

# FORTUNE Prelims Precise

January 2026



# FORTUNE IAS

## Toppers in Top 100



# Preface

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

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

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

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



Test your preparation with  
January 2026  
Monthly Current Affairs  
quiz here

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# Polity & Governance

## Central Ground Water Board (CGWB)

- The **Central Ground Water Board (CGWB)** released its **Annual Ground Water Quality Report-2025**.
- **CGWB** is an attached office under the **Department of Water Resources, River Development & Ganga Rejuvenation, Ministry of Jal Shakti**, formed in **1970** by renaming the Exploratory Tube Well Organisation.
- It is headquartered at **Faridabad**, Haryana and has **18 Regional Offices**.
- It is headed by a **Chairman and five Members** and is a multidisciplinary scientific body responsible for **monitoring, assessment, and sustainable management of groundwater**.

### Key findings:

- **71.7%** samples meet BIS standards
- Major contaminants in India: **nitrate (20%), fluoride, and electrical conductivity (EC)**
- **Arunachal Pradesh, Mizoram, Meghalaya, and Jammu & Kashmir** had 100% BIS-compliant samples
- **Rajasthan, Haryana, and Andhra Pradesh** showed widespread contamination
- **Monsoon season** led to partial improvement, especially in **EC and fluoride** levels

## Sports Authority of India (SAI)

- The Sports Authority of India (SAI) conducted a workshop for combat sports coaches in New Delhi.
- **Sports Authority of India (SAI)**, autonomous body under the Department of Sports, Ministry of Youth Affairs & Sports, was set up in **1984** to carry forward the legacy of the **IXth Asian Games held in New Delhi in 1982**.

- Set up as a **Society registered under Societies Act, 1860**, its key functions include **coaching, sports science and sports medicine support**, provision of equipment and international exposure, and **maintenance of sports stadia**.
- SAI runs various **training and development schemes** such as **National Centres of Excellence (NCOEs)**, **SAI Training Centres (STCs)**, **Khelo India programmes** for youth and university athletes, and provides **Target Olympic Podium Scheme (TOPS) support** to elite sportspersons.
- SAI also plays a governance role by **assisting National Sports Federations** and implementing initiatives under the **National Sports Policy**, with its headquarters located in New Delhi.

## Governor and State address

- Several States have seen fresh confrontations with Governors **over the content and reading of the Governor's Address to the State Legislature**, raising questions on constitutional propriety.
- The **Governor's Address to the State Legislature** has its roots in **Section 63 of the Government of India Act, 1935**, where Governors could address provincial legislatures, with speeches from 1937 onwards prepared in consultation with Ministers.
- Under the **Indian Constitution, Article 175** allows a Governor to address the House optionally, while **Article 176** mandates an address at the first session of each year and after general elections, presenting the **Cabinet-prepared legislative agenda**, which is then debated through the **'Motion of Thanks'**.
  - ➔ The Governor must deliver the address **as prepared**, without altering content or selectively reading portions.
- Supreme Court rulings—**Shamsher Singh v. Punjab (1974)** and **Nabam Rebia v. Deputy Speaker (2016)**—clarify that the Governor is a **constitutional head acting on the aid and advice of Ministers**, with no discretion over policy.
- If a Governor acts partisan or refuses duties, the **President, under Article 160**, can direct the Governor to perform constitutional functions or ask them to vacate office.

## Prior sanction for public servants

- A two-judge Bench of the Supreme Court has delivered a split verdict on the constitutional validity of **Section 17A of the Prevention of Corruption Act, 1988**.
- This section was **inserted into the PCA in 2018** and stated the requirement of prior government approval **before initiating any inquiry** or investigation against a public servant for decisions taken in official capacity.
- Done with the intention of protecting honest officers from frivolous probes, the original act already contained **Section 19** that requires **prior government sanction before a court can prosecute** a public servant for corruption while still allowing investigation.
- **Section 17A** goes further by mandating **prior approval even to start an inquiry or investigation** but is criticised for potentially obstructing anti-corruption probes.
- In the current case, **Justice K.V. Viswanathan** upheld Section 17A as needed to protect honest officials from fear of investigation that could make them overly cautious (“play-it-safe” bureaucracy).
  - ➔ But he said it is valid **only if approval comes from an independent body** like the Lokpal or Lokayukta, not the government.).
- In contrast, **Justice B.V. Nagarathna** held Section 17A **unconstitutional**, saying it merely revives earlier protections already struck down, violates **Article 14 (equality)**, and is unnecessary because **Section 19 already protects honest officers**.
- Because of this **split verdict**, a **larger Bench of the Supreme Court** will now give the final decision.

## Central Vigilance Commission (CVC)

- **President Droupadi Murmu** made the appointment of Praveen Vashista as **Vigilance Commissioner in the Central Vigilance Commission** recently.
- The Central Vigilance Commission (CVC), **established in 1964** on the **Santhanam Committee’s** recommendations and given **statutory status by the CVC Act, 2003**.
- It is India’s apex anti-corruption body tasked with **promoting integrity in public administration**.

- It conducts **preliminary inquiries** into Lokpal-referred complaints and exercises **superintendence over the CBI in corruption cases under the PCA, 1988**.
- The Commission **comprises** a Central Vigilance Commissioner (Chairperson) and up to two Vigilance Commissioners, appointed by the President on the recommendation of a **committee** consisting of the Prime Minister, Home Minister, and Leader of Opposition, with a **tenure of four years or up to age 65**.

## UGC’s anti-discrimination regulations

- The Supreme Court (SC) of India has stayed the implementation of the **UGC (Promotion of Equity in Higher Education Institutions) Regulations, 2026**
- The UGC has notified the **regulations this year** to curb discrimination, including caste-based bias, across **all higher education institutions**.
- **Replacing** the advisory 2012 regulations, the new rules make equity enforcement **mandatory**, aiming to protect SCs, STs, OBCs, EWS, women, and persons with disabilities.
- Every institution must now set up an **Equal Opportunity Centre (EOC)**, an **Equity Committee**, and **Equity Squads**, along with a 24-hour Equity Helpline and Equity Ambassadors.
- The Equity Committee must act swiftly on complaints, while Equity Squads maintain campus vigilance.
- Unlike earlier rules, the 2026 regulations introduce **national-level monitoring** and allow punitive action against non-compliant institutions, including denial of UGC grants and programs.

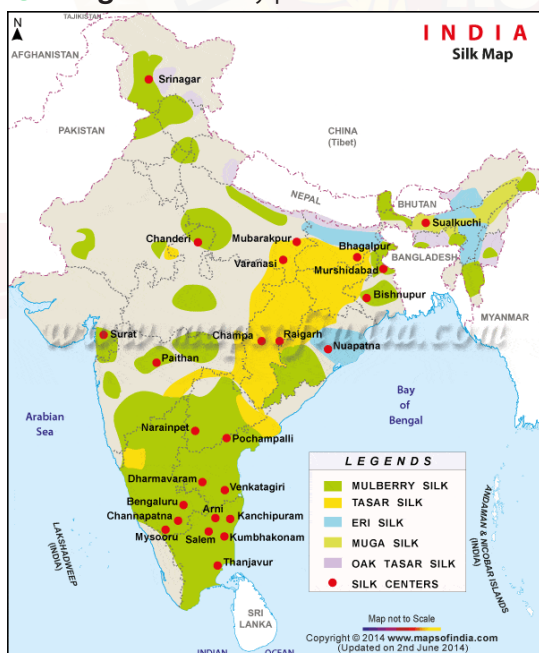
### The University Grants Commission:

- The UGC is a **statutory organization under the Ministry of Education**, established by a 1956 Act of Parliament.
- Its purpose is to **promote and coordinate university education, determine and maintain standards of teaching**, examination, and research, provide grants to eligible institutions, and advise Central and State Governments on the development of Higher Education.
- The UGC has offices in three Delhi locations: Bahadur Shah Zafar Marg, 35 Feroze Shah Road, and the South Campus of the University of Delhi.

# Economy

## Central Silk Board

- The government has increased the **Central Silk Board's (CSB) financial approval limit** from ₹50 lakh to ₹1 crore.
- This enables **faster, independent decisions on modernization and research** without requiring ministry-level sanctions, fostering increased exports.
- Established in **1948** under the **Ministry of Textiles** and headquartered in **Bangalore**, CSB coordinates R&D, seed distribution, and technology dissemination.
- India is the **world's second-largest producer and consumer of silk** with **Karnataka** as the leading producer, accounting for over one-third of the total, followed by Andhra Pradesh, Tamil Nadu, and West Bengal.
- ✓ **Mulberry:** Primarily in Karnataka, Andhra Pradesh, Tamil Nadu.
- ✓ **Eri:** Majorly produced in the North East and Assam. Recently started in Gujarat.
- ✓ **Tropical Tasar:** Produced in Jharkhand, Chhattisgarh, and Bihar.
- ✓ **Temperate (oak) Tasar:** Jammu & Kashmir, Himachal Pradesh, Manipur, and Assam.
- ✓ **Muga:** Exclusively produced in Assam.



## Catastrophe Bonds

- **Kerala recently asked the Union government** to consider instituting 'catastrophe bonds' as protection against disaster-linked losses.
- Catastrophe (CAT) bonds are **insurance-linked securities** that **shift disaster risks**—like floods, landslides, or cyclones—from governments to investors.
- In India, **governments currently bear full recovery costs**, straining budgets, especially in disaster-prone areas like Kerala.
- CAT bonds provide **quick, pre-arranged funds after qualifying disasters**, enabling faster response without affecting other programmes.
- **Governments or insurers issue CAT bonds** to raise funds from investors, offering high interest due to the risk.
- If **no disaster occurs** during the bond term (3–5 years), investors **get full principal and interest**.
- If a **predefined disaster**—like floods, landslides, or earthquakes—occurs, **part or all of the principal is used for relief**, transferring risk to investors and providing governments quick funds.

## Open Network for Digital Commerce (ONDC)

- Archaeological Survey of India (ASI), under the Ministry of Culture, has launched online ticket booking for more than 170 centrally protected monuments and museums **through the Open Network for Digital Commerce (ONDC)**
- ONDC is a Government of India initiative under the **Department for Promotion of Industry and Internal Trade (DPIIT)**, Ministry of Commerce and Industry, aimed at **making digital commerce more inclusive and decentralized**.
- Called the **"UPI of e-commerce,"** it uses **open protocols** to connect buyers, sellers, delivery partners, and payment systems across different apps.
- Open protocols means that ONDC uses **standardized, open-source rules (specifically Beckn protocol)** that allow **different buyer and seller applications to interact directly**, removing the need for both parties to be on the same platform (unlike closed systems like Amazon/Flipkart).

- Managed by a **not-for-profit with an advisory council of experts**, ONDC is a network of **interoperable apps** rather than a single platform.
- It is operational in **500+ cities, with over 350 million transactions completed**, and expanding across e-commerce, mobility, logistics, and services.
- Buyers and sellers can **access it via ONDC-enabled apps**, with businesses onboarding through seller apps using basic KYC and product details.

➔ PMKKKY directs how DMF funds must be used for welfare and development in mining-impacted areas.

- Mining companies contribute a **percentage of royalty** (typically 10% for leases after 2015, up to 30% in some cases) to the district's DMF—creating a **non-lapsable fund**.
- **At least 60%** of the DMF funds should be utilised for **high-priority areas**.

## Economic Survey of India 2026

- **Chief Economic Advisor V. Anantha Nageswaran** recently presented the Economic Survey 2026, prepared by the **Department of Economic Affairs (Ministry of Finance)**.
- It provides a comprehensive report card of the nation's economy ahead of the Union Budget on February 1.

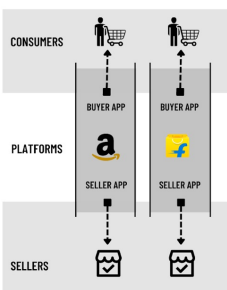
### Key Highlights:

- **Growth:** Real GDP expected at 6.8–7.2% in 2026-27, slightly lower than 7.4% in FY26.
- **Inflation:** Contained, with improving supply-side conditions.
- **Fiscal:** FY25 deficit at 4.8% of GDP; FY26 target 4.4%; state-level populism and weak finances a concern.
- **Rupee & Capital Flows:** INR depreciated ~5.4% in 2025 due to foreign capital outflows.
- **Capital Spending:** Rose from ₹2.63 lakh crore in FY18 to ₹11.21 lakh crore in FY26 (BE); effective spending ₹15.48 lakh crore.
- **Innovation & Global Standing:** Global Innovation Index rank improved to 38th (2025); renewable energy 3rd globally; foodgrain production 3577.3 LMT.
- **External Position:** Forex reserves \$701.4B (~11 months of imports); remittances \$135.4B.
- **Poverty:** Multidimensional Poverty Index shows drop from 55.3% (2005-06) to 11.28% (2022–23)



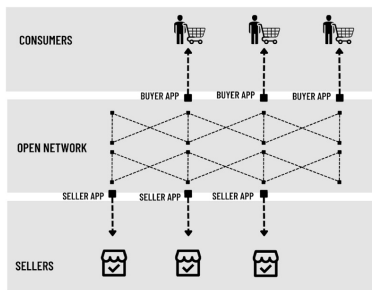
#### Platform Centric Models

Buyers and sellers can only interact within walled platforms.



#### Network Centric Models (like ONDC)

Buyers and sellers can interact with each other in a platform-agnostic manner.



## District Mineral Foundations (DMFs)

- The Allahabad High Court recently held that formation of **District Mineral Foundations** must be construed liberally for those who are affected negatively by mining operations.
- **District Mineral Foundations (DMFs)** are non-profit trusts in mining-affected districts, established by **State Governments** under Section 9B of the MMDR Amendment Act, 2015.
- **Funding** comes from **contributions by mining companies (a percentage of royalty from mining)** in the district decided by the Central Government, although it is collected and managed by the State Governments in DMFs.
- The main **objective** is to use these funds for welfare and development projects in mining-affected areas.
- The **core “scheme”** guiding DMF operations is the **Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY)**, launched in 2015 by the Ministry of Mines.

## Power Gap Index

- The **Economic Survey 2025-26** highlighted India's strategic underperformance using the **Power Gap Index**.
- The **Power Gap Index** is **produced by the Lowy Institute, Australia**, as a secondary analysis derived from its **Asia Power Index**.
- The **Asia Power Index**, ranks **27 Asia-Pacific countries** on power and influence in the region.
- It combines **resource measures** (economy, military, resilience, future potential) and **influence measures** (diplomacy, defence, trade, culture) to assess how effectively nations convert capabilities into regional influence.
- The Power Gap index **measures the gap** between a country's resources and actual regional influence: positive scores indicate effective influence, negative scores show underutilisation.
- India ranks **3rd** overall (40/100) in Asia Power Index, entering the "major power" category, but has a **negative Power Gap of -4.0**, the **lowest in Asia** except Russia and North Korea.
- Smaller countries like Japan (1.0), Australia (8.0), Singapore (5.2), and South Korea (5.1) convert resources into influence more effectively.

## Sampoornata Abhiyan 2.0

- **NITI Aayog recently launched 'Sampoornata Abhiyan 2.0'**, in the Aspirational Districts and Blocks of India.
- **Sampoornata Abhiyan 2.0** is a 3-month campaign to undertake a sustained effort to achieve **saturation of 5 Key Performance Indicators (KPIs) in Aspirational Districts** and 6 Key Performance Indicators in Aspirational Blocks across the country.
- The initiative **covers 112 Aspirational Districts and 513 Aspirational Blocks** under the Aspirational Districts and Blocks Programme of Niti Aayog.
- The campaign is designed as an intensive, time-bound effort to address critical gaps in health, nutrition, sanitation, education and animal welfare.

➔ **Aspirational Blocks (6 KPIs):** Supplementary nutrition coverage, child measurement efficiency, functional toilets and drinking water in Anganwadis, girls' toilet facilities in schools, and bovine vaccination.

➔ **Aspirational Districts (5 KPIs):** Birth weight monitoring, TB case notification, Village/Urban Health & Nutrition Days, girls' school toilets, and animal vaccination.

- Launched in **2018**, the **Aspirational Districts Programme (ADP)** by **NITI Aayog** aims to rapidly transform districts and blocks with poor socio-economic indicators.
- The **Aspirational Blocks Programme** was launched on 7 January 2023 by the Government of India under NITI Aayog as a **sub-component** of the Aspirational Districts Programme to improve governance and quality of life in under-developed blocks across the country.

## Advanced Chemistry Cell (ACC) Scheme

- India's Advanced Chemistry Cell-Production Linked Incentive (ACC-PLI) scheme has fallen behind schedule, with only 1.4 GWh battery capacity commissioned against a target of 50 GWh by 2026, as per a recent analytical report.
- **Advanced Chemistry Cells** are the components of modern batteries using technologies such as lithium-ion to run electric vehicles and are different from the classical lead-acid batteries that start a car or run inverters.
- The ACC-PLI scheme, **launched by the Ministry of Heavy Industries** in October 2021, promised emergent battery manufacturers, who won an auction, a certain amount of money for every battery they sold, as a way to incentivise investment in the sector.
- The government's scheme also **aimed to build a local battery supply chain (cathode, anode, electrolyte) to reduce import dependence**, mobilising private investments and global tech partnerships, lowering battery costs, and accelerating electric vehicle (EV) and energy storage adoption.
- Currently, **China is the dominant supplier of such cells**, and one of the aims of the scheme is to reduce India's dependence on the country.
- With an outlay of ₹18,100 crore the **ACC-PLI sought to attract large companies by mandating a minimum investment of ₹1,100 crore** (\$129.3 million).

- ✓ In return, companies would receive a maximum subsidy of ₹2,000 per KWH.
- Another mandate was that companies **should ensure 25% of the manufacturing was local within two years, and 60% within five years.**

## Small Industries Development Bank of India (SIDBI)

- The Union Cabinet recently approved an equity infusion of **₹5,000 crore into the Small Industries Development Bank of India (SIDBI)** to expand the credit available to micro, small and medium enterprises (MSMEs).
- **SIDBI** is the principal All India Financial Institution in India dedicated to the promotion, financing, and development of the **Micro, Small and Medium Enterprises (MSME)** sector.
- Established on **April 2, 1990, under an Act of Parliament**, it was initially a subsidiary of **IDBI Bank** but became **independent** in 2000.
- Headquartered in **Lucknow**, Uttar Pradesh and provides **refinance** to banks lending to MSMEs, direct lending (term loans, working capital), credit guarantees, microfinance support, venture capital funding (via **SIDBI Fund of Funds**), and developmental initiatives like skill building, green financing, and digital lending.
- SIDBI also supports MSMEs through **Udyami Mitra**, an online platform for loans, scheme guidance, and handholding support.
- Key initiatives include **SMILE** (credit for growth and technology upgradation), **ASME** (term loans and working capital), **credit guarantee schemes**, **SGAF** (equity co-investment), and **cluster development programs**.
- SIDBI also promotes **green finance**, financial inclusion via MFIs/SHGs, and publishes knowledge products like **CriSidEx**, **MSME Pulse**, and **SPeX** to track sector performance and sentiment.

## 10 years of StartUp India

- On **National StartUp Day (16 January 2026)**, the Prime Minister of India extended greetings as India marked 10 years of the StartUp India initiative.
- **Startup India is a flagship initiative** under the Department for Promotion of Industry and Internal Trade (DPIIT).

- It has the **vision of building a strong and inclusive startup ecosystem** across the country.
- Main objectives of Startup India include **simplification of compliance procedures and facilitating access to funding** via tax exemptions, grants, and venture capital.
- Startup India has **simplified certification by enabling self-certifications**. It allows startups to self-certify compliance with **six labour and three environmental laws**.
- It has fastened the process of **filing and following through patent application** by reducing fees and expediting examination for intellectual property filings.
- It provides a **single-point digital platform** for startup registration and tracking.

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# International Relations

## European Atomic Energy Community (Euratom)

- India and the **European Union** have reaffirmed cooperation on **peaceful uses of nuclear energy** under the **2020 India–Euratom Agreement**.
- European Atomic Energy Community (Euratom)**, established in **1957 under the Treaty of Rome**, is the **international organisation** created to **develop, regulate, and coordinate the peaceful (civilian) use of nuclear energy in Europe**.
- It was founded by **six countries**—Belgium, France, Germany, Italy, Luxembourg and the Netherlands—and later included all EU members.
- Euratom **regulates the EU’s civil nuclear sector**, which supplies about **30% of EU electricity**.
- Its key instruments include the **Euratom Supply Agency**, which ensures **regular and equitable access to nuclear materials**, and **research and nuclear safeguard mechanisms**.
- The **India–Euratom Agreement** provides a legal framework for civilian nuclear cooperation, ensuring non-proliferation safeguards while facilitating nuclear trade and technology transfer.



- Member states
- Participating associated states

## Indo Pacific Oceans Initiative (IPOI)

- India recently welcomed Spain for joining the Indo-Pacific Oceans Initiative (IPOI).
- The IPOI was **launched by India** in November 2019 at the **ASEAN-led East Asia Summit (EAS) in Bangkok** to promote cooperation for a **free, open and rules-based Indo-Pacific**.
- It is a **non-treaty, voluntary arrangement** with no legally binding obligations, allowing flexible participation based on national priorities.
- IPOI adopts a pillar-based approach with seven pillars, where one or two countries act as lead partners.

NOTE: The **East Asia Summit (EAS)** is an annual, **ASEAN-led regional forum** for strategic dialogue on political, security, and economic challenges, involving **18 countries**: the 10 ASEAN members and 8 dialogue partners (Australia, China, India, Japan, New Zealand, South Korea, Russia, and the US). Established in 2005, it promotes peace and prosperity in the Indo-Pacific



## World Economic Forum (WEF)

- Recently, the **56th World Economic Forum (WEF) Annual Meeting** was hosted in Davos, Switzerland.
- It had the theme **“A Spirit of Dialogue”** and brought together global leaders from business, politics, and civil society.
- Established in 1971** as an **international non-profit organisation** by German economist Klaus Schwab, who chaired the WEF for 50 years till his retirement in 2025.

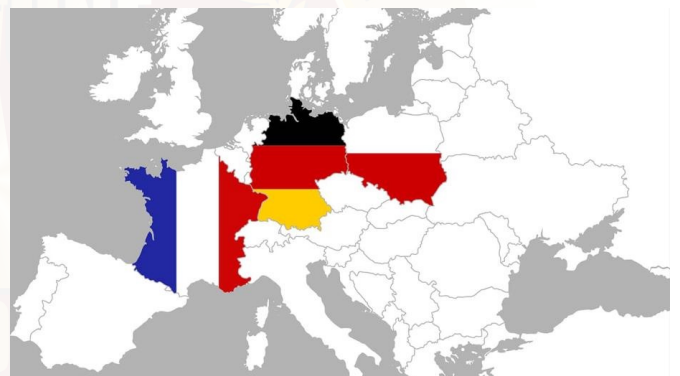
- It was **originally founded as the European Management Forum** later renamed to World Economic Forum in 1987.
- It produces **flagship reports** such as the **Global Gender Gap, Future of Jobs, Global Risks, Global Cybersecurity Outlook, the Global Cooperation Barometer** etc.
- It **addresses major global concerns** such as climate change, economic challenges, and global security and it is **funded by its diverse membership**.

### United Nations Economic and Social Council (ECOSOC)

- The **UN Economic and Social Council (ECOSOC)**, established in **1945 under the UN Charter** marked its **80th anniversary**.
- ECOSOC is one of the **six principal organs of the United Nations** and promotes **sustainable development (SDG)** by integrating **economic growth, social inclusion, and environmental protection**, guided by the principle of **leaving no one behind**.
- The Council has **54 members**, elected by the **UN General Assembly for three-year terms** and a **rotating presidency** selected annually from a different region.
- The seats are distributed geographically: 14 from African states, 11 from Asian states, 6 from Eastern European states, 10 from Latin American and Caribbean states, and 13 from Western European and other states (including the USA, Canada, Australia, etc.).
- **Elections take place every year, renewing one-third** of the seats (18 members retire annually).
- ECOSOC has played a key role in bringing autonomous international organizations into relationship with the UN as **specialized agencies** including WHO, UNESCO, ILO, FAO, World Bank Group etc.
- ECOSOC exercises coordinating and recommendatory powers, **but lacks binding or enforcement authority**.

### Weimar Triangle

- India's External Affairs Minister recently participated in India's first-ever engagement in the Weimar Triangle, with French and Polish counterparts along with German representatives.
- The **Weimar Triangle** is a **regional political grouping of France, Germany, and Poland**, formed in **1991** through a joint declaration at **Weimar, Germany**.
- It was created to promote **Franco-German-Polish reconciliation**, strengthen **political dialogue on European security and integration**, and support **Poland's integration with Western institutions**, including **NATO and the EU**.
- After Poland joined **NATO (1999)** and the **EU (2004)**, the grouping evolved into a **consultative forum** ahead of EU negotiations.
- Though it has **no formal institutional structure**, it continues to function as a political framework and extends to **civil society cooperation**, such as **youth exchanges and academic collaboration**.



### China's Antarctic Law

- China has proposed a **draft Antarctic Activities and Environmental Protection Law** to regulate all **China-linked activities in Antarctica**, aligning domestic practice with the **Antarctic Treaty System**.
- India enacted a similar law, the **Indian Antarctic Act, 2022**.

#### Key points of comparison:

- **Jurisdiction:** China's law has **wider reach**, covering Chinese entities and foreign actors operating from China or Chinese ports; India's

Act mainly applies to **Indian citizens, entities, and those linked to Indian expeditions or stations.**

- **Permits:** China extends permissions beyond science to **tourism, shipping, and fishing**; India prioritises **scientific research, conservation, and environmental protection.**
- **Environmental safeguards:** Both mandate **EIAs, waste and pollution control**, and protection of ecosystems; India explicitly **prohibits introduction of non-native species.**
- **Peaceful use:** China explicitly **prohibits military activities** except limited peaceful support; the Indian Act has **no separate provision.**
- **Resources:** Both **ban mineral exploitation**, except for scientific research.
- **Compliance:** China provides **sanctions, insurance/financial guarantees, and emergency plans**; India extends **Indian courts' jurisdiction to Antarctica** and prescribes **penal provisions.**

**Note:** The **Antarctic Treaty (1959; in force 1961)** designates Antarctica (south of **60°S**) as a **scientific preserve**, prohibiting military activity and nuclear explosions or waste disposal.

## Ganga Water Sharing Treaty (1996)

- India–Bangladesh Ganga Water Sharing Treaty (1996) is set to **expire in December 2026.**
- Signed on **December 12, 1996**, by PM H. D. Deve Gowda and PM Sheikh Hasina, the 30-year treaty (renewable by mutual consent) governs **dry-season (Jan 1–May 31) sharing of Ganga/Padma waters at Farakka Barrage.**
- The **barrage diverts water** into the **Hooghly River** to maintain **navigability for the Kolkata (Calcutta) port**, while the **main flow continues into Bangladesh as the Padma River.**
- Water is shared in **10-day periods using a flow-based formula at Farakka:**  $\leq 70,000$  cusecs  $\rightarrow$  50:50;  $70,000\text{--}75,000 \rightarrow$  Bangladesh 35,000 cusecs, India gets the rest;  $>75,000 \rightarrow$  India 40,000 cusecs, Bangladesh gets the remainder.
- There is also a **guarantee clause** ensuring each country receives at least 35,000 cusecs in alternate 10-day periods during the critical March 11–May 10 window, with **emergency consultations** if flows fall below 50,000 cusecs.

- The treaty sets up a **Joint Committee** for monitoring and reporting; unresolved issues escalate to the **Joint Rivers Commission (JRC)**, then to direct diplomatic talks.
- The **dispute originated in the 1960s–70s** after the Farakka Barrage commissioned by India in 1975, with short-term agreements in 1977 and 1985; the 1996 treaty provided a **long-term, comprehensive solution**, strengthening bilateral relations.

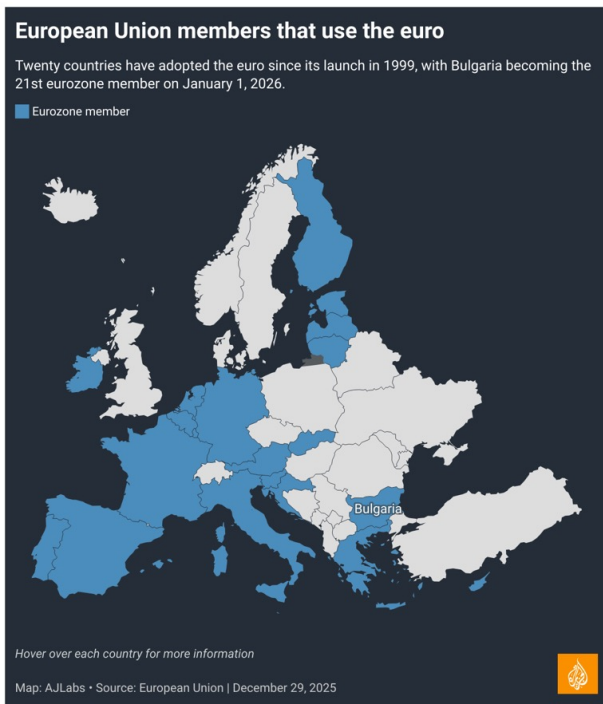


## Bulgaria joins Eurozone

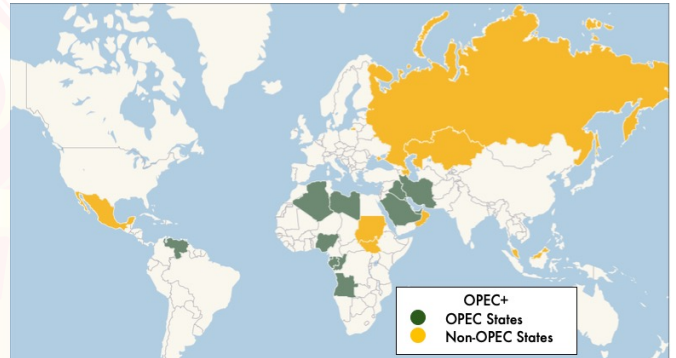
- Bulgaria officially adopted the euro on January 1, 2026, becoming the **21st member of the eurozone** and retiring its **national currency, the lev.**
- Bulgaria is a **Balkan nation in southeastern Europe** and a member of the European Union (since 2007) and NATO (since 2004) and is bordered by Romania, Greece, Turkey, Serbia, North Macedonia and Black Sea.

### EUROZONE:

- The eurozone (euro area) is the group of EU countries that have adopted the euro (€) as their official legal tender and follow a common monetary policy.
- The **Maastricht Treaty (1992)** (also known as the Treaty on European Union) laid the foundation for the European Union by paving the way for a common Economic and Monetary Union.
- This led to the **adoption of the euro as a single legal tender by the creation of a unified central banking system through the European Central Bank (ECB)**, and later led to the establishment of a common economic region (Eurozone).
- Currently **21 countries of the EU have adopted the euro**, where Sweden, Poland, the Czech Republic, Hungary, Romania, and Denmark have not yet adopted it



- The OPEC Statute **allows any major crude exporter** with aligned interests to join if approved by **three-fourths of Full Members and all Founder Members**.
- The **non-OPEC members of OPEC+** are Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan, and Sudan.



## OPEC Plus

- OPEC Plus has agreed in principle to **maintain steady oil output** despite rising political tensions among key members and widening geopolitical uncertainty.
- The Organisation of the Petroleum Exporting Countries (OPEC) is a **grouping of the world's largest oil-producing countries** which was **established in 1960** by founding members Iran, Iraq, Kuwait, Saudi Arabia and Venezuela.
  - It is a **permanent intergovernmental organisation** with headquarters in **Vienna, Austria**.
- **OPEC Plus is an extension of the OPEC formed in 2016**, in response to dramatically falling oil prices driven by significant increases in U.S. shale oil output.
- After its founding, countries like Qatar, Indonesia, Libya, UAE, Algeria, Nigeria, Ecuador, Gabon, Angola, Equatorial Guinea, and Congo **joined at different times**.
- Several members **suspended or terminated** membership—Ecuador (suspended 1992, rejoined 2007, withdrew 2020), Indonesia (suspended 2009, rejoined 2016, suspended 2016), Gabon (terminated 1995, rejoined 2016), Qatar (left 2019), **Angola (withdrew 2024)**.
- Currently, OPEC has 12 member countries.

## India–EU Free Trade Agreement

- India EU FTA, also phrased by both sides as the “Mother of All Deals”, covering a combined \$25 trillion economy was announced at the **16th India–EU Summit**.
- Key Features:
  - **Massive Tariff Elimination:** The EU will provide duty-free access to over 99% of Indian exports by trade value. India will eliminate tariffs on roughly 92-97% of EU goods over a phased period.
  - **Labour-Intensive Sector Boost:** Zero duties on USD 33 billion worth of Indian exports including textiles, apparel, leather, gems, jewellery, and marine products.
  - **Calibrated Auto Liberalization:** A quota-based system allows EU luxury carmakers access to the Indian market at reduced duties (dropping from 110% to as low as 10%) while protecting domestic manufacturing.
  - **Services and Mobility:** India gains access to 144 EU sub-sectors (IT, finance, education) and a new mobility framework facilitates visas for skilled professionals, intra-corporate transferees, and even practitioners of Indian Traditional Medicine (AYUSH).
  - **Sustainability & CBAM:** Forward-looking provisions on the EU's Carbon Border Adjustment Mechanism (CBAM) ensure technical support and dialogue to help Indian MSMEs comply with green standards.

- **Agricultural Carve-outs:** India has successfully safeguarded sensitive sectors like dairy, cereals, and poultry, which are excluded from the deal to protect local farmers. shorten

## • WHO GAINS WHAT, WHAT NEXT



### FOR INDIA

	Before FTA	After FTA
Marine sector	up to 26%	0%
Chemical	up to 12.8%	0%
Leather & footwear	up to 17%	0%
Plastic & rubber	up to 6.5%	0%
Textile & apparel	up to 12%	0%
Base metal	up to 10%	0%
Gems & jewellery	up to 4%	0%
Railway, aircraft, ships	up to 7.7%	0%
Furniture & light consumer goods	up to 10.5%	0%
Toys	up to 4.7%	0%
Sports goods	up to 4.7%	0%

### FOR EU

	Before FTA	After FTA
Motor vehicles	110%	10% (quota of 250k/yr)
Wine	150%	20% (premium); 30% (medium)
Spirits	up to 150%	40%
Beer	110%	50%
Olive Oil	up to 45%	0%
Kiwis & pears	33%	10% (in-quota)
Machinery & electrical equipment	up to 44%	0% for most products
Aircraft & spacecraft	up to 11%	0% for most items
Iron and steel	up to 22%	0% for most items
Pharma	11%	0% for most items
Processed food (bread, biscuit, pasta, chocolate, pet-food)	up to 50%	0%

• India's labour-intensive annual exports worth \$35 billion benefit immediately

• Signing of the deal expected later this year

• Legal scrubbing to take 4-5 months

• Deal expected to come into effect by early next year

• India will receive same flexibility as

US on EU's carbon tax



SOURCE: COMMERCE & INDUSTRY MINISTRY, EUROPEAN UNION

## Gaza Peace Board

- India has received an invitation to join US President Donald Trump's proposed "Gaza Peace Board".
- It is a **US-led intergovernmental body, established under UN Security Council (UNSC) Resolution 2803** ( authorised a Board to supervise Gaza's transition until 2027), to **enact a comprehensive US peace plan for the reconstruction of Gaza.**
  - ➔ The **initiative is not under UN command**, but the "Comprehensive Plan to End the Gaza Conflict" which has UNSC endorsement, providing it international legitimacy.
- It is proposed to be **chaired by US President Donald J. Trump**, and also found an **Executive Board comprising high-level figures** with expertise in diplomacy, development, and economics.
- It **helps to provide strategic oversight and mobilize resources** for Gaza's demilitarization, reconstruction, economic recovery, and transitional governance until a stable administration is in place.
- **Invitations to the board have been extended to many countries**, including Greece, Pakistan, and India and **has a unique funding model** that allows for **non-contributing three-year memberships** (can be renewed), while a **USD 1 billion payment grants permanent status.**

## Oldest known rock art



- A **hand stencil** was discovered in **Liang Metanduno cave, Muna Island, Indonesia**, dated to **at least 67,800 years ago**, making it possibly the **oldest known rock art in the world.**
- The limestone cave art, featuring hand stencils with modified fingers, shows **advanced symbolic expression** and provides the earliest direct evidence of modern humans in the region, supporting the **earlier human arrival in Australia (~60,000 years ago).**
- Earlier, some experts had claimed that the petroglyph rock art at **Daraki-Chattan (hillock) near Bhanpura in Mandsaur district** is the "world's oldest rock art", dated almost 2 to 5 lakh years' old.

## Tirukkural

- The Prime Minister of India paid homage to Thiruvalluvar on **Thiruvalluvar Day** (the second day of the Tamil month of Thai) and urged citizens to read the Tirukkural.
- **Tirukkural** is a **foundational Tamil masterpiece**, believed to be **composed by the poet-saint Thiruvalluvar** between 2nd Century BCE and 5th Century CE.
- While Thiruvalluvar is not mentioned in the Tirukkural itself, later poets celebrated him and his work in the anthology '**Thiruvalluva Malai**' (present form in 10th century CE).

- It is the **most celebrated of the Patiren-kirckkanakku** ( is a collection of eighteen Tamil didactic texts from the post-Sangam period) in Tamil literature.
- **Tirukkural** is a **collection of 1,330 couplets (kurals)** that offer timeless wisdom on various aspects of life, including ethics, governance, love, and spirituality.
- It is divided into **Aram (Virtue), Porul (Wealth), and Inbam (Love)**, celebrated for its **secular, universal moral teachings**.
- Also called **Poyyamozhi** (words that never fail) and **Deiva Nool** (divine text), it is **Jain-associated** by many scholars but valued for its non-denominational ethical guidance.
- It is widely revered as the **“Tamil Veda”** (Tamil Marai), the **“Bible of the Tamil Land,”** or the **“Universal Veda”** (Ulaga Pothumarai).

## Kathputli Puppetry



- Jaipur’s Kathputli Nagar, home to nearly 250 families of traditional puppeteers, has drawn attention for preserving one of Rajasthan’s oldest living folk art traditions.
- **Kath (wood) and putli (doll)** is a form of **traditional string puppetry of Rajasthan**, where **wooden dolls dressed in colourful costumes** are animated with strings to narrate stories of kings, warriors, folklore and moral tales.
- It **originated and is mainly practiced in Rajasthan**, especially in Jaipur, Nagaur, Churu and Sikar, with Kathputli Nagar in Jaipur being its largest living hub.
- Kathputli is believed to be **over 1,000 years old** and was **traditionally performed by travelling Bhat and Nat communities** to entertain and educate village audiences during

fairs, royal courts and festivals.

- It is a **narrative performance accompanied by folk music like dholak and harmonium** and the **themes include Rajput history, folk heroes, social satire and moral stories**.
- Other major string puppetry in India includes **Bommalattam (Tamil Nadu), Nool pavakoothu (Kerala), Koyya bommalata ( Andhra Pradesh), Yakshagana gombeyata (Karnataka), Kalasutri bahulya (Maharashtra), Gopalila kundhei (Odisha), Putul nach (Tripura)** etc.

## Bagurumba Dance



- The Prime Minister witnessed a performance of the traditional Bagurumba dance of the **Bodo community in Assam**.
- **Bagurumba Dance (Bodo, Assam)** – Also called the **“Butterfly Dance”**, it is a traditional **Bodo** folk dance symbolising harmony with nature, **featuring gentle movements** imitating butterflies, birds, and flowers.
- Performed mainly by **young women with men as musicians** during festivals like **Bwisagu** and **Domasi**.
- The **Bodo are Assam’s largest Scheduled Tribe**, part of the **Bodo-Kachari family**, spread across several North-Eastern states.
- Other NE folk dances include **Cheraw (Mizoram), Bihu (Assam), Hojagiri (Tripura), Wangala (Meghalaya), Cham (Sikkim/ Arunachal), War Dance (Nagaland), and Jhumur (Assam)**.

## Parbati Giri

- The Prime Minister of India recently paid homage to freedom fighter Parbati Giri on the occasion of her birth centenary.

- **Parbati Giri (1926–1995)** is also known as the “**Mother Teresa of Western Odisha**” and “**Banhi Kanya (daughter of fire)**”.
- She joined the freedom struggle inspired by Gandhian ideals, participating in the **Individual Satyagraha (1940)**, **Khadi Andolan**, and **Quit India Movement (1942)**.
- Post-Independence, she led **famine relief, prison reforms, leprosy eradication, and welfare of the marginalized**.
- Born in Samlaipadar, Odisha, she received an **Honorary Doctorate from Sambalpur University (1988)**.



- According to tradition, it was first built in **gold by Somraj (Moon God), silver by Ravana, and wood by Lord Krishna**, and later reconstructed in stone by **Kumarapala (r. 1143–72)** after Mahmud of Ghazni’s destruction in 1026.
- The temple was **looted and destroyed multiple times**, including in **1026 (Mahmud of Ghazni), 1297, 1394, and 1706 (Aurangzeb)**.
- A nearby temple was built by **Rani Ahilyabai Holkar** of Indore around 1783,
- The **present temple**, built in **Chalukya style architecture**, was **completed in May 1951 under Vallabhbai Patel**.
- The 1951 reconstruction was **funded by public donations**, adhering to **Mahatma Gandhi’s suggestion**, following the liberation of Junagadh.

## Somnath Temple



- Somnath Temple, Gujarat witnessed the **1000th anniversary of Mahmud of Ghazni’s attack** and the **75th anniversary of the temple’s modern consecration**
- The **Somnath Temple**, located at **Prabhas Patan on Gujarat’s coast**, is the **first among the 12 Shiva Jyotirlingas** and an important **Triveni Sangam**—the confluence of the Kapila, Hiran, and Saraswati rivers.

## Rani Velu Nachiyar

- The nation paid tributes to **Rani Velu Nachiyar (1730–1790)** on her birth anniversary.
- Rani Velu Nachiyar, also known as **Veeramangai (“brave woman”)**, was **born on 3rd January 1730** in the **Ramnad Kingdom of Ramanathapuram in present-day Tamil Nadu**.
- She is revered as the **first Indian queen to launch an organised armed resistance against the British East India Company**.
- After the death of her husband Muthuvaduganathaperiya Udaiathevar, **she ascended the throne of Sivaganga in 1780 after receiving military support from Tipu Sultan of Mysore** and ruled till 1790, restoring indigenous political authority in the region.
- She **used India’s first recorded human bomb (a fighter named Kuyili)**, and **organized the first trained women’s army**, pioneering women’s participation in 18th-century warfare.
- She was highly educated, fluent in **Urdu, English, and French**.

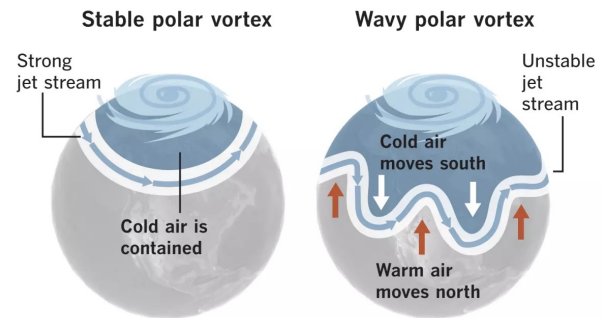




- The ancient **Paathara (or Khoni) grain storage tradition** in Andhra Pradesh's Srikakulam district is facing imminent extinction..
- It is used to preserve paddy long-term and **protects grain from rodents, moisture, theft, and contamination**, may improve rice taste, and is used **only for household consumption and rituals**, not commercial sale.
- Dug in **rectangular pits, plastered with straw and clay**, and sealed with cow dung, it was part of rural architecture and joint family life in the inland, hilly terrain along the **Mahendratanaya River** in the Andhra-Odisha border region.

### Polar Vortex

#### How a polar vortex works



NOAA

- A severe winter storm impacting the U.S. from Texas to New England recently highlights the dynamic role of the stratospheric polar vortex.
- The polar vortex is a **large area of low-pressure and cold air that swirls like a wheel around both of the Earth's polar regions** and it is strongest during the winter season in each hemisphere.
- There are **two types of polar vortex**:
  - ★ **Tropospheric polar vortex**: occurs at the lowest layer of the atmosphere extends from the surface up to about 10 - 15 km where most weather phenomena occur.
  - ★ **Stratospheric polar vortex**: occurs at around 15 - 50km high and it disappears during the summer and is the strongest during the autumn unlike tropospheric polar vortex.
- The US, part of Europe, experiences its effects because a **strong polar vortex maintains the jet streams in the upper atmosphere in a circular path**, which separates cold and warm air masses, but **when the polar vortex weakens, the jet stream becomes wavy, allowing cold air to push southwards**.
- Studies show that **climate change has effects on the polar vortex** as poles warm faster than other parts of Earth, the polar vortex and jet stream may weaken which make the polar vortex more prone to disruption.

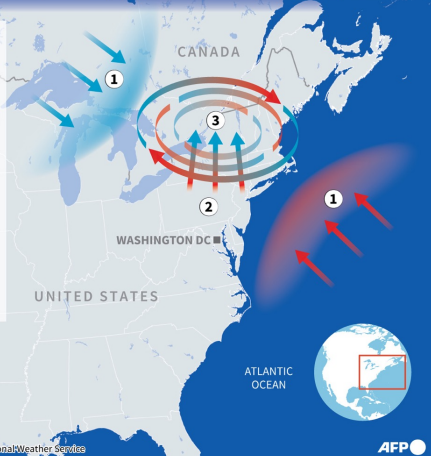
## Bomb Cyclone

### Formation of a "bomb cyclone"

These quickly intensifying storms can cause blizzards, severe thunderstorms and heavy precipitation

- 1 A warm air mass collides with a cold air mass, such as air over warm ocean waters
- 2 When the masses collide, the hot air rises, cools and condenses
- 3 Atmospheric pressure falls rapidly (at least 24 hPa in 24 hours at the centre of the depression), winds strengthen around the storm

This storm can lead to a severe drop in temperature and intense precipitation, including blizzards



Sources: The Conversation/Meteo-France/National Weather Service

AFP

- Recently, a powerful "bomb cyclone" barreled across the northern United States.
- A **bomb cyclone** (also known as **bombogenesis** or **explosive cyclogenesis**) is a rapidly intensifying **extratropical cyclone** where the central atmospheric **pressure drops by at least 24 millibars in 24 hours**, causing explosive strengthening of the storm.
- It **typically occurs in winter** when **cold air (high-pressure) clashes with warmer air (low-pressure) masses** (often over oceans), leading to powerful winds, heavy precipitation like snow or rain, and hazardous conditions such as blizzards or coastal flooding.
- The **four most active regions** where extratropical explosive cyclogenesis occurs in the world are the **Northwest Pacific, the North Atlantic, the Southwest Pacific, and the South Atlantic**.
- The weather conditions associated with the Bomb cyclone includes **Heavy rainfall and intense downpours, Severe thunderstorms, Blizzards, heavy snowfall** etc.

## Western Disturbance

- The India Meteorological Department (IMD) has issued an alert for a quick succession of two Western Disturbances (WD) expected to sweep across Northwest and Central India from January to February.
- It is an **extra-tropical storm (or low-pressure system)** that **originates in the Mediterranean region** which **travels eastwards across the Middle East, Iran, Afghanistan, and Pakistan** before entering the Indian subcontinent, mostly common during the **boreal winter months (December to March)**.

- It is formed **when a high-pressure area over Europe (near Ukraine) pushes cold polar air toward the relatively warmer, moist air over the Mediterranean** leading to the creation of an extratropical depression (a non-tropical storm).
- These storms are then **pushed toward India by the Subtropical Westerly Jet Stream** (a high-altitude wind current acting as a global conveyor belt) and **upon hitting the Himalayan barrier**, the moisture-laden air is forced to rise, **leading to condensation and precipitation**.
- These are the **primary source of non-monsoonal rainfall in India** and also they **bring heavy snowfall** to the Western Himalayas (J&K, Himachal, Uttarakhand) and **light to moderate rain** to the plains (Punjab, Haryana, Delhi, UP) which **helps Rabi crops**.

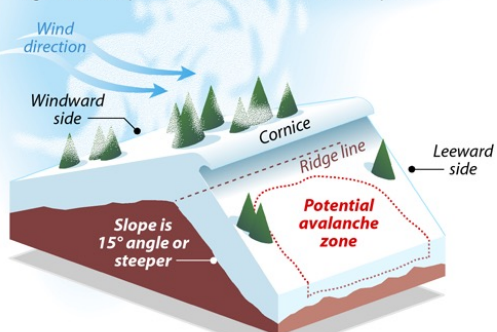
## Sonamarg Avalanche

### Avalanche Anatomy

Avalanches are caused by certain combinations of wind, temperatures, snow and terrain, and global warming could increase the danger in some regions or during some seasons.

#### “SLAB” AVALANCHE AT A GLANCE

Avalanches more frequently occur on the leeward side of a ridgeline, on slopes that are at a 15° incline or steeper.



1 Avalanche conditions commonly occur when heavy, new snowfall accumulates on a weaker crust on top of consolidated, older snow



2 When disturbed, the heavier layer of snow slides along the crust layer, resulting in a "slab" avalanche

3 These avalanches can travel upwards of 85 miles per hour with devastating force

SOURCES: ICN research

PAUL HORN / Inside Climate News

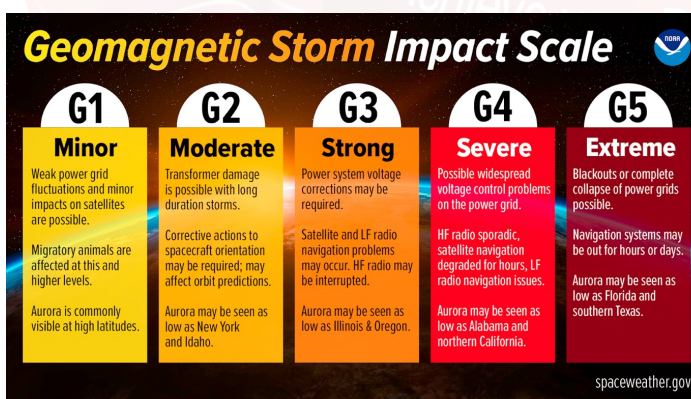
- A massive avalanche struck the **Sonamarg**, Jammu and Kashmir, engulfing buildings and vehicles following heavy snowfall.
- An avalanche is a **rapid downslope movement of a large detached mass of snow, ice, and associated debris**, such as rocks and vegetation.

# Environment & Ecology

- It occurs **when the force of gravity on the snow cover exceeds its mechanical strength**, causing the snowpack to fracture and descend rapidly down a mountainside.
- There are various kinds of avalanches, including **rock avalanches** (which consist of large segments of shattered rock), **ice avalanches** (which typically occur in the vicinity of a glacier), and **debris avalanches** (which contain loose stones and soil).
- **Factors causing Avalanches** includes **Steep Slopes, Heavy Snowfall, Snowpack Layering** (presence of a weak layer beneath a cohesive slab), **Weather Changes** (Rapid temperature rises or rain-on-snow events), **External Triggers** (Seismic activity (earthquakes)) etc.

## G4 (Severe) Geomagnetic Storm

- A powerful **G4 (Severe) Geomagnetic Storm**, caused by solar activity, has lit up the night skies with spectacular auroras visible across multiple continents.
- A geomagnetic storm is a **major temporary disturbance in Earth's magnetosphere** caused by an efficient **transfer of energy from the solar wind**—often triggered by **coronal mass ejections (CMEs)** from the Sun—leading to changes in magnetic fields, currents, plasmas, and ionospheric conditions.
- Geomagnetic storms are **classified on the G-scale**, ranging from **G1 (minor) to G5 (extreme)** where G4 storm falls under the severe category, indicating intense geomagnetic activity.
- Their impacts include **serious disturbances in satellite operations, voltage disruptions in power grids and pipelines, disruptions in radio communications, reduced accuracy in GPS and other navigation systems** etc.
- Also during strong geomagnetic storms, the auroral oval expands, allowing **auroras to be visible at much lower latitudes** than usual.



## Day Zero

- UN has warned that many **cities** are moving towards acute **water collapse** which is referred to as “Day Zero”
- “Day Zero” refers to the point when a **city’s usable water supply drops below a critical level**, forcing rationed emergency distribution instead of regular tap water.
- The term gained global attention during **Cape Town’s 2018 water crisis** and is now used by UN agencies to describe systemic urban water collapse.
- Water stress and scarcity are measured using the **Falkenmark Indicator** (per capita water availability) and the **Withdrawal-to-Availability (WTA) ratio**; stress occurs below 1,700 m<sup>3</sup>/person/year or 20–40% WTA, scarcity below 1,000 m<sup>3</sup> or over 40% WTA, and absolute scarcity below 500 m<sup>3</sup>/person/year.
- Also, the **Water Poverty Index (WPI)**, developed by Caroline Sullivan, is a **holistic measure of water scarcity** combining five components—**Resources, Access, Capacity, Use, and Environment**—to capture both **natural and human factors**, highlighting how governance, infrastructure, and socio-economic conditions affect water security.

## Environmental Protection Fund

- The Union Government has notified rules to operationalise the **Environmental (Protection) Fund**, a statutory fund under the **Environment (Protection) Act, 1986**, strengthened by the **Jan Vishwas Act, 2023**.
- The Fund utilises **monetary penalties from environmental law violations**—retained after decriminalisation—for 11 categories of activities including **pollution control, environmental restoration, monitoring, research, clean technology, IT systems, and capacity building**.
- For transparency, it will be **audited by the CAG**, while the **Central Pollution Control Board (CPCB)** will manage a **centralised online portal**.

- Penalties under the **Air Act, 1981** and **EP Act** are major sources, with **25% retained by the Centre** and **75% transferred to States/UTs**

## GEI Target (Amendment) Rules, 2025

- The Union Government has notified the **second round of mandatory emission-intensity reduction targets** for carbon-intensive industries under the **Greenhouse Gases Emission Intensity (GEI) Target (Amendment) Rules, 2025**.
- These rules are framed under the **Environment (Protection) Act, 1986**.
- They operationalise India's **Carbon Credit Trading Scheme (CCTS)** by setting **sector-specific GHG intensity targets** (measured in tCO<sub>2</sub>e per unit of output), with **2023–24 as the baseline** and **3–7% reduction targets for 2026–27**.
- Compliance is overseen by the **Bureau of Energy Efficiency (BEE)**, while the **CPCB** can impose penalties, including compensation equal to **twice the average carbon credit price**.
- With the inclusion of **petroleum refineries, petrochemicals, textiles and secondary aluminium**, alongside earlier sectors like cement and aluminium, a large share of India's **hard-to-abate industrial emissions** is now covered.
- Industries that overachieve targets earn **tradable carbon credit certificates**, creating a market-based incentive to cut emissions.

## BBNJ (High Seas) Treaty

- The UN Biodiversity Beyond National Jurisdiction (BBNJ) Treaty has entered into force after crossing the required 60 ratifications, creating the **first legally binding global framework to protect biodiversity in international waters**.
- Also known as the **High Seas Treaty**, it operates **under the United Nations Convention on the Law of the Sea (UNCLOS) to conserve and sustainably use marine biodiversity** in areas beyond national jurisdiction (the High Seas).
  - ➔ High seas are the parts of the **ocean that lie beyond the jurisdiction** of any country, beginning outside a country's **Exclusive Economic Zone (EEZ)**, i.e., beyond 200 nautical miles from the coast.

- It **aims to achieve the “30 by 30” goal** which **protects 30% of the global ocean area by 2030** and **enables large-scale conservation across two-thirds of the ocean**, which lies beyond national control.
- It is built on **four pillars**: fair **sharing of benefits** from marine genetic resources, creation of **marine protected areas**, mandatory **environmental impact assessments** for activities on the high seas, and **capacity building** with technology transfer to support developing countries.
- It **supports SDG 14 (Life Below Water)** and **contributes to addressing the triple planetary crisis of climate change, biodiversity loss, and pollution**.
- **India has signed but not yet ratified** the BBNJ (High Seas) Treaty, as it is currently aligning its domestic, environmental, and maritime laws—specifically the Biological Diversity Act—with the treaty's provisions..

## Global Environment Facility

- The Global Environment Facility has approved funds for four new UN Environment Programme-led projects at its 70th Council meeting.
- The **Global Environment Facility (GEF)** is an international **financial mechanism** that provides **grants and funding** to developing countries to support projects that protect the global environment and promote sustainable development.
- **Established in the eve of 1992 Rio Earth Summit**, it is **composed of all 186 member countries (including India)** and the **World Bank serves as the GEF Trustee**, administering the GEF Trust Fund (contributions by donors).
- It has a **unique governing structure** organized around an Assembly, the Council, the Secretariat, 18 agencies, a Scientific and Technical Advisory Panel, and the Evaluation Office.
- The GEF provides **financial support** for implementing **conventions** including the Convention on Biological Diversity (CBD), **UNFCCC, UNCCD, Stockholm Convention, Minamata Convention**, Biodiversity Beyond National Jurisdiction (BBNJ) Agreement, and also aids the **Montreal Protocol**.

## M-STRIPES

- India's Tiger census and other animal surveys will be using the advanced **Monitoring System for Tigers: Intensive Protection and Ecological Status (M-Stripes/MSTripES)** app.
- The MSTripES program was launched by the **National Tiger Conservation Authority (NTCA)** along with the Wildlife Institute of India in 2010.
- It uses **Global Positioning System (GPS), General Packet Radio Services (GPRS), and remote sensing**, to collect information from the field.
- Forest staff use the **M-STRIPES mobile app** to record patrol routes, sightings, and ecological data, which helps improve **anti-poaching enforcement, habitat management, and decision-making in protected areas**.
- The system has **three modules: Patrol module**—records patrols, crime scenes, and observations with offline GPS and SOS alerts; **Ecological module**—monitors tigers, prey, human impact, and habitat nationwide; **Conflict module**—tracks human-wildlife conflicts with geotagged data to aid mitigation.

## Science & Technology

### Doomsday Clock



- The hands of the Doomsday Clock were moved **85 seconds to midnight**, the closest the world has ever been to global catastrophe in its estimation.
- **Reasons cited** are failure of leadership, worsening nuclear threats, climate change, and AI risks.
- The **Doomsday Clock** is a symbolic indicator created in **1947** by the **Bulletin of the Atomic Scientists (BAS)** to convey how close humanity is to self-inflicted global catastrophe, with **midnight representing doomsday**.
- The **Bulletin of the Atomic Scientists** is a **non-profit organization founded in 1945 at the University of Chicago** by scientists involved in the Manhattan Project (**U.S.-led scientific and military programmes (1942–1946)** to develop the **world's first atomic (nuclear) weapons** during World War II).
- The clock is **not calculated mathematically**; instead, it is set annually by the **BAS Science and Security Board**, in consultation with Nobel laureates, based on expert assessment of risks to global stability.
- The Doomsday Clock is **displayed** at the Bulletin of the Atomic Scientists' offices in the lobby of the Keller Center at the **University of Chicago**.
- The Doomsday Clock has been reset **28 times since 1947**, and **last year 2025** Position was **89 seconds** to midnight (1 minute, 29 seconds).

## Bacillus Subtilis



- **Kerala** officially declared *Bacillus subtilis* as 'State microbe'.
- *Bacillus subtilis*, commonly known as the '**Hay Bacillus**', is a **non-pathogenic, probiotic, Gram-positive, rod-shaped bacterium** found primarily in soil and the gastrointestinal tract of humans, animals and has the **ability to produce and secrete antibiotics**.
- It is **famous for its ability to form tough, protective endospores, allowing it to survive extreme environmental conditions** like heat and drought.
- It is **categorized as GRAS (Generally Regarded As Safe) by global food authorities** and is a key ingredient in **traditional fermented foods** like the Japanese Natto.
- It is non-pathogenic **but can contaminate food and be considered an opportunistic pathogen among the immuno-compromised**.
- They are **used on seeds, vegetables, and plants as a fungicide** because of their ability to produce antibiotics and **it inhabits in the root system of the plant competing with disease causing organisms**.
- Importantly **Ammonia causes toxicity**, but the **froth in the Yamuna is mainly due to phosphates and surfactants** from untreated sewage and detergents.
- Ammonia is a **colourless, pungent gas composed of nitrogen and hydrogen with the formula NH<sub>3</sub>** and the **simplest stable compound** of these elements.
- It is **highly soluble in water**, forming ammonium hydroxide, an alkaline solution and has **density which is less than air**.
- It is **produced naturally from decomposition of organic matter**, including plants and animals and is **manufactured mainly by the Haber-Bosch process** (from nitrogen and hydrogen).
- Also some plants, mainly legumes, in combination with **rhizobia bacteria, "fix" atmospheric nitrogen** to produce ammonia.
- The **exposure to high levels of ammonia in air may be irritating to a person's skin, eyes, throat, and lungs** and cause coughing and burns and **to prevent the release of toxic fumes, ammonia should not be mixed with other chemicals (like chlorine bleach)**.
- It is a **basic building block for ammonium nitrate fertilizer** and also **used as a refrigerant, stabilizer, neutralizer, and purifier** — particularly in food transport and water treatment applications.

## Ammonia spikes in Yamuna

- **Ammonia spikes** in the Yamuna have become a **chronic winter issue** causing water toxicity, generally occurring between 15 and 22 times a year.
- In winter, there is reduced water flow in Yamuna due to **low rainfall and lower upstream water releases** (from barrages and reservoirs) further reduce river flow, so untreated sewage and industrial effluents become more concentrated, leading to ammonia spikes.
- Recently BSNL announced the **nationwide rollout of Voice over WiFi (VoWiFi)**, also known as Wi-Fi Calling.
- While this is a new, nationwide offering from BSNL, it is **not new to India**, as private operators like Airtel and Jio have offered it for several years.
- Voice over WiFi (VoWiFi) is a technology that **allows users to make and receive voice calls and SMS over a Wi-Fi network** instead of a mobile network.
- When **mobile signal is weak**, your **phone routes calls** and messages through a Wi-Fi connection to **your telecom operator's core network using secure internet protocols**.
- To the user, it works like a normal call—same number, no extra app, and seamless switching between Wi-Fi and cellular networks when available.

## Voice over WiFi (VoWiFi) Services

### Key Features of VoWiFi:

- **IMS-Based Integration:** VoWiFi uses IP Multimedia Subsystem (IMS) technology to route calls, allowing it to function as a carrier-native service.
- **Seamless Handover:** Calls can transition automatically between Wi-Fi and mobile networks (VoLTE) without dropping, provided both services are enabled.
- It **enables uninterrupted communication in signal-dark zones** particularly in rural and indoor environments, **provides clearer and more stable voice calls** compared to fluctuating cellular networks and **maintains strong protection using SIM-based encryption and authentication.**

### Candida Auris

- The drug-resistant **fungal species** *Candida auris* is **turning more deadly** and is spreading globally, according to a study led by Indian researchers.
- **Candida auris** is a multidrug-resistant fungal pathogen causing **severe, often fatal infections** in hospitalised and immunocompromised patients.
- *C. auris* is **not a major threat to healthy individuals** (but can carry it to others) but poses a severe risk to those with weakened immune systems or serious underlying conditions.
- First identified in 2009, it has emerged as a global health threat due to **high mortality (30–60%), resistance to treatment, persistence on skin and medical devices.**
- *Candida auris* **spreads mainly through direct contact** with infected or colonised people and contaminated surfaces or medical equipment, especially in healthcare settings, including via invasive devices like catheters or ventilator tubes.
  - It **does not spread through the air** and is usually carried on the skin.
- *C. auris* is hard to diagnose, often requiring specialised tests like MALDI-TOF MS and is sometimes misidentified as other infections.

### Bio-bitumen

- India has become the **first country to commercially produce bio-bitumen** for road construction, a **green alternative to petroleum bitumen** made from **agricultural residues like rice straw.**
- It can replace **20–30% of conventional bitumen (binder used in road construction), is environment-friendly, cost-efficient, and field-tested** (e.g., 100 m road on Jorabat-Shillong Expressway, Meghalaya).
- **Bio-bitumen is produced by converting biomass**—such as agricultural waste (rice straw, stubble), lignin, or vegetable oils—into a sustainable binder through processes like **pyrolysis**, which thermally decomposes organic material in **low-oxygen environments.**
- The resulting **bio-oil is then refined**, polymer-modified for improved viscosity and stability, and often blended with conventional bitumen for use in road construction.
- Bio-bitumen **reduces fossil fuel use, curbs air pollution, and converts crop waste into infrastructure material**, helping address stubble burning.

**Note:** Bitumen is a **black, sticky hydrocarbon** used as a **binder in roads and for waterproofing.** It is primarily **made from crude oil** during the **refining process.** It is the **heavy, sticky residue left after lighter fractions (like petrol, diesel, and kerosene) are removed**

### Dust EXperiment (DEX)

- ISRO has confirmed that an **interplanetary dust particle (IDP)** enters Earth's atmosphere roughly **every 16 minutes**, based on measurements from India's first cosmic dust detector Dust Experiment (DEX).
- India's **Dust Experiment (DEX)**, developed by the **Physical Research Laboratory (PRL) under the Indian Space Research Organisation (ISRO)**, is the country's first instrument designed to detect **high-speed interplanetary dust particles (IDPs)** in Earth orbit.

**Interplanetary Dust Particles (IDPs)** are **microscopic shrapnel from comets and asteroids** that form our atmosphere's mysterious "meteor layer" and these **can be analyzed to**

gain insights into their origins, formation mechanisms, and the processes that occurred in early solar and presolar environments.

- It was flown onboard the **Polar Satellite Launch Vehicle (PSLV) Orbital Experimental Module (POEM)** during the **PSLV-C58 XPoSat mission**, launched on **January 1, 2024**.
- The instrument, weighing about **3 kilograms**, operates at an altitude of **~350 km** and detects microscopic dust impacts using the **hypervelocity detection principle**, recording signals generated by high-speed collisions.
- Observations from DEX provide insights into the **meteor layer** and help scientists understand the **origins, formation mechanisms, and early solar system processes** of comets and asteroids.

### Traditional Indelible Ink

- **Maharashtra's** State Election Commission has decided to **revert to traditional indelible ink** after complaints that **marker-pen ink** used in municipal polls could be wiped off.

Indelible ink is a **permanent marking ink applied on a voter's finger after voting** to indicate that the person has already exercised their franchise and cannot vote again.

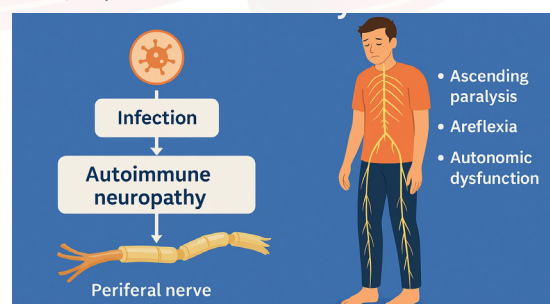
- **India began using indelible ink in 1962** (Third General Election) as a simple, low-cost and effective method to prevent impersonation and repeat voting.
- The **ink contains silver nitrate**, which reacts with the skin and light to leave a dark mark and the **stain fades only as the outer layer of skin wears away** and it also contains a dye to make it clearly visible.
- It is **manufactured exclusively by Mysore Paints and Varnish Limited, a Karnataka government undertaking**, using a closely guarded formula developed by India's National Physical Laboratory.
- The company supplies indelible ink for elections across the country and, with approval from the Election Commission and the Government of India, **has also exported it to several countries, including Afghanistan, Cambodia, Kenya, Mongolia, Nepal and Nigeria**.

### Ethylene Glycol (EG)

- **Telangana** recently issued a **stop use notice** for a batch of Almont-Kid Syrup contaminated with toxic **Ethylene Glycol (EG)**.
- Ethylene Glycol (EG) is a **colorless, odorless, sweet-tasting, and water-soluble organic compound** that is **commonly used in a variety of industrial applications**.
- It is a **slightly viscous liquid** usually produced by the **reaction of ethylene oxide with water**; it is the **simplest member of the glycol family** of organic compounds with **chemical formula C<sub>2</sub>H<sub>6</sub>O<sub>2</sub>**, and it is a **diol** (a compound containing two hydroxyl groups).
- It is **primarily used as an antifreeze and coolant in automotive and industrial applications** due to its ability to significantly lower the freezing point of liquids and also **used as an ingredient in hydraulic fluids, printing inks, and paint solvents**.
- It is **also used as a reagent in making polyesters, explosives, alkyd resins, and synthetic waxes** and it is **highly poisonous**; animals or humans that drink the solution become very ill and may die.
- Ethylene glycol (EG) or diethylene glycol (DEG) can enter syrups when **cheap industrial solvents are substituted for safe excipients** like glycerin, through **contaminated raw materials**, or via **cross-contamination from inadequately cleaned equipment**.

### Guillain-Barre Syndrome

- A **Guillain-Barré Syndrome (GBS) outbreak** in **Madhya Pradesh's** Neemuch district has caused two deaths in Manasa.
- GBS is a **rare autoimmune neurological disorder** where the immune system attacks the peripheral nerves, causing numbness, tingling, muscle weakness, and sometimes paralysis.
- It often **follows infections** (particularly from *Campylobacter jejuni*), **vaccination, or surgery**.



# Defence

## INS Sudarshini

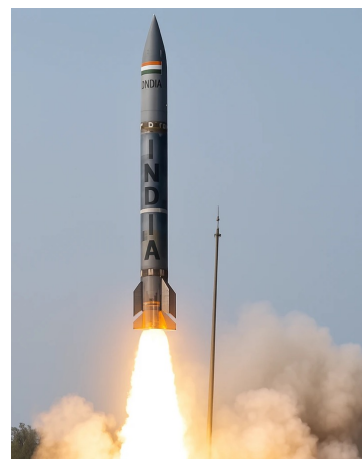


- The Indian Navy's sail training ship **INS Sudarshini** began its 10 month long “**Lokayan 26**” **transoceanic expedition** on **20 January 2026**, departing from **Kochi**.
- **INS Sudarshini** is a sail training ship of the **Indian Navy**, commissioned in **2012**, and built indigenously by **Goa Shipyard Limited** as a sister ship to **INS Tarangini** (commissioned in 1997).
- It is a three-masted sailing vessel designed by **naval architect Colin Mudie**, measuring about 54 meters long, with 20 sails covering ~1,035 square meters, **powered by sail as well as auxiliary engines**.

## Pralay Missile

- DRDO successfully conducted testing of **two indigenously-developed Pralay** missiles from the same mobile launcher off **Odisha coast**, marking a key milestone in user trials.
- **Pralay** is a **short-range (150–500 km)**, **solid-propellant, surface-to-surface quasi-ballistic missile** with **high-precision guidance**, capable of carrying **500–1,000 kg warheads** against varied targets.
- The Pralay missile is considered “**quasi-ballistic**” because it combines the high-speed, **solid-fuel propulsion of a ballistic missile** with the ability to perform in-flight, terminal, and **mid-course maneuvers** at lower altitudes.

- Unlike traditional **ballistic missiles that follow a fixed parabolic arc**, Pralay uses a depressed trajectory and can alter its path, making it extremely difficult to intercept by enemy air defense systems.



- Developed by **Research Centre Imarat** and other DRDO labs, it can be **launched from mobile platforms**.

## Military Exercises

- **Will for Peace 2026:** A BRICS Plus naval exercise held off Simon's Town, South Africa, led by China with participation from Russia, Iran, and the UAE. India did not participate, while Brazil, Egypt, Ethiopia, and Indonesia attended as observers.
- **Steadfast Dart:** A NATO-led exercise in Central Europe demonstrating operational and strategic capabilities across land, air, space, cyber, maritime, and special operations forces.
- **Dosti-17:** Held in the Maldives, originally a bilateral exercise between Maldives and Indian Coast Guards, expanded to include Sri Lanka in 2012. It strengthens trilateral maritime cooperation and coordination in the region.

## Miscellaneous

### Indira Gandhi Peace Prize



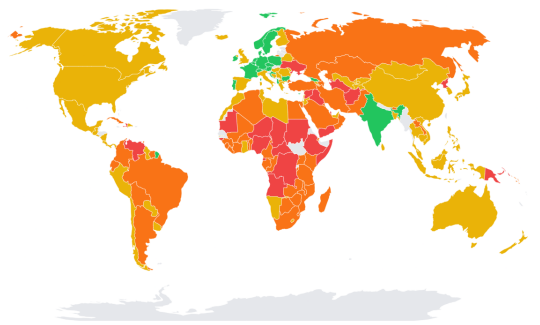
- Recently, **Mozambican rights activist Graca Machel** has been selected for the Indira Gandhi Prize for Peace, Disarmament and Development for 2025.
- The award, also called the **Indira Gandhi Peace Prize**, has been presented **annually** since **1986** by the **Indira Gandhi Memorial Trust** in honor of former Prime Minister Indira Gandhi.
- It honours individuals or organisations for **outstanding contributions to international peace, disarmament and development**.
- It consists of a **monetary award of Rs.10 million along with a citation** and **awarded to a person or organization** without any distinction of nationality, race or religion or gender.

### Atal Pension Yojana (APY)

- The Union Cabinet approved the **continuation of the Atal Pension Yojana (APY)** up to FY 2030-31.
- Launched on **9 May 2015**, APY aims to provide a **universal social security system**, especially for the poor, underprivileged, and unorganised sector workers.
- Administered by the **Pension Fund Regulatory and Development Authority (PFRDA)** under the National Pension System (NPS), it is open to **citizens aged 18–40** (excluding income taxpayers) and guarantees a **lifelong pension of ₹1,000–5,000 from age 60**, with benefits for spouses and nominees.
- Contributions are eligible for **tax benefits**, with a minimum 20-year contribution period.

### Responsible Nations Index

- India launched the **Responsible Nations Index (RNI)**, a global framework aimed at **assessing countries on ethical governance**, social well-being, environmental stewardship and global responsibility, moving **beyond traditional measures of power and economic strength**.
- RNI is **developed by the World Intellectual Foundation (WIF)** in collaboration with Jawaharlal Nehru University (JNU), IIM Mumbai, and the Dr. Ambedkar International Centre.
- It is a pioneering, **India-led framework evaluating 154 nations on ethical, environmental, and social responsibility rather than just GDP** and in the inaugural 2026 report, **Singapore ranked 1st, while India secured 16th place**.
- It is structured around **three core dimensions**, namely
  - ★ **Internal responsibility:** It focuses on dignity, justice, and the well-being of citizens;
  - ★ **Environmental responsibility:** It is covering stewardship of natural resources and climate action.
  - ★ **External responsibility:** It measures a country's contribution to peace, cooperation, and global stability



■ Top 20 (High Responsibility) ■ Rank 21-80 (Medium) ■ Rank 81-130 (Low-Medium) ■ Rank 131-154 (Low) ■ No Data

### The Padma Awards



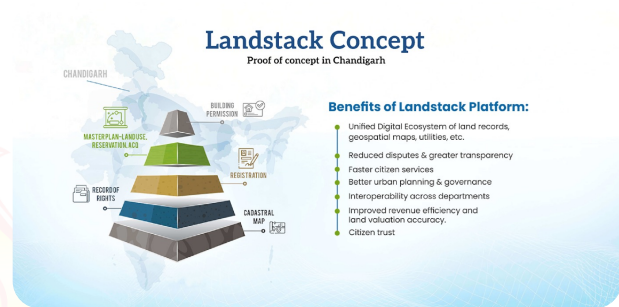
Padma Vibhushan

Padma Bhushan

Padma Shri

- The Padma Awards 2026 were announced on the eve of Republic Day.
- It is **one of India's highest civilian honours**, conferred **to recognise distinguished and exceptional service involving an element of public service across diverse fields**.
- It was **instituted by the Government Of India in 1954** which originally had three classes later renamed in 1955 as Padma Vibhushan, Padma Bhushan and Padma Shri.
- The Awards are given in three categories: **Padma Vibhushan (for exceptional and distinguished service)**, **Padma Bhushan (distinguished service of higher order)** and **Padma Shri (distinguished service)**.
- It is **open to all persons irrespective of race, gender, occupation or position; Government servants (including PSU employees) are generally not eligible**, except doctors and scientists and **normally not conferred posthumously**, but allowed in exceptional cases.
- Nominations for **Padma Awards** are invited online annually (public, officials, awardees, MPs, ministries, institutes) via **padmaawards.gov.in** or **awards.gov.in**.
- The **Padma Awards Committee**, constituted annually by the Prime Minister, headed by the **Cabinet Secretary** and including senior officials and eminent persons, evaluates nominations based on **lifetime contributions** and recommends candidates to the **Prime Minister and President**.
- Awards are **announced on Republic Day eve** and presented at **Rashtrapati Bhavan** in March/April.
- The **awardees receive a Sanad (certificate) and a medallion** and it **does not constitute a title and cannot be used as a prefix or suffix**.
- According to guidelines, the total number of Padma Awards granted in a year is limited to a **maximum of 120**.
  - ✓ This, however, does not include awards given to foreigners, Non-Resident Indians (NRIs), Overseas Citizens of India (OCIs), and posthumous awards.

## Land Stack



- The Land Stack, a **GIS-based digital platform to centralize land records**, was launched by the Ministry of **Rural Development**.
- Piloted in Chandigarh and Tamil Nadu, it offers **single-window access to land data**, aiming to modernize land governance, reduce fraud, and increase transparency..
- **Land Stack** consolidates all land-related data (in stacks)—such as ownership records, boundaries, transactions, and revenue details—into a **single accessible system** for citizens, officials, and other stakeholders.
- It was **launched under the Digital India Land Record Modernisation Programme (DILRMP)**.
- It uses **Geographic Information System (GIS) technology** to **map land parcels, boundaries, and attributes spatially**, allowing visual representation, analysis, and better decision-making for land management, planning, and e-governance.
- This **helps** prevent disputes, reduce fraudulent transactions, and improve inter-departmental coordination.

## Places in News

- Established in **2012** after Syrian government forces withdrew, Rojava—meaning “**west**” in Kurdish—is home to **Kurds, Arabs, Assyrians, Armenians, Yazidis, Turkmen, and Chechens**, with Kurds as the largest ethnic group.

### Shiveluch volcano



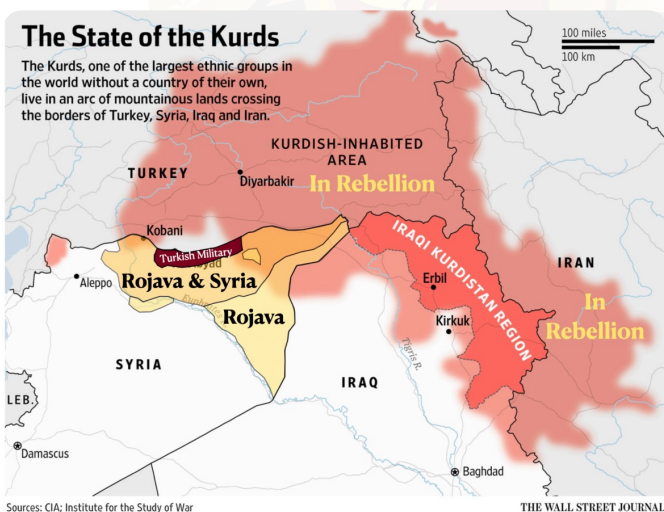
- The **Shiveluch volcano** in **Kamchatka, Russia**, erupted recently, sending an **ash plume up to 11.5 km** above sea level.
- Rising to **3,283 meters**, it is the **northernmost active volcano in Kamchatka**, part of the **Pacific Ring of Fire**, with at least **60 major eruptions in the last 10,000 years** and an estimated age of **60,000–70,000 years**.

### Shaksgam Valley



- The **Shaksgam Valley** has returned to focus after China reaffirmed its territorial claims and defended infrastructure construction in the region, following India's strong diplomatic protest.
- Shaksgam Valley, or the Trans Karakoram Tract**, is part of the Hunza-Gilgit region occupied by Pakistan and lies to the north of the Siachen glacier.
- It **borders China's Xinjiang province to the north, Pakistan-occupied Gilgit-Baltistan to the south and west**, and the Siachen area to the east.
- While it is **claimed by India, Pakistan used to control it until it ceded it to China in 1963** under China- Pakistan boundary Agreement.
- CPEC (China Pakistan Economic Corridor) launched in 2015** to connect the Gwadar port of Pakistan with the Chinese city of Kashgar in Xinjiang also passes through Shaksgam Valley.
- India has categorically rejected Pakistan's territorial claims** and refused to recognize the 1963 agreement with China and maintains the valley as an integral territory of India.

### Rojava Region



- The **ceasefire between the Syrian government and Kurdish-led Syrian Democratic Forces (SDF)** marks the end of **Rojava**, the Kurdish-run autonomous region in **northeast Syria**.

### Chattergala pass

- Border Roads Organisation (BRO)** successfully carried out a high-altitude rescue and road restoration operation under **Project Sampark at Chattergala Pass**.

- It is situated at an altitude of 10,500 ft. in the Bharderwah–Chattergala axis in Jammu region of Union Territory of Jammu and Kashmir.
- It is tucked in the **Chamba-doda ranges of the greater Himalayas** and it is surrounded by alpine meadows, snow-covered peaks, and dense forest.
- A major 6.8 km **Chattergala tunnel is planned** beneath the pass to provide all-weather connectivity.



- It is also called **Larapinta in the Indigenous Arrente language**, and is located in central Australia and flows through the **Northern Territory and the state of South Australia**.
- It originates in **MacDonnell Ranges in Australia** and forms where two smaller creeks, Davenport and Ormiston, meet.
- It is the **oldest riverbed in the world and also one of the four crucial waterbodies of Lake Eyre Basin**.
- The river has a **cross-axial drainage system or antecedent system** and the river system that cuts across geological structures rather than following them.
- The river is intermittent in nature and flows mainly after heavy rainfall.

### Zaskar River



### Finke River

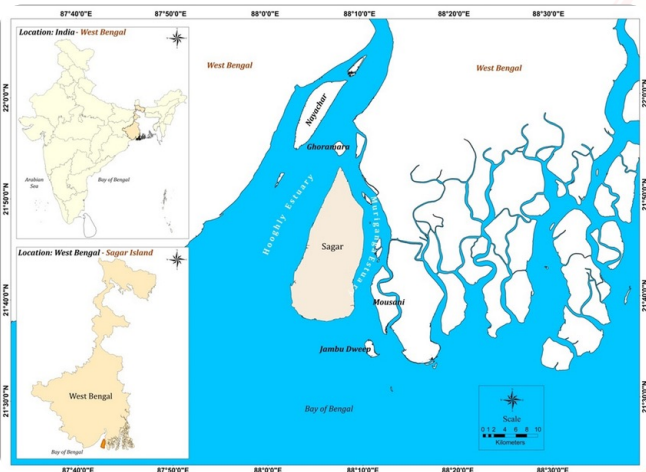


- The much-awaited **Chadar trek on the frozen Zaskar river in Ladakh** has been deferred due to inadequate ice formation, disappointing trekkers eager to participate in the adventure sport.
- It is a **major left-bank tributary of the Indus River**, flowing entirely within the union territory of Ladakh in northern India and it drains the remote Zaskar Valley in the northwestern Himalayas.
- It originates from the northeast **of the Great Himalayan range**.

- **The Finke River, Australia** is believed to be the world's oldest river system and began flowing between 300 and 400 million years ago, long before dinosaurs walked the planet.

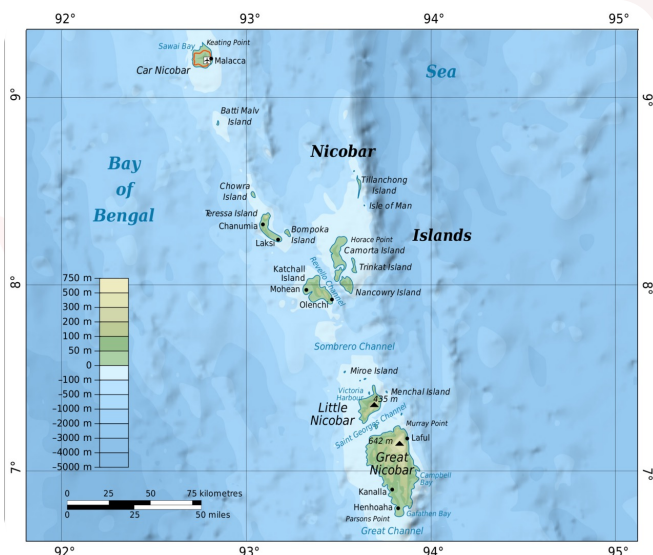
- **Doda and TsrapLingti Chu** (Lungnak River) are two significant tributaries that join together at padam village to form Zanskar river.
- It is famous for its incredible **Zanskar Gorge**, which is a super deep canyon it has carved over many years.

## Sagar Island



- **West Bengal** recently laid the foundation for a **5-km bridge** connecting **Sagar Island (Gangasagar/Sagardwip)** to the mainland.
- Located **100 km south of Kolkata** in **South 24 Parganas**, it lies at the **Ganges delta meeting the Bay of Bengal**, is cyclone-prone, lacks mangroves or tigers, and attracts **thousands of pilgrims annually** for **Makar Sankranti** at the **Kapil Muni temple**.

## Car Nicobar Island



- The **Chief of Defence Staff** recently inaugurated a runway upgrade at the **Indian Air Force's Car Nicobar base**.
- The northernmost island of the **Nicobar group** (Andaman & Nicobar Islands), it covers **under 127 sq km**, houses nearly **18,000 people** (mainly **Nicobarese tribals**), has a **tropical monsoon climate**, extensive **coconut plantations**.
- It is recognized as an **Important Bird Area** by BirdLife International.

## Socotra Island



- Hundreds of tourists are stranded on Socotra, a **250 km long Yemeni island** in the northwest Indian Ocean.
- It lies near the **Gulf of Aden** and forms **part of the Socotra Archipelago**, which includes four islands and two rocky islets.
- The island features the **Hajhir Mountains** in the interior, narrow coastal plains in the north, and a broader southern plain, with a total **population of around 70,000** who **speak Socotri**.
- Often called the **“Galápagos of the Indian Ocean,”** it is rich in endemic flora and fauna—37% of plant species, 90% of reptiles, and 95% of land snails are found nowhere else—and was designated a **UNESCO World Heritage Site in 2008**.

## Species in News

### Gharial



- Reports show a rise in the gharial population in the Gandak river.
- The **gharial** (*Gavialis gangeticus*), a **freshwater crocodile**, belongs to the order Crocodylia and family Crocodylidae.
- Its name comes from the **Hindi word “ghara” (pot)**, referring to the distinctive bulbous, pot-like **snout tip of adult males**.
- The species shows strong **sexual dimorphism** in size and appearance, with the longest and thinnest snout among all crocodylians and thick, non-overlapping epidermal scales.
- Once widespread across rivers in Bangladesh, Bhutan, India, Myanmar, Nepal, and Pakistan, its major populations are **now limited to the Chambal, Girwa (India), and Rapti-Narayani (Nepal) rivers**.
- In India, the **National Chambal Sanctuary** (across Madhya Pradesh, Uttar Pradesh, and Rajasthan) hosts the largest population.

### Indian Giant Squirrel (*Ratufa indica*)

- The **Indian Giant Squirrel** (or Malabar Giant Squirrel), Maharashtra's state animal (“Shekru”), was sighted in Pune's Atwan region.
- Native to India's **Western Ghats, Eastern Ghats, and Satpura Range** across several states, this large, arboreal squirrel has a tail longer than its body, is omnivorous, and shelters in tree holes.
- It is easily recognized by its **striking multi-colored fur**, typically showing two to three shades of white, cream, brown, black, red, maroon, or dark fuchsia.
- It can **grow up to 3 feet (1 meter) in total length**, with its body (25-46 cm) roughly equal

to its long, bushy tail, and weighing **around 1.5 to 2 kg**.



### Amazonian Stingless Bees



- Amazonian stingless bees have become the first insect in the world to be granted legal rights after municipalities in **Peru** passed an ordinance recently.
- Amazonian **stingless bees** (family **Meliponini**) are highly social insects native to the **Amazon rainforest** and other tropical regions of South America.
- Unlike honeybees, they **lack a functional sting** and defend their nests by biting or using sticky resins.
- The Amazon hosts **over 60 species**, including **Melipona fascinata**, **Scaptotrigona spp.**, and **Tetragonisca angustula**.
- These bees produce a **small quantity of tangy, medicinal “meliponine honey”** with antibacterial properties and build intricate nests in tree hollows, termite mounds, or human-made boxes using a wax-resin mix called cerumen.
- They are **excellent pollinators**, supporting forest biodiversity and crops like açai, cupuaçu, and Brazil nuts.

### Indian Skimmer

- The **Bombay Natural History Society (BNHS)** and **National Mission for Clean Ganga (NMCG)** launched a project to protect the **endangered Indian Skimmer (Rynchops albicollis)** and its breeding habitats in the **Ganga Basin**.

- This **riverine bird**, found in India, Bangladesh, Pakistan, Nepal, and Myanmar, breeds along rivers like the **Ganga, Yamuna, and Chambal**, feeds by skimming water with its **long orange lower mandible**.
- It serves as an **indicator of healthy river ecosystems**.



## Orobanche aegyptiaca

- India's largest oilseed crop, **mustard**, is under threat from the parasitic weed **Orobanche aegyptiaca (Margoja)** in **Rajasthan and Haryana**.
- Orobanche aegyptiaca, also called the **Egyptian broomrape**, is a plant which is an **obligate holoparasite** from the family Orobanchaceae with a complex lifecycle
- This **root-parasitic, chlorophyll-lacking weed** attaches to crop roots, extracting water and nutrients, causing **wilting, stunted growth, and severe yield loss**.
- Native to the **Mediterranean–West Asia**, it spreads via **soil, wind, irrigation, and tools**, with seeds remaining **viable up to 20 years**, making it a persistent threat to mustard cultivation.



## Kashmir Markhor



- The **Kashmir markhor (Capra falconeri cashmiriensis)**, India's **rarest wild goat**, is facing **local extinction**, with only **200–300 individuals** remaining, mainly in the **Kazinag range of Jammu & Kashmir**.
- **Markhor (Capra falconeri)** is a cliff-dwelling **world's largest species of wild goat**, renowned for its **massive, spiraled or corkscrew-shaped horns**.
- It is found in **Pakistan** (national animal), **Afghanistan, Tajikistan, Uzbekistan**, and **parts of northern India**.
- **Kashmir Markhor** is a **subspecies of markhor** and is **endemic to Kashmir** and occurs in the **Pir Panjal range**, especially **Kazinag National Park (last stronghold)**, **Hirpora WLS**, **Tattakuti WLS**, and **Khara Gali Conservation Reserve**.
  - ➔ It was once thought extinct in India.
- Adapted to **steep cliffs**, it is **herbivorous**, with long hair aiding survival in **cold Himalayan climates**.

## Galaxy Frog

- A study reported that **seven Galaxy Frogs** likely died after heavy disturbance caused by photographers.
- The **Galaxy Frog (Melanobatrachus indicus)** is a **rare, endemic amphibian** of the **Western Ghats**, identified by its shiny black skin with blue speckles and orange markings.
- It inhabits **cool, moist evergreen forests** of **Kerala and Tamil Nadu**, living under **rotten logs**.
- Declared the **flagship species of Mathikettan Shola National Park (Kerala)**, it is **small (2 – 3.5 cm)**, **non-vocal**, and highly sensitive to **heat and disturbance** due to skin-based respiration.

- Major threats include **habitat conversion, firewood collection, landslides, and human disturbance.**



- Indian scientists recently discovered a rare subterranean amphibian species and named it *Gegeneophis valmiki*.
- It is a **rare, subterranean amphibian species**, discovered in the **northern Western Ghats of Maharashtra.**
- It **belongs to the genus *Gegeneophis***, commonly called **blind caecilians.**

→ **Caecilians, often called “hidden amphibians”, are limbless, worm-like creatures that spend most of their lives underground.**

→ They **do not croak or call like frogs**, and their **eyes are buried beneath layers of skin and bone**, making field identification exceptionally difficult.

→ Their **burrowing improves soil aeration and structure, their feeding helps regulate soil invertebrates**, and they form part of the food web for birds, reptiles and small mammals.

→ They also represent a key **evolutionary link** between aquatic and terrestrial vertebrates.

## Grey Slender Loris

- Kerala and Tamil Nadu have initiated habitat restoration and monitoring for the **grey slender loris**, a nocturnal primate of the **Loridae** family.



- It has a **lean body, long slender limbs, large ears**, a pointed snout, and **dark rings around the eyes.**
- The species is **slow-moving and insectivorous**, inhabiting tropical rainforests, scrub and semi-deciduous forests, and swamps of **southern & eastern India** (Andhra Pradesh, Karnataka, Kerala, Tamil Nadu) and **Sri Lanka.**
- It has **four subspecies**—Malabar, Mysore, Northern Ceylonese, and Highland slender loris.
- Major threats include **habitat loss**, decline of **acacia trees**, **hunting, pet trade, road kills**, and **superstitious killings.**

## Royle's Pika

- Scientists said that climate change threatens creatures like Royle's pika that have weathered extreme environments for thousands of years.
- Royle's pika (*Ochotona roylei*), also called the **Himalayan mouse hare or hui shutu, is a species of pika.**
- It is found in **open rocky landscapes and rhododendron forests** at 2,400–5,000 m elevation in the Himalayan region.
- It is **found in northwestern Pakistan to Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh in India to Nepal and Tibet.**

- It **does not hibernate**, instead it relies on a thick winter snowpack to act as an insulating blanket, and **does not make its own nest**; rather, it takes narrow creeks and existing burrow systems as its nest.

- Its **primary food plants include alpine herbs and forbs.**



## Gegeneophis Valmiki



## Keywords

- **White Goods:** They are **large household appliances** such as refrigerators, washing machines, air conditioners, and dishwashers, primarily used for **routine domestic tasks**. They are called “white goods” because they were **traditionally manufactured in white enamel finishes**, though modern versions come in various colors and designs.
- **National Legislative Index (NLI):** Announced by Lok Sabha Speaker Om Birla to objectively **assess and compare the performance of legislatures** through a transparent annual score (0–100). It will evaluate indicators like sitting days, legislative scrutiny, debates, transparency and digitisation, aligning with the vision of **“One Nation, One Legislative Platform.”**
- **Monroe Doctrine:** The doctrine formulated by **US President James Monroe was originally aimed at opposing European meddling in the Western Hemisphere**. Articulated in Monroe’s 1823 address to Congress, it was **intended to ward off European colonization** or other interference in independent nations of the Western Hemisphere. In return, the U.S. also agreed to stay out of European wars and internal affairs.
- **Largest electrified rail system:** Indian Railways has become the largest electrified rail network in the world, with about **99.2% of its broad-gauge network electrified by 2025**. India’s railway electrification story began in 1925, when the country’s first electric train, powered by a 1500 Volt DC system, ran between Bombay Victoria Terminus and Kurla Harbour.
- **Womaniya Initiative:** Launched by **Government e-Marketplace (GeM) in 2019**, is a successful flagship program empowering **women-led Micro & Small Enterprises (MSEs)** by giving them direct digital access to government procurement, helping them secure over ₹80,000 crore in orders and boosting **financial inclusion**, marking its seventh anniversary recently in January 2026.
- **Export Preparedness Index (EPI):** **NITI Aayog** recently released the Export Preparedness Index 2024. **Maharashtra** secured the top rank, followed by **Tamil Nadu**, Gujarat, Uttar Pradesh, and Andhra Pradesh in the Large states category. The index is structured around **four core pillars** and **70 indicators**: Business Ecosystem (40% weightage), Export Infrastructure (20%), Policy & Governance (20%), and Export Performance (20%).
- **Havana Syndrome:** It is a set of mysterious symptoms—like **headaches, dizziness, and memory problems**—first seen in US diplomats in Cuba in 2016 and later in other countries. Scientists suspect **pulsed radio or microwave waves** may be involved, and the **Pentagon is testing a device** linked to it.
- **PANKHUDI Portal:** Launched by the **Ministry of Women and Child Development**, it is a **single-window digital platform** to facilitate CSR and partnership initiatives for women and child development. It integrates **citizens, NGOs, corporates, and government agencies** to support key areas like **nutrition, health, child welfare, and women’s empowerment**, strengthening schemes such as **Mission Saksham Anganwadi & Poshan 2.0, Mission Vatsalya, and Mission Shakti**.
- **Henley Passport Index:** It is released by **Henley & Partners**, a global citizenship and residence advisory firm, in collaboration with data from the **International Air Transport Association (IATA)** and ranks passports worldwide based on the number of countries their holders can enter without a prior visa. **Singapore** holds the **strongest** passport with access to 192 destinations, **Japan** and **South Korea** are second with 188, and **India** has risen to **80th** (from 85th), offering visa-free or visa-on-arrival access to 55 countries.
- **Nimesulide:** It is a **non-steroidal anti-inflammatory drug** used to **relieve pain, inflammation, and fever** and particularly for conditions like osteoarthritis, acute pain, and menstrual pain, but must be used cautiously due to potential **liver toxicity**. The Union Health Ministry **prohibited** the manufacture, sale, and distribution of all **oral formulations** of Nimesulide above 100 mg (immediate-release).



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IMP



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AIR 457  
IMP



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MTS, IMP



**GREESHMA K B**  
AIR 559  
IMP



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AIR 563  
PCM, Sociology



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AIR 569  
MTS, Sociology, IMP



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AIR 641  
MTS,IMP



**VAISAKH C R**  
AIR 656  
IMP



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AIR 702  
PCM, Malayalam  
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