pledge** (quadruple sustainable fuel use by 2035).
- **Turkiye** will host COP31 and **Ethiopia** COP32.

Science & Technology

Vanadium Flow Battery at NTPC

- India has inaugurated its first **MWh-scale Vanadium Redox Flow Battery (VRFB)** system—a 3 MWh installation at **NTPC NETRA, Greater Noida**—marking a major step in long-duration energy storage.
- Developed by **NTPC's R&D centre**, the VRFB offers an **alternative to lithium-ion batteries**, using **liquid vanadium electrolyte** instead of scarce materials.
- Vanadium Redox Flow Batteries (VRFBs) **last much longer (20–25 years) with almost no capacity loss**, are far **safer** due to their **water-based, non-flammable electrolytes**, and can be **easily scaled up** by simply adding more electrolyte tanks.
- They also **tolerate 100% charge-discharge cycles** without degradation and use a **stable single-element chemistry**.
- These features make **VRFBs ideal for long-duration storage** needed for renewable energy integration, while **lithium batteries remain better for compact, lightweight uses** like electronics and electric vehicles.
- **India has far more vanadium resources than lithium**, thus reducing import dependency too.
- Indian Bureau of Mines estimates **nearly 24.6 million tonnes** of vanadium-bearing ores primarily in **Odisha, Karnataka, Maharashtra, Arunachal Pradesh**.
- Vanadium is **mostly present as a by-product** in iron ore deposits.

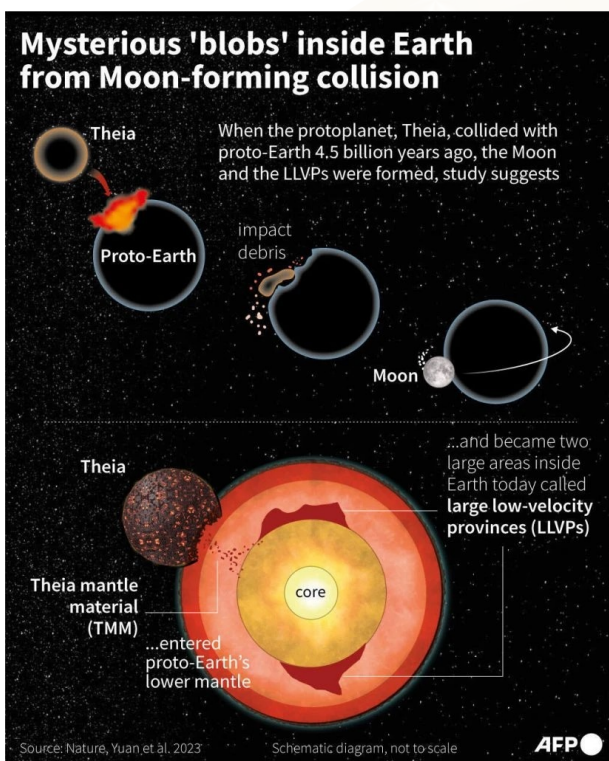
Measles in Canada

- Canada has lost its **measles-free status** after a large outbreak infected thousands.
- Measles is a **highly contagious airborne viral disease** that begins in the respiratory tract and can cause severe illness and even death.
- It is caused by a **Morbillivirus**, which is a genus of **single-stranded RNA** viruses within the **Paramyxovirus** family.

- Symptoms include **high fever**, runny nose, cough, red watery eyes, and a **red blotchy rash**.
- The **Measles, Mumps, and Rubella (MMR) vaccine (two doses)** offers the best protection.
- **India** still reports thousands of measles cases each year, and remains among the countries with high measles burden globally.

Note: **Mumps** is caused by a paramyxovirus of the genus **Rubulavirus**, while **rubella** is caused by a **Togavirus (Rubivirus)**. Rubella resembles measles with its red rash, which is why it's called "**German measles**," but it is a completely different disease.

Theia



- Recent research suggests that Earth and **Theia**, a Mars-sized planetary body, were neighbors in the early Solar System.
- **Theia** was a Mars-sized protoplanet in the early Solar System that is, according to **Giant-Impact Hypothesis**, believed to have collided with the young Earth about 4.5 billion years ago.
- The impact allowed Earth to absorb Theia's iron core, while the ejected debris later **formed the Moon**.
- Studies indicate that Theia may also have contributed to Earth's **water and chemical composition**.

- **Similar oxygen isotopes** in Earth's mantle and lunar rocks support the idea that both contain mixed material from Earth and Theia.

Dark Patterns

- The **Central Consumer Protection Authority (CCPA)** reported that 26 digital platforms have removed "**dark patterns**"—deceptive website or app designs that manipulate users into unintended decisions.
- Coined by UX designer **Harry Brignull** in 2010, dark patterns exploit cognitive biases. Common types include:
 - 👉 **False Urgency:** Creating fake time pressure, e.g., "Only 1 seat left!"
 - 👉 **Basket Sneaking:** Adding extra products or services at checkout without consent.
 - 👉 **Confirm Shaming:** Guilt-tripping users into agreeing or subscribing.
 - 👉 **Forced Action:** Compelling users to perform unrelated tasks to proceed.
 - 👉 **Subscription Trap:** Easy to subscribe but hard to cancel.
 - 👉 **Interface Interference:** Hiding important information or buttons.
 - 👉 **Bait and Switch:** Promoting one offer but delivering another.
 - 👉 **Nagging:** Persistent reminders or pressure to take action.
 - 👉 **Hidden Costs/ drip pricing:** Revealing extra charges only at the final stage of purchase.
 - 👉 **Disguised Ads:** Ads designed to look like regular content, such as articles or reviews.

- The **CCPA** is a statutory body under the **Ministry of Consumer Affairs, Food and Public Distribution**, established under the **Consumer Protection Act, 2019**.

Sintered Rare Earth Permanent Magnets (REPM)

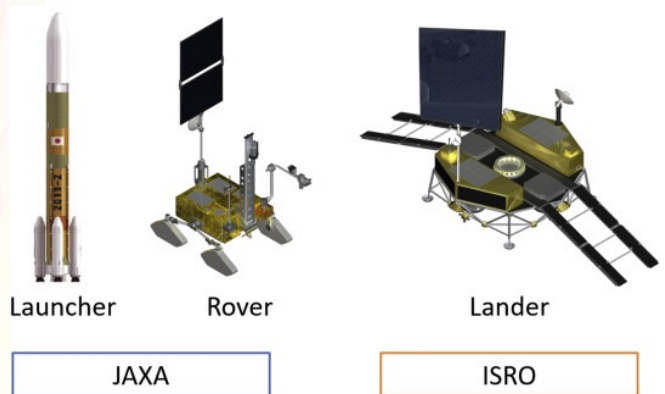
- The Union Cabinet approved a **₹7,280-crore scheme** to promote the manufacturing of **Sintered Rare Earth Permanent Magnets (REPMs)**.

- **Sintered** refers to a **manufacturing process** where powdered material is **heated below its melting point** until the particles **fuse together** to form a solid piece
- REPMs are the **strongest commercial permanent magnets**, made from rare earth elements like **neodymium, praseodymium, and dysprosium** (e.g., NdFeB alloys).
- REPMs are used in **electric vehicle motors, wind turbines, electronics, aerospace, and defense.**
- They offer **high magnetic strength, compact size, superior performance, and heat resistance**, enabling smaller, more efficient, and powerful devices.

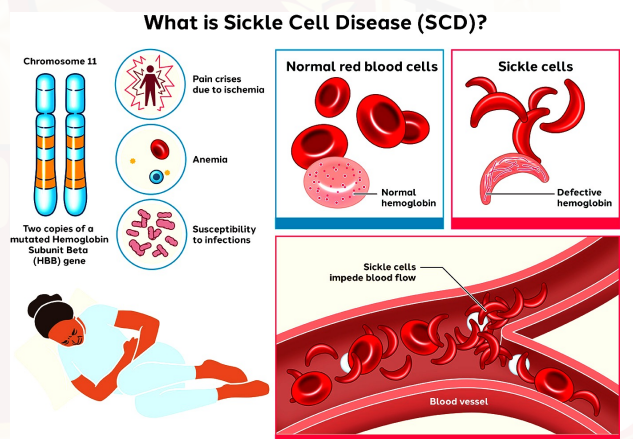
- The **Lunar Polar Exploration Mission (LUPEX/ Chandrayaan-5)** is a planned **ISRO-JAXA joint mission** to send an **uncrewed lander and rover** to the Moon's **south pole no earlier than 2028**, exploring shadowed regions and assessing water.
- **JAXA** will provide the **H3 rocket and rover**, while **ISRO** will supply the **lander** and some instruments.
- LUPEX follows the planned **Chandrayaan-4 lunar sample-return mission.**
- The rover will carry instruments from **ISRO, JAXA, NASA, and ESA.**

New Names for Martian Landforms

- A **3.5-billion-year-old crater on Mars** has been named after Indian geologist **M.S. Krishnan**.
- Five nearby craters and a Martian valley have also received Kerala-based names: **Valiamala, Thumba, Bekal, Varkala, and Periyar.**
- The crater lies in **Xanthe Terra**, a region showing evidence of ancient glaciers and rivers.
- The **International Astronomical Union (IAU)**, founded in 1919 and headquartered in **Paris**, is the globally recognized authority for naming celestial bodies and features.
- It comprises professional astronomers from **92 member countries** and promotes astronomy through research, education, and international cooperation



BIRSA 101 Gene Therapy



MARS-KERALA CONNECT		
NAME	CATEGORY	SIGNIFICANCE
Krishnan	Large crater	Named after pioneering Indian geologist
Valiamala	Small crater	Site of IIST, Thiruvananthapuram
Thumba	Small crater	Birthplace of India's space programme
Varkala	Small crater	Geologically unique cliff formations
Bekal	Small crater	Site of historic Bekal Fort in Kasaragod
Periyar	Martian Valley	Longest river in Kerala

LuPEX (LUnar Polar EXploration) Mission

- A **Japanese delegation** recently reviewed **ISRO's LuPEX (Chandrayaan-5) mission**, a joint project with **JAXA.**

- **India's first indigenous CRISPR-based gene therapy** for **Sickle Cell Disease (SCD)**, was launched by the **Health Ministry.**
- It is named **BIRSA-101** after tribal leader Birsa Munda.
- Developed by **CSIR-IGIB**, it uses **CRISPR-Cas9 "molecular scissors"** to correct the genetic mutation causing SCD directly in patients' cells.
- Priced lower than global alternatives, it aims to be **accessible to poorer populations.**

- SCD is a genetic disorder causing **rigid, sickle-shaped red blood cells**.
- This leads to **reduced oxygen transport, blood flow blockages, pain, organ damage, anemia, infections, and strokes**.
- Risk increases if **both parents are carriers** or one is affected.
- SCD is **common in tribals** due to genetic concentration, malaria-driven evolutionary selection, and social/geographical isolation.
- India has a **National Sickle Cell Anemia Elimination Mission (NSCAEM)**, launched in 2023, with the goal of eliminating the disease by **2047**.

Note: CRISPR stands for **Clustered Regularly Interspaced Short Palindromic Repeats**. CRISPR is a gene-editing tool that uses a guide RNA and a cutting protein (like Cas9) to make precise changes in DNA. **TnpB is considered an evolutionary ancestor of CRISPR systems**, and ICAR's technology works **similar to CRISPR but uses TnpB instead of Cas9/Cas12**.

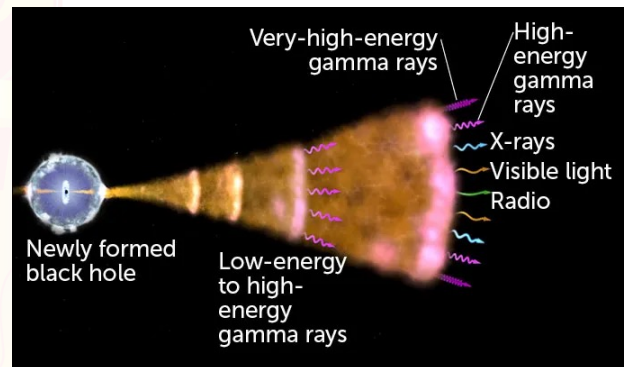
Transposon-associated proteins (TnpB)

- The **Indian Council of Agricultural Research (ICAR)** has patented a **TnpB-based next generation genome editing technology**.
- **TnpB** is a small (~400-amino-acid) protein from the bacterium **Deinococcus radiodurans**, which can withstand extreme radiation and stress.
- **TnpB-based genome editing uses the TnpB protein as the nuclease** (the DNA-cutting enzyme), guided by a small RNA, to **cut or modify specific DNA sequences** — very similar to how CRISPR-based genome editing uses Cas proteins.
- Tnpb is **smaller than Cas9/Cas12** and is thus easier to deliver into plant cells.

How it works:

1. A **guide RNA (gRNA)** is designed to match a specific DNA sequence.
 2. The enzyme (TnpB or Cas9) **binds to this RNA**.
 3. The RNA acts like a **GPS**, leading the enzyme to the matching DNA sequence.
 4. Once it finds the match, the enzyme **cuts or edits the DNA** at that spot.
- Genome editing is used to improve plant traits like **yield, disease resistance, and nutrition**.

Gamma-Ray Bursts



- New research suggests that **gamma-ray bursts (GRBs)** from tiny **“black hole morsels”** formed during massive black hole collisions could help reveal **quantum gravity**.
- **Gamma-Ray Bursts (GRBs)** are the universe's most powerful explosions, brief but incredibly bright flashes of **high-energy light from distant galaxies**, often signaling the **birth of black holes** from collapsing massive stars or the **merger of neutron stars**, lasting from milliseconds to minutes and releasing immense energy.
- They occur in two forms:
 - 👉 **Long GRBs (>2 sec):** From collapsing massive stars/supernovae, creating a black hole; common and seen in distant galaxies.
 - 👉 **Short GRBs (<2 sec):** From mergers of neutron stars or neutron star-black hole pairs; rarer and usually closer.
- **Black hole morsels** are hypothetical, tiny, extremely **hot micro-black holes** created during black hole mergers, which may evaporate quickly and emit intense gamma rays.
- In physics, **quantum mechanics** describes particles, atoms, energy at extremely small scales but it does not include gravity whereas **general relativity** describes gravity, space, time, planets, black holes — but it is not quantum (extremely small scale).

- **Quantum gravity** is the future theory of physics that tries to **combine quantum mechanics** (rules of the very small: atoms, particles) with **general relativity** (Einstein's theory of gravity and spacetime).
- **Quantum gravity** suggests that **spacetime might be made of tiny "grains,"** which could make high-energy and low-energy light travel at slightly different speeds.
- **Gamma-Ray Bursts help test this** by sending mixed-energy light across billions of years—if the photons arrive at different times, it hints at quantum gravity; if not, spacetime is likely smooth.

Auramine O

- Auramine O has again been **detected in food products** to colour turmeric, spices, milk, and sweets in various parts of India
- Auramine O is a **cheap synthetic industrial yellow dye** (diarylmethane group) that is **toxic and possibly carcinogenic** (International Agency for Research on Cancer (IARC)), causing liver damage, DNA mutations, and skin/respiratory irritation.
- Its **industrial use** includes textile and leather processing, printing inks, paper manufacturing, and certain microbiological staining procedures.
- Since it is **not a permitted food colour**, its use is **banned under the Food Safety and Standards Regulations (FSSR).**

India has dealt with **multiple waves of dye-related adulteration** for nearly four decades, from **metanil yellow** in turmeric, **rhodamine B** in cotton candy and curry masala, **Sudan dyes** added to spices, **Argemone oil** mixed with mustard oil, **calcium carbide** used to ripen fruits, **urea** added to milk to thicken it, **mineral oil** mixed with edible oils to **chalk powder** added to flour

LCA Tejas



- The **Light Combat Aircraft (LCA) Tejas**, India's indigenous **4.5-generation multi-role light combat aircraft**, crashed at the **Dubai Air Show**, killing **Indian Air Force (IAF) Wing Commander Namansh Syal.**
- Tejas is the **second jet powered combat aircraft** developed by **Hindustan Aeronautics Limited (HAL)**, after the HF-24 Marut
- The Tejas, inducted in **2016**, is the **lightest and smallest in its class**, features Active Electronically Scanned Array (**AESA**) radar, advanced Electronic Warfare (**EW**) systems and **in-flight refuelling.**
- It is powered by a **single US General Electric (GE) F404 engine** and carries various precision-guided weapons.
- India currently has **five LCA Tejas squadrons** in the Indian Air Force, primarily based at **Sulur, Tamil Nadu**, with Mk-1 and Mk-1A variants operational and Mk-2 planned for future induction.
- The Indian Navy is also inducting the LCA Tejas in a naval variant called **Tejas Naval (NAVAL Tejas)**, designed for **carrier-based operations.**

Operation Pawan

- The **Chief of the Army Staff (COAS) General** recently paid homage to soldiers who laid down their lives during Operation Pawan.
- It was the **Indian Peace Keeping Force (IPKF) mission in Sri Lanka under the 1987 Indo-Sri Lanka Accord**, undertaken during the Sri Lankan Civil War (1983–2009), marking India's

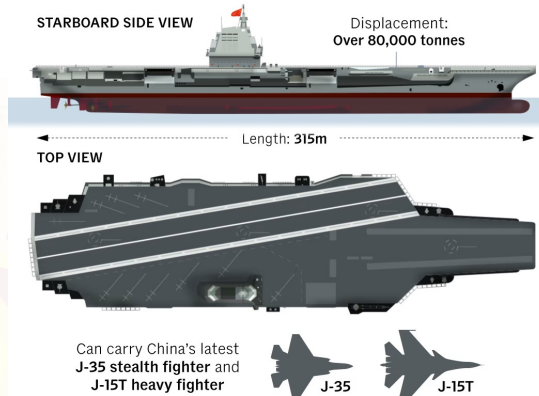
first major post-Independence international peacekeeping deployment.

- The Accord signed by **PM Rajiv Gandhi and President J. R. Jayewardene**, sought to curb the intensifying conflict between the Sinhalese-majority government and Liberation Tigers of Tamil Eelam (LTTE).
- The **IPKF**, tasked with disarming the **LTTE** and regaining the **Jaffna Peninsula**, conducted a counter-insurgency campaign from **1987–1990** known as **Operation Pawan**.
- It resulted in **1,171 soldiers martyred** and over **3,500 injured** before withdrawing from Sri Lanka in 1990.

Fujian Aircraft Carrier

- China has commissioned its latest aircraft carrier **Fujian**.
- The Fujian is **China's third aircraft carrier** and its **first fully Chinese-designed carrier**, officially called **Type 003**.
- It is the second carrier in the world with **EMALS (Electromagnetic Aircraft Launch System)**, a modern, electric-powered type of **CATOBAR (Catapult-Assisted Take-Off But Arrested Recovery)** system after America's newest carrier, the USS Gerald R. Ford.
- India's **INS Vikramaditya and INS Vikrant**, uses a **ski-jump based Short Take-Off But Arrested Recovery (STOBAR)** system, not catapults.
- In terms of strength the **US has 11 aircraft carriers** (all nuclear powered), while **China now has 3, India, UK, Italy** have 2 while **France and Russia** have 1 each.

China's third aircraft carrier, the Fujian



- Largest conventionally powered warship in the world
- Features **electromagnetic catapults** that can launch 3 aircraft types
- An advanced take-off system, the **EMALS**, allows planes to take off with heavier weapons and fuel loads. The **only** aircraft carrier currently equipped with this technology is the **USS Gerald R Ford**

Source: Agencies/CNA
CNA GRAPHICS



Exercise in News

EXERCISE	COUNTRIES	FORCE	DESCRIPTION
Suryakiran	India- Nepal	Army	Exercise held at Pittorgarh (Uttarakhand) to strengthen battalion-level synergy in Jungle Warfare, Counter-Terrorism Operations in Mountainous Terrain, Humanitarian Assistance & Disaster Relief (HADR),.
Ajeya Warrior 2025	India- UK	Army	Biennial exercise held at Mahajanfield Firing ranges (Rajasthan) and focuses on counter-terrorism operations in semi-urban environments.
Garuda 2025	India- Indonesia	Special Forces	Exercise held in France and designed to emphasise physical fitness, tactical drills and high-intensity combat training
Malabar 2025	Multilateral	Navy	Held at Guam in the Northern Pacific
Exercise Mitra Shakti XI	India- Sri Lanka	Army	11th edition held at Belgavi, Karnataka
Sagar Kavach	Domestic	Indian Coast Guard	It was aimed at strengthening inter agency coordination and enhancing the overall preparedness of maritime defence mechanism across Karnataka and Kerala coast

Miscellaneous

Commonwealth Games 2030

- India has been **formally ratified as the host of the 2030 Commonwealth Games**, with Ahmedabad (Amdavad), Gujarat as venue.
- This has paved the way for staging the event a **second time as New Delhi hosted the game in 2010**.
- As the host, India **can propose up to two new or traditional sports** and the Indian delegation said one of the sports identified is yoga.
- The **Commonwealth or the Commonwealth of Nations** is a voluntary organization of **56 member countries**, including India, the UK, Canada, and Australia.
- Members are **sovereign and independent** but work together through **shared values, agreements**,
- Commonwealth Games are **quadrennial international multisport events** contested by athletes from the **Commonwealth of Nations** and managed by the Commonwealth Games Federation, based in London, England.
 - ➔ The first ever Commonwealth Games was held in the **Canadian city of Hamilton in 1930**.

Indira Gandhi Peace Prize

- The **2024 Indira Gandhi Prize for Peace, Disarmament and Development** was awarded to **Michelle Bachelet**,
- Chile's first woman President, for reforms promoting **inclusive pensions, social protection for women and children, and increased women's political participation**.
- Instituted in **1985** to honor Indira Gandhi's contributions, the prize is administered by the **Indira Gandhi Memorial Trust** and includes **Rs. 10 million**, a **trophy**, and a citation.
- The trophy, made of **Haematite Jasper**—the same stone as at Gandhi's samadhi in New Delhi—is one of India's hardest stones, estimated to be **2,000 million years old**.

UNESCO Creative Cities Network

- Lucknow has been named a **UNESCO Creative City of Gastronomy** during the 43rd UNESCO General Conference in Uzbekistan, celebrating its centuries-old **Awadhi cuisine** and food traditions.
- It joins 70 gastronomy cities worldwide and is the second Indian city after Hyderabad.
- Famous for dishes like **Galouti Kabab, Awadhi Biryani, Chaat, Golgappe**, and desserts like **Makhan Malai**, Lucknow's recognition highlights its rich culinary heritage.
- The **UNESCO Creative Cities Network (UCCN)**, established in 2004, promotes collaboration among cities leveraging creativity for sustainable urban development.

Integrated Child Development Services (ICDS)

- India's **Integrated Child Development Services (ICDS)**, launched in 1975, has completed 50 years.
- ICDS is the world's largest community-based programme for **child nutrition, early learning, and maternal health**.
- It is a **centrally sponsored scheme** implemented by States/UTs and is now under **Mission POSHAN 2.0**.
- Targeting children up to 6 years and women aged 16–44, services are delivered at local **Anganwadi centres** by **Anganwadi Workers**.
- ICDS combines **health, education, and nutrition**, offering supplementary nutrition, pre-school education, immunisation, health check-ups, referrals, and nutrition education.

GI Tag

- 3 new products of India received Geographical Indication (GI) tag under **Geographical Indications of Goods (Registration and Protection) Act, 1999**.
- A GI tag recognises products that possess unique qualities or characteristics linked to their geographical origin.

- The **Geographical Indications Registry** under the **Ministry of Commerce and Industry** grants the tag which is **valid for 10 years**, renewed indefinitely.
- Both **Indian and Non-Indian items** (must have GI recognition in their own country first) can get the recognition.

Meerut Bugle:

- The **bugle** is a brass wind instrument used by the **armed forces for signaling, parades, and ceremonies**.
- Meerut, Uttar Pradesh, has been a **center of bugle-making since the late 19th century**, and most of India's army, paramilitary, and police forces still use **Meerut-made bugles**



Arunachal Dao:

- The '**dao**' is a handcrafted multipurpose blade symbolizing the courage, cultural heritage, and metallurgical tradition of **Arunachal Pradesh's** tribal communities.



Ambaji Marble:

- **Ambaji marble**, quarried in **Ambaji town, Gujarat**, is renowned for its **pure white color, exceptional shine, high calcium content, and durability**.
- Its mines date back **1,200–1,500 years**, around the period of the **Dilwara Jain Temples** in Mount Abu.



Places in News

Hayli Gubbi Volcano



- **Ethiopia's** Hayli Gubbi volcano, which erupted after nearly 10,000 years, has sent a massive ash **cloud drifting toward India**, raising air quality and aviation concerns.
- Located **800 km northeast of Addis Ababa**, it is the **southernmost volcano of the Erta Ale Range in the Afar region**—a tectonic triple junction between the Red Sea, Gulf of Aden, and East African Rift.
- Hayli Gubbi, a **500-meter-high shield volcano**, sits in a geologically active zone.
- After Erta Ale's July 2025 eruption, magma was tracked moving south beneath Hayli Gubbi.

Ningaloo Reef



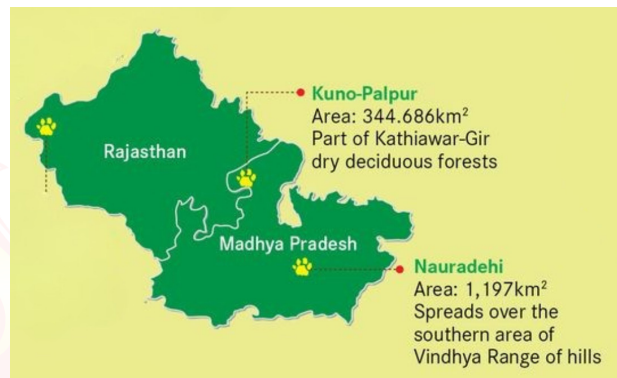
- Nearly 70% of corals in **Australia's Ningaloo Reef**—the **world's largest fringing reef** and a **UNESCO World Heritage site**—have died due to the country's most intense marine heatwave.
- A **fringing reef** is a type of coral reef that **grows directly along the coastline**, often separated from the shore by a narrow, shallow lagoon or no lagoon at all.
- Stretching along Western Australia's coast in the East Indian Ocean, the Ningaloo reef hosts whale sharks, manta rays, turtles, and humpback whales.
- The Ningaloo Coast also features an **extensive karst system of caves and watercourses**.

Gogabeel Lake



- Gogabeel Lake in **Katihar, Bihar**, has been designated **India's 94th Ramsar Site** and **Bihar's sixth**, becoming the **state's first community reserve**.
- A **natural oxbow lake** between the **Ganga and Mahananda rivers**, it functions as a floodplain wetland, linking with rivers during monsoons.
- An **oxbow lake** is a crescent-shaped lake formed when a river meander is cut off from the main channel, common in lowland rivers with wide floodplains.
- A **community reserve** is a protected area on community-owned land in India, declared under the Wildlife Protection Act, 1972, where local communities help conserve flora, fauna, and their habitat.
- Ramsar Convention (1971)** is an international treaty promoting wetland conservation and sustainable use through local, national, and global cooperation.
- Currently India has 94 Ramsar sites **ranking third globally** after the United Kingdom (176) and Mexico (144) and first in Asia.

Nauradehi Wildlife Sanctuary NWS



- Nauradehi Wildlife Sanctuary (NWS)** in Madhya Pradesh, spread over **1,197 sq km**, will become the state's **third cheetah habitat** after Kuno and Gandhi Sagar.
- Located between the **Yamuna and Narmada basins**, it serves as a crucial wildlife corridor linking Panna, Satpura, and indirectly Bandhavgarh Tiger Reserves.
- Dominated by **Vindhyan sandstone, Lameta, and Deccan Trap formations**, the sanctuary features **Tropical Dry Deciduous forests** and varied grasslands.
- It hosts **tigers, leopards, Indian wolves (keystone species), wild dogs, sloth bears, nilgai, chinkara, sambar, and blackbuck**.

Lake Turkana



- A **Nature Scientific Reports** study found that declining water levels in **Lake Turkana** over the past 6,000 years increased **earthquake activity**.
- Africa's **largest desert lake** and the **most saline in East Africa**, it is known for its **jade-green waters** and **active tectonics**.
- Located mainly in **northern Kenya** with a tip in **southern Ethiopia**, it lies in the **East African Rift**.

- Fed by the **Omo, Kerio, and Turkwel rivers** (Omo contributes ~90%), it was formed by **rift tectonics** and features **volcanic outcrops** and **three volcanic islands**, and is a **UNESCO World Heritage site**.

- It frequently emits ash, has periodic major eruptions, and—despite its risks—remains a popular trekking destination

Kunar River



- India has backed **Afghanistan's plan to build a dam on the Kunar River**, a major transboundary river that **originates in Pakistan's Chitral district**, flows into Afghanistan, and then **re-enters Pakistan as the Kabul River** before joining the Indus at Attock.
- The Kabul–Kunar system is vital for irrigation, drinking water, and hydropower in Pakistan's **Khyber Pakhtunkhwa region**.
- If Afghanistan builds dams upstream, it could **sharply reduce Pakistan's already strained water supply**, worsening shortages for farms and communities.

Mount Semeru



- Mount Semeru, **Indonesia's tallest and most active volcano on Java**, erupted violently, sending ash 13 km high and causing dangerous pyroclastic flows.
- Standing 3,676 m tall, **Semeru (also called Mahameru)** is one of Indonesia's ~130 active volcanoes along the Pacific Ring of Fire.

Siliguri Corridor



- India has set up three **new Army garrisons at Dhubri, Kishanganj and Chopra** to boost surveillance and readiness around the sensitive Siliguri Corridor.
- This narrow **60 km × 22 km "Chicken's Neck"** is the only land link between mainland India and the northeast, bordered by Bangladesh and China, and also connects to Nepal and Bhutan.
- Because of its geography, even a 130-km Chinese advance could potentially cut off the northeast, making the corridor extremely strategic.

Lake Urmia (Iran)



- **Iran has attempted cloud-seeding** over the Lake Urmia basin to induce rainfall amid the country's worst drought in decades.
- Lake Urmia is a **UNESCO Biosphere Reserve** and once the second-largest hypersaline lake in the world after the Caspian Sea.
- It has **shrunk drastically now** due to climate change as well as thousands of dams and irrigation projects on the rivers (especially Zarrineh and Simineh) which reduced the inflow that once kept the lake full..

Species in News

Corpse flower



- Scientists in Sumatra recently rediscovered the extremely rare **Rafflesia hasseltii**, a “corpse flower” known for its huge petals (up to 1 m wide, ~6 kg) and foul smell of decaying flesh.
- Among the rarest of 42 parasitic Rafflesia species, it has a slow cycle—buds take **nine months** to mature and the bloom lasts only **about a week**, attracting carrion-eating insects for pollination.
- Native to western Sumatra’s rainforests, it has been used by indigenous groups like the **Orang Asli** in folk medicine for wound healing and postpartum care, though its high tannin content makes excess use toxic.
- Rafflesia, most now at risk of extinction, is restricted to **Indonesia–Malaysia–Philippines** because it evolved in this hotspot, depends on a **single host vine**, and cannot disperse or survive outside dense Southeast Asian rainforests.

African Grey Parrot

- Reports show that India lacks registered breeders or authorised pet shops for **African grey parrots**, even though they are **easily available in Indian markets**.
- The **African grey parrot (Psittacus erithacus)** is a highly intelligent, medium-sized parrot and the **best mimic among birds**.

- Native to West and Central Africa, it inhabits **savannas, mangroves, woodland edges, and forest clearings**, with two subspecies—Congo African Grey and Timneh African Grey.

- It has a black bill, white facial mask with yellow eyes, and a red tail.
- It mainly **eats** fruits, seeds, buds, nectar, and pollen, and can live over 50 years.

- **CITES:** Appendix I
- **IUCN:** Endangered



Galápagos Tortoise



- **Gramma**, a beloved **Galápagos giant tortoise (Chelonoidis nigra complex)** and the oldest animal at the San Diego Zoo, has died at an estimated **141 years**.
- Galápagos tortoises, found only on the **Galápagos Islands** (Ecuador), comprise **15 species** of the family Testudinidae and are the **largest living terrestrial turtles**, sometimes reaching nearly 400 kg.
- They are **herbivores**, meeting most of their water needs from food, though they drink and store water when available.
- While the species complex is **generally classified as Vulnerable (VU)** by the IUCN, the status of individual subspecies ranges widely due to **varying** survival rates and conservation success:

Cuban Gar



- Cuban scientists are restoring **Zapata Swamp** to save the **Cuban gar (Atractosteus tristoechus)**, a large, predatory freshwater fish with snout filled with sharp teeth.
- A prehistoric **gar fish**, existing for **100 million years** and lives in **freshwater and brackish water** endemic to Cuba and the Isle of Youth (Isla de la Juventud).
- Like other gar species, the Cuban Gar is an **obligate air-breather**.
- It can **breathe atmospheric air** when water oxygen is low and tolerates **high ammonia/nitrate**.
- **Threats:** overexploitation, habitat loss, and invasive African walking catfish.
- **IUCN Status:** Critically Endangered.

Sangai (Rucervus eldii)

- The **Sangai Festival** was celebrated in **Manipur**.



- The **Sangai (Manipur brow-antlered deer)** is a subspecies of Eld's deer and the **State Animal of Manipur**.
- They are culturally revered and endemic to **Keibul Lamjao National Park**, where it lives on the **floating phumdi wetlands** of Loktak Lake.

- Known as the **“dancing deer”** for its delicate gait on floating vegetation, it has a dark reddish-brown winter coat and lighter summer coat.

Status:

- **CITES:** Appendix I
- **IUCN:** Critically Endangered
- **WPA 1972:** Schedule I

Rhesus Macaque



- The **National Board for Wildlife (NBWL)** has recommended restoring the Rhesus Macaque to **Schedule II of the Wildlife (Protection) Act**, removing its vermin status.
- Rhesus monkeys (**Macaca mulatta**) **share 93% of human genes** and show similar anatomy and behaviour.
- They are **Old World monkeys** found across South and Southeast Asia, including India, and are diurnal, semi-arboreal, herbivorous, and highly adaptable, often living in large troops near humans.
- **IUCN status:** Least Concern.

Himalayan Black Bear



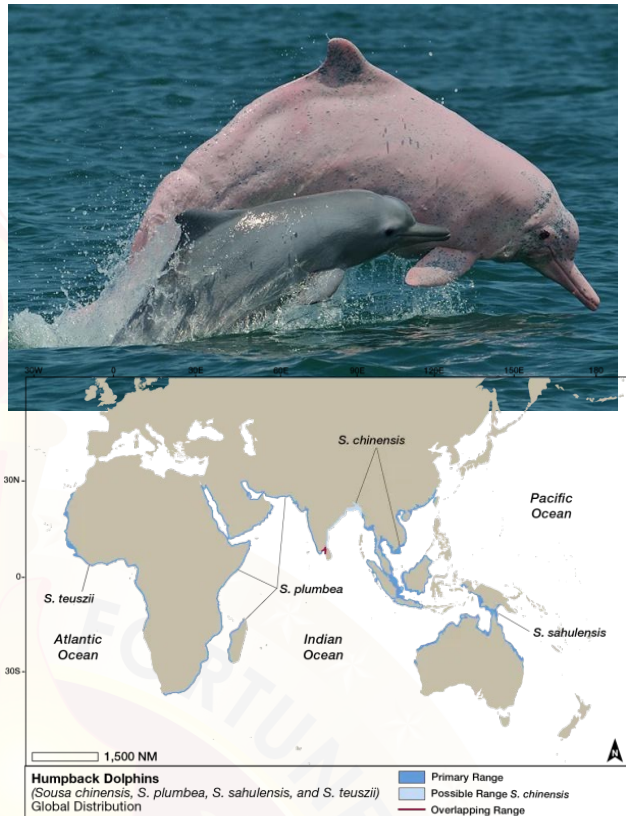
- Wildlife experts in Uttarakhand report that **Himalayan Black Bears (*Ursus thibetanus laniger*)** are becoming aggressive as **erratic weather disrupts hibernation**.
- A subspecies of the Asiatic black bear, it is an **omnivore** with a distinct **crescent-shaped chest patch** and lives in **broadleaf and coniferous forests** at **1,200–3,300 m** from J&K to Arunachal Pradesh, with **Great Himalayan National Park (GHNP)** as a major refuge.
- With a lifespan of **25–30 years**, It hibernates throughout the winter in the **northwestern Himalayas**, while it is usually active during the entire year in the eastern Himalayas.
- As a **keystone species**, it aids **seed dispersal, pest control, and nutrient cycling**.
- **IUCN Status:** Vulnerable

Finn's Weaver



- Ornithologists warn that the **Finn's Weaver (*Ploceus megarhynchus*)** is rapidly disappearing from the **marshy Terai lowlands**.
- Also called **Finn's baya** or **yellow weaver**, it is native to the **Ganga–Brahmaputra valleys** of India and Nepal, living near wetlands with tall grasses, Semal and Shisham trees.
- Mostly **granivorous**, it also eats invertebrates.
- Its habitat is shrinking due to **agriculture expansion, grass cutting, construction, housing, and industrial growth** in the Terai.
- **IUCN: Endangered.**

Humpback Dolphins



- A recent study examined the **cooperative behaviour between wild dolphins—especially humpback dolphins—and traditional fishers** in **Ashtamudi Lake, Kerala**.
- Humpback dolphins live in **shallow nearshore waters** across Australia, Africa, and Asia.
- They usually occur in **small groups of 2–6**, though larger groups (30–50) are recorded.
- On the Indian coast, both ***S. chinensis*** and ***S. plumbea*** are found.
- Living close to the shore, they often form cooperative bonds with fishers and assist in catching fish.

Four species are recognised:

- ➔ **Indo-Pacific humpback dolphin (*Sousa chinensis*)** – Vulnerable
- ➔ **Indian Ocean humpback dolphin (*S. plumbea*)** – Endangered
- ➔ **Atlantic humpback dolphin (*S. teuszi*)** – Critically Endangered
- ➔ **Australian humpback dolphin (*S. sahalensis*)** – Vulnerable

Keywords

1. **Most populous city and district:** North 24 Parganas, West Bengal has become **India's most populous district**, overtaking Thane with an estimated population of 10.9 million and a density of 2,469 people per km². Meanwhile, **Jakarta** in Indonesia is now the **world's most populous city** in 2025, with nearly 42 million residents, followed by Dhaka, Tokyo, and New Delhi.
2. **Bharat NCAP 2.0:** A draft Bharat **New Car Assessment Program (NCAP) 2.0** was released by the Ministry of Road Transport & Highways, that expands India's crash-safety rating system with new test categories and higher benchmarks, including **Vulnerable Road User Protection**. The voluntary programme rates vehicles on crashworthiness up to five stars, with ratings issued by the **Central Institute of Road Transport, Pune**.
3. **Global Mutirão:** Global Mutirão is **Brazil's COP30 initiative** for **global, voluntary, people-powered climate action** inspired by Indigenous "**mutirão**" traditions of solidarity, diversity, and bottom-up cooperation. Unanimously adopted by 195 countries in Belém, it includes **tripling adaptation finance** by 2035 to limit warming to 1.5°C
4. **Ricin:** It is a highly toxic protein prepared from **castor seeds that can** be lethal if **inhaled, ingested, or injected**, as it **blocks protein production in cells**, leading to death. It is a **potential biological weapon**, with no antidote, and treatment is limited to **supportive care**. The **Gujarat Anti-Terrorist Squad** recently arrested a suspect allegedly preparing **ricin**.
5. **Goldilocks Environment:** Morgan Stanley in 2026 India Economics Outlook, projected a "Goldilocks Environment" meaning a **balanced, moderate growth with low inflation**, forecasting 6.8% real GDP growth for FY26, driven by strong domestic demand (consumption & investment) despite global uncertainty.
6. **World's Tallest Lord Ram Statue:** PM inaugurated a **77-foot bronze statue of Lord Rama** at the 550th **Sardha Panchashatamanotsava** of the Gokarn Partagali Jeevottam Math in **Goa**; crafted by **Ram Sutar**, who also designed the Statue of Unity. The Math, founded on **Madhvacharya's Dvaita tradition**, is located on the banks of the **Kushavati River**.
7. **International IDEA:** It is an inter-governmental body **founded in 1995** and based in **Stockholm** with 35 member states—advances **global democracy**, with India as a founding member and the organisation holding **UNGA observer status** since 2003. **Chief Election Commissioner** Gyanesh Kumar will serve as **Chairperson** of International IDEA in 2026.
8. **National Water Awards:** The **6th National Water Awards (2024)**, conferred by the **Ministry of Jal Shakti**, ranked **Maharashtra first**, followed by Gujarat and Haryana, recognizing efforts under the '**Jal Samridh Bharat**' vision. Awards cover categories like **districts, villages, urban bodies, schools, industries, associations, institutions, civil society, and individuals** for excellence in water management.
9. **Operation Southern Spear:** The **U.S. launched Operation Southern Spear** to target Latin American drug cartels using **unmanned air and sea systems** across the Caribbean and eastern Pacific. The operation combines **robotic vessels, drones, traditional warships, and high-speed interdiction boats** to disrupt drug networks and secure U.S. borders.
10. **Project Suncatcher:** Google's Project Suncatcher aims to **build AI-powered, solar-powered data centres in space** using orbiting satellites with **Tensor Processing Units (TPUs)** and optical links. The initiative seeks to **reduce Earth's energy, water, and carbon footprint** from terrestrial data centres, with prototype satellites planned for launch by 2027 in partnership with Planet Labs.



കേരളം പറയുന്നു IAS നേടാൻ ഭാഗ്യമല്ല FORTUNE ആണ് വേണ്ടത്



NANDANA G P
AIR 47
PCM



SONNET JOSE
AIR 54
PCM



REENU ANNA MATHEW
AIR 81
Sociology Test Series



DEVIKA PRIYADERSINI
AIR 95
IMP



KRISHNA C
AIR 139
MTS, IMP



AMAL P V
AIR 158
PSIR, PTS, MTS, IMP



ALEX ABRAHAM P J
AIR 165
MTS, IMP



RAJATH R
AIR 169
PCM Working Professional,
Sociology



GOPIKA B
AIR 185
MTS, IMP



SOWMYA KRISHNAN
AIR 196
PCM, Malayalam
Optional



VINEETH LOHIDAKSHAN
AIR 211
MTS, PTS PRO, IMP



HEMANTH SANKAR P
AIR 223
PCM



AKSHAY DILEEP
AIR 246
MTS, PTS PRO,
Sociology



NINIYA THOMAS
AIR 254
Open Mock MTS



LAKSHMIPRIYA P
AIR 297
MTS, IMP



LAKSHMI MENON V
AIR 310
MTS, Sociology, IMP



MANJIMA P
AIR 321
PCM, Sociology



ADITYA NARAYAN H
AIR 357
PTS, MTS, Sociology,
IMP



SWATHY S
AIR 377
PCM, Malayalam
Optional



MICHAEL JOM
AIR 415
Sociology, IMP



NADIYA ABDUL RASHEED
AIR 429
PTS, MTS



NAJMA A SALAM
AIR 442
MTS, Malayalam Optional,
IMP



ADARSH C S
AIR 457
IMP



ANAND PYARELAL
AIR 484
MTS, IMP



GREESHMA K B
AIR 559
IMP



OORMILA J S
AIR 563
PCM, Sociology



HEMA V
AIR 569
MTS, Sociology, IMP



AKSHAY RAJ P
AIR 641
MTS,IMP



VAISAKH C R
AIR 656
IMP



ANJALI P
AIR 702
PCM, Malayalam
Optional



NESRIN P FASIM
AIR 703
IMP



AJAY R RAJ
AIR 730
IMP



YEDU K RAJAN
AIR 785
IMP



GANGA GOPI
AIR 786
PCM



PRANAV P MANANGATH
AIR 800
PCM



ADHIL SHUKOOR
AIR 822
IMP



KIRAN G
AIR 835
IMP



NISA UNNIRAJAN
AIR 1000
PCM



SAGAR MOHANDAS
AIR 1003
IMP

2025 സിവിൽ സർവീസ് ഫലം:
90% മലയാളികളും
FORTUNE IAS ACADEMY-ൽ നിന്ന്

39
43 Toppers