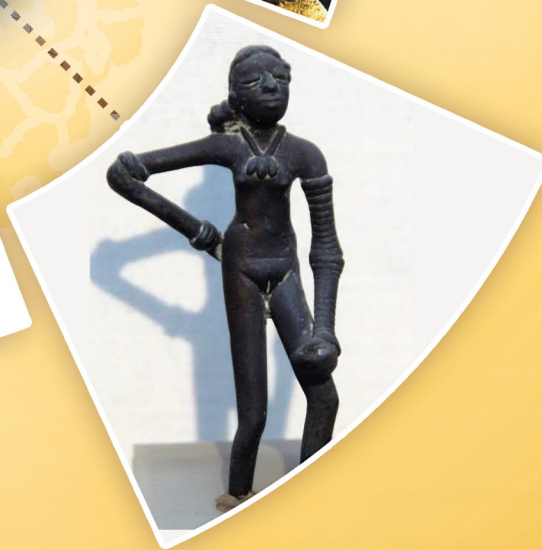


FORTUNE Prelims Precise

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



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June 2026
Monthly Current Affairs
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INDEX - JUNE 2026

Polity & Governance 1

1. Expansion of Article 21	1
2. AFSPA in North-East	1
3. National Statistical Commission (NSC)	1
4. Indian Passport & Citizenship	2
5. Rajya Sabha Elections	2
6. North Eastern Council	2
7. Pradhan Mantri Kaushal Vikas Yojana (PMKVY)	2
8. Election Symbols	3
9. Telegram Ban	3
10. Additional Judges as Permanent Judges	3

Economy 4

11. Revised Wholesale Price Index (WPI)	4
12. Producer Price Index (PPI)	5
13. Cambodia joins UPI	5
14. Capital Market Reforms	5
15. Foreign Currency Non-Resident (Bank)	6
16. National Investment and Infrastructure Fund (NIIF)	6
17. Energy Transition Index	6
18. Current Account Surplus	7
19. Updated IIP	7

International Relations 8

20. UN Mission in South Sudan (UNMISS)	8
21. Critical Minerals Global Supply Chain Observatory	8
22. US Pacific Command (USPACOM)	8
23. Iraq and OPEC	9
24. International Maritime Organisation (IMO)	9
25. New Development Bank (BRICS)	9
26. Tribunal for the Law of the Sea (ITLOS)	10
27. Financial Action Task Force	10
28. Global Peace Index (GPI)	10
29. World Gold Council	11

History & Culture 11

30. Dancing Girl of Mohenjo-daro	11
31. Shree Jagannath Temple	11
32. Thewa Art	12
33. Sushruta Statue	12
34. Ambubachi Mela	12
35. Kalamkari Painting	13
36. Holy Buddhist Relics of Arhats	13

Geography 14

37. Andaman shallow offshore block	14
38. Ocean Information Services Centre (INCOIS)	14
39. Aurora Borealis	14
40. Sagittarius A*	15
41. Indian Ocean dipole	15
42. Giant's Causeway	15
43. Heat Dome over Europe	16

Environment & Ecology 17

44. Pavona clavus Colony (Potato Patch)	17
45. Carbon Credits Under the Paris Agreement	17
46. International Big Cat Alliance	17
47. India's first 3D-Printed Reef	18
48. Caustic Soda	18
49. State of India's Environment Report	18

Science & Technology 19

50. Coal Gasification	19
51. Blue Micromoon	19
52. India's First Flex-Fuel Passenger Vehicle	19
53. Sitapur 250 MW Solar-BESS Project	20
54. Drop Shipping	20
55. High-Energy Medical Cyclotron Project (HEMCP)	20
56. Ammonia Gas	21
57. Fixed Dose Combination Drug Ban	21

Defence 22

58. RudraM-II Missile	22
59. Tri-Commissioning of INS warships	22
60. HELINA Missile	22
61. Multi-Layered Ballistic Missile Defence (BMD) System	23
Military Exercises	23
62. RIMPAC 2026	23
63. Pitch Black	23
64. Khaan Quest	23

Miscellaneous 24

65. FIFA World Cup 2026	24
66. Food Planet Prize 2026	24
67. Schedules of the Drugs Rules, 1945	24
68. ASPIRE Scheme	25
69. National War Memorial (NWM)	25
70. Narco-Coordination Centre	25
71. Anthropological Survey of India (AnSI)	25
72. National Internet Exchange of India	26
73. GI-Tags	26

Places in News 27

74. India-Nepal Border Dispute	27
75. India's 100th Ramsar Site	27
76. Gilgit-Baltistan	27
77. Sea of Azov	27
78. Padma Barrage	28
79. Lonar Lake	28
80. Caspian Sea	28
81. Lake Baikal	28

Species in News 29

82. Kashmir Saffron	29
83. Aldabra Giant Tortoise (Geochelone gigantea)	29
84. White-Rumped Vulture	29
85. Hargila Bird	29
86. Banganapalle Mango	30
87. Nagori Ashwagandha	30
88. Sistan sand boa	30

Keywords 31

89. Top Ship Recycling Nation	31
90. Downblending Process	31
91. Drunix	31
92. ANCHOR	31
93. Biochar	31
94. MAVEN Mars Mission	31
95. Varya AI Model	31
96. Isobutanol	31
97. Doctrine of Promissory Estoppel	31
98. Doctrine of Forum Non Conveniens	31

Polity & Governance

Expansion of Article 21

- Recent judgments by the **Delhi High Court** and the **Supreme Court** have expanded the scope of **Article 21 (Right to Life and Personal Liberty)**.
- The **Delhi High Court** recognised the **Right to be Forgotten** as part of the **Right to Privacy**, already recognised under Article 21 in the Justice K. S. Puttaswamy vs Union Of India, 2017 case.
- This will allow courts to order **de-indexing of judicial records** and **masking of personal details** where no legitimate **public interest** exists.
- It balanced privacy with the principle of **open justice** and highlighted the **need** for a **dedicated RTBF law**.
- The **Supreme Court** recognised the **Right to Walk on safe and well-maintained footpaths** as a fundamental right under Article 21.
- It held that pedestrian rights take precedence over motorised vehicles, directed local bodies to maintain footpaths, criticised the **Motor Vehicles Act, 1988** for being vehicle-centric, and called for a dedicated law on pedestrian safety.

AFSPA in North-East

- The Union Home Minister announced that **AFSPA will be withdrawn from almost the entire Northeast by next year**, citing improved security conditions.
- AFSPA is a **special law enacted in 1958** (with a separate Act for **Jammu & Kashmir in 1990**) to deal with **insurgency, terrorism and internal disturbances** in areas declared as '**disturbed areas**'.
- Its origins can be traced to the **1942 Armed Forces (Special Powers) Ordinance** promulgated during the Quit India Movement.

- The Act empowers the **armed forces and notified paramilitary forces** to use force (including lethal force in specified circumstances), arrest without warrant, conduct searches without warrant, and provides **immunity from prosecution**, with legal proceedings requiring prior sanction of the **Central Government**.
- In **Naga People's Movement of Human Rights v. Union of India (1997)**, the Supreme Court upheld AFSPA's constitutional validity but directed that **disturbed area notifications be reviewed every six months**.
- SC also made the Army's operational '**Do's and Don'ts**' legally binding to safeguard citizens' rights.

National Statistical Commission (NSC)

- The **Appointments Committee of the Cabinet (ACC)** has approved the appointment of a new **Chairperson of the National Statistical Commission (NSC)**.
- The NSC was **constituted in 2006** through an **executive resolution** based on the recommendations of the **C. Rangarajan Commission (2001)** to strengthen India's official statistical system.
- It is an **autonomous advisory body** (not a statutory body), and its recommendations are **not legally binding**.
- The Commission comprises a **part-time Chairperson, four part-time members, the CEO of NITI Aayog (ex-officio), and the Secretary, Ministry of Statistics and Programme Implementation (MoSPI)**, who acts as its Secretary.
- The Chairperson and members have a **maximum tenure of three years**.
- The **Chief Statistician of India (CSI)**, created alongside the NSC, heads the **National Statistical Office (NSO)** and serves as the **Secretary to the NSC** as well as **Secretary, MoSPI**.

The Appointments Committee of the Cabinet (ACC) is the highest body in India, headed by the **Prime Minister** and includes the **Home Minister**, approves all major appointments of senior civil servants, bureaucrats, and heads of Public Sector Undertakings.

Indian Passport & Citizenship

- The **Ministry of External Affairs (MEA)** clarified that an **Indian passport is a travel document, not a proof of citizenship**.
- Issued under the **Passports Act, 1967**, passports are generally granted only to **Indian citizens**, though the Central Government may issue one to a **non-citizen in public interest** under **Section 20**.
- The Act also empowers the government to **refuse, impound or revoke passports** on grounds such as national security, public interest or criminal proceedings, treating the **passport as a statutory privilege subject to reasonable restrictions**.
- All newly issued e-passports contain **The International Civil Aviation Organization (ICAO)-compliant biometric chips** for enhanced security.
- Currently, only about **10% of Indians possess a passport**.
- Indian passport holders enjoy **visa-free access to 27 countries, visa-on-arrival in 47 countries, and e-visa facilities in 66 countries**.

ICAO (HQ at **Montreal, Canada**) is a specialized **UN agency** established in 1947 under Chicago Convention (1944) to set global standards for civil aviation safety, security, and efficiency. **India** has been a member since its **inception**.

Rajya Sabha Elections

- The **Election Commission of India (ECI)** announced the schedule for **by-elections to vacant Rajya Sabha seats from West Bengal**.
- The **Rajya Sabha** is a **permanent House**, with **one-third of its members retiring every two years**, each serving a **six-year term**.
- Under **Article 80**, it can have a maximum strength of **250 members** (238 elected and 12 nominated by the President), though its present strength is **245**.
- Members are **indirectly elected** by the elected MLAs of States and the Legislative Assemblies of **Delhi, Puducherry and Jammu & Kashmir** through the system of **Proportional Representation by means of the Single Transferable Vote (STV)**.
- MLAs rank candidates in order of preference, and candidates are elected on achieving the

prescribed **quota**.

- Rajya Sabha elections are conducted through an **open ballot system**, requiring party MLAs to show their marked ballot to the authorised party agent before voting, while **independent MLAs vote by secret ballot**.

North Eastern Council

- The **Plenary Session of the North Eastern Council (NEC)** was held in **Shillong** under the chairmanship of the **Union Home Minister**, who is also the **Chairman of the NEC**.
- Established under the **North Eastern Council Act, 1971**, the NEC is a **statutory body** and the **nodal agency for the economic and social development** of the **North Eastern Region (NER)**.
- NER comprises **Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura**.
- Initially constituted as an **advisory body**, it now functions as a **regional planning body**.
- The Council consists of the **Governors and Chief Ministers of the eight Northeastern States**, along with **three members nominated by the President**.
- It accords priority to **inter-state schemes and projects** benefiting two or more States, while also preparing and reviewing **state-specific development projects for Sikkim**.

Pradhan Mantri Kaushal Vikas Yojana (PMKVY)

- The **Public Accounts Committee (PAC)** criticised the implementation of the **Pradhan Mantri Kaushal Vikas Yojana (PMKVY)** for focusing on training in sectors with low employment demand.
- Launched in **2015**, PMKVY is the flagship skill development scheme of the **Ministry of Skill Development and Entrepreneurship (MSDE)**, implemented by the **National Skill Development Corporation (NSDC)** to provide **industry-relevant skill training** and improve youth employability.
- Between **2015 and 2022**, three phases of the scheme were implemented with an outlay of **₹14,450 crore**, certifying **1.10 crore candidates** against a target of **1.32 crore**.

- Its key components include **Short-Term Training (STT)** for unemployed youth and school/college dropouts, **Recognition of Prior Learning (RPL)** for certifying existing skills of workers in the unorganised sector, integration with the **World Bank-assisted SANKALP** programme to strengthen skill governance and quality, and the **Skill Hub Initiative (SHI)** under **NEP 2020** to expand vocational education through schools, colleges and RSETIs.

The **Public Accounts Committee (PAC)** is the oldest financial committee of Parliament, consisting of **22 members (15 from Lok Sabha and 7 from Rajya Sabha)**. It examines the **audit reports of the Comptroller and Auditor General (CAG)** and ensures parliamentary control over government expenditure and public accounts. Its **chairperson** is traditionally from the **Opposition party**.

Election Symbols

- The viral rise of the **Cockroach Janta Party (CJP)** has drawn attention to the **Election Commission of India's (ECI)** framework for allotment of election symbols.
- Election symbols are governed by the **Election Symbols (Reservation and Allotment) Order, 1968**, under which **recognised national and state parties** enjoy exclusive rights over their **reserved symbols**.
- On the other hand, **registered unrecognised parties** must generally choose from the ECI's **free symbols** list.
- Such parties **may propose new symbols** for the Commission's consideration; however, **new animal-based symbols are no longer allotted** following concerns raised in the 1990s.
- Existing parties continue to retain their reserved animal symbols (e.g., the **Bahujan Samaj Party's elephant**), but newly registered parties **cannot obtain new animal symbols**.

Telegram Ban

- The **Ministry of Electronics and Information Technology (MeitY)** temporarily blocked **Telegram** at the request of the **National Testing Agency (NTA)** until the completion of the **NEET examination** to prevent the circulation of exam-related content.

- **Section 69A of the Information Technology Act, 2000** empowers the **Central Government** to **block online content** in the interest of the **sovereignty and integrity of India, defence, security of the State, friendly relations with foreign States, public order**, or to prevent the incitement of cognisable offences.

➔ In the current case, **Telegram took the blocking to Delhi High court**, but the court ruled that **online content** under the IT Act includes **entire online platforms** and apps.

- Under the **Information Technology (Procedure and Safeguards for Blocking for Access of Information by Public) Rules, 2009**, intermediaries are generally given an opportunity to be heard (**Rule 8**), while **Rule 9** permits emergency blocking without prior hearing, subject to subsequent review.
- **Rule 16** mandates confidentiality of blocking orders.
- In **Shreya Singhal v. Union of India (2015)**, the Supreme Court upheld the constitutional validity of **Section 69A**, observing that blocking orders must be **issued in writing** and are **subject to judicial review** under **Article 226**.

Additional Judges as Permanent Judges

- The President of India recently appointed **six additional judges** of the **Bombay High Court** as **permanent judges** under **Article 217(1)** of the Constitution.
- Under **Article 217**, High Court judges are appointed by the **President** after consultation with the **Chief Justice of India (CJI)**, the **Governor of the State**, and the **Chief Justice of the concerned High Court**.
- The **sanctioned strength** of permanent judges in each High Court is determined by the **President** of India.
- A **permanent judge** of the High Court holds office until the age of **62 years**, whereas an **additional judge**, appointed under **Article 224** beyond the sanctioned strength, is appointed for a period **not exceeding two years** to deal with temporary increases in workload or case backlog, but also retires at **62 years**.
- Even though additional judges are temporary, they are **appointed via the Collegium System** (concurrence of the Chief Justice of India and

the Supreme Court Collegium, in consultation with the High Court Chief Justice and the state Governor).

- A person is eligible for appointment (same for both permanent and additional judges) if they are an **Indian citizen** and have either **held a judicial office for at least 10 years** or **practised as an advocate of a High Court for at least 10 years**.

Note: There is no concept of additional judges in the Supreme Court. Under **Article 127**, the Chief Justice of India can appoint a **serving High Court judge** as an **Ad-hoc Judge** to the Supreme Court with the President's consent, but only to fulfill a temporary lack of **quorum**. Alternatively, under **Article 128**, the Chief Justice can request a **retired Supreme Court or High Court judge** to sit and act as a **temporary judge** to help manage extreme case pendency.



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Economy

Revised Wholesale Price Index (WPI)

- The **Ministry of Commerce and Industry** has overhauled India's Wholesale Price Index (WPI) by updating its **base year from 2011-12 to 2022-23**, capturing modern supply-side realities.
- The revised WPI expands the commodity basket from **697 to 957 items**, adds **solar, wind and nuclear electricity** to reflect the green energy transition, and shifts **crude petroleum and natural gas** from **Primary Articles to Fuel & Power** for improved energy tracking.

Other methodological changes

- **Improved Methodology for Derivation of Weights: Gross Value of Output (GVO)** has been used for preparing weights for WPI (2022-23) as compared to **Net Traded Value** i.e. $GVO + Imports - Exports$, used in WPI 2011-12 series since the weights based on GVO reflect the economic significance of commodities in a better way from the producer's perspective, as they represent domestic production.
- **Improved Computation Methodology:** The new indices are being compiled using short-term formulation using **chain-based method**, in place of long-term formulation method (as practiced in the existing series).
- **Improved Method for Imputing Missing Price Data:** 'Targeted Mean Imputation' method has been used, in place of 'Carry-forward' method being used in the existing series of WPI.

Items to weights: How the WPI is going to change

	WPI-2011/12 series		WPI-2022/23 series	
	No. of items	Weight	No. of items	Weight
Primary Articles items	115	22.62%	129	22.76%
Fuel & Power items	18	13.15%	25	14.11%
Manufactured items	564	64.23%	803	63.13%
TOTAL ITEMS	697	100%	957	100%

Source: Ministry of Commerce & Industry • [Get the data](#) • Created with [Datawrapper](#)

Producer Price Index (PPI)

- The **Ministry of Commerce & Industry** released **India's first Producer Price Index (PPI)** for **goods and services**, marking the beginning of a gradual transition from the **Wholesale Price Index (WPI)** over the next **five years**.
- Unlike the **WPI**, which measures **wholesale prices of goods**, the **PPI** captures the **prices received by producers** for both **goods and services**, making it more consistent with **GDP/National Accounts** and **IMF recommendations**.
- The **base year** for both the revised **WPI and PPI** is **2022–23**, with an expanded basket of **957 items**.
- India will have **Output PPI** and a **trial Input PPI** and also a **Services PPI**.
 - ✓ **Output PPI:** Measures the price **producers receive** when selling their finished goods (their revenue).
 - ✓ **Input PPI:** Measures the price **producers pay for the raw materials and supplies** needed to make those goods.
- Manufactured items have the **highest 69.93% weight in output PPI (Goods)**, followed by agriculture, forestry and fishing (22.16%), electricity (4.49%), and mining and quarrying (3.42%).
- The first phase of the **Services PPI** covers **banking, securities transactions, insurance, pension fund management, railways, air passenger transport, and telecommunications**, with additional services to be included later.

Note: Both the Wholesale Price Index (WPI) and the new Producer Price Index (PPI) are released by the **Office of the Economic Adviser**, under the **Department for Promotion of Industry and Internal Trade (DPIIT)**, Ministry of Commerce & Industry.

Cambodia joins UPI

- **NPCI International Payments Limited (NIPL)** has officially partnered with **ACLEDA Bank** to launch **Unified Payments Interface (UPI) acceptance in Cambodia**.

- UPI is accepted in **eight countries** - Singapore, the United Arab Emirates, France, Mauritius, Nepal, Bhutan, Qatar and Sri Lanka - enabling Indian travellers to make seamless payments abroad through familiar platforms.
- Now, **Cambodia is the ninth** country joining the list.
- Unified Payments Interface (UPI) was developed by the **National Payments Corporation of India (NPCI)** and launched in **April 2016**.
- The **National Payments Corporation of India (NPCI)** is an umbrella organization set up in **2008** by the **RBI** and **Indian Banks Association** to operate all retail payment systems in the country.
 - Operating as a not-for-profit company, it is the infrastructure backbone behind India's digital payment revolution, developing systems like **UPI, RuPay, IMPS, and Bharat BillPay**.
- **NIPL** was incorporated in 2020, as a **wholly owned subsidiary of NPCI** to **internationalise India's RuPay** (domestic card scheme) and **UPI** (mobile payment solution) to facilitate seamless cross-border payments.

Capital Market Reforms

- The **Ministry of Finance** announced a series of **capital market reforms** to deepen the **Government Securities (G-Sec) market** and boost **Foreign Portfolio Investment (FPI)**.
- A **capital market** is a financial marketplace where businesses and governments go to **raise long-term funds** (money needed for more than one year).
- People trade long-term financial assets like **stocks** (company ownership) and **bonds** (loans to companies or governments).

Major Reforms

- **Portfolio Investment Scheme (PIS):** PIS was the route used by NRIs and OCIs to invest directly through a bank routed channel in Indian stock markets.

➤ The recent reforms allow **Persons Resident Outside India (PROIs)**, in addition to **NRIs and OCIs**, which basically means foreign citizens can now invest in stock markets in India directly.

- **Fully Accessible Route (FAR):** FAR is a special framework introduced by the RBI in 2020 that allows non-residents to invest in **specific Government of India securities** without any quantitative caps or investment limits.

➡ The **FAR** has now been expanded to include **15-, 30- and 40-year Government Securities** and **Sovereign Green Bonds (SGrBs)**.

- Further, **interest income and capital gains** earned by FPIs from investments in G-Secs will be **tax-exempt**, aimed at attracting long-term institutional investors such as **sovereign wealth funds, pension funds and insurance companies**.

Foreign Currency Non-Resident (Bank)

- To **encourage foreign currency inflows**, the Reserve Bank of India (RBI) has offered a special window allowing banks to mobilise fresh **3–5 year FCNR(B) deposits**.
- **FCNR(B) deposits** are **fixed-term deposits** opened in an Indian bank by non-resident Indians, but money is kept entirely in **designated foreign currencies** such as the **US Dollar, Pound Sterling, Euro, Japanese Yen, Australian Dollar and Canadian Dollar**, not Indian Rupees.
- Since these deposits are maintained in foreign currency, they **eliminate exchange rate risk** for **depositors** and the **interest earned is exempt from income tax** in India as long as the depositor remains a non-resident.
- Normally, **when an NRI deposits** foreign currency into an FCNR(B) account, the bank must **convert those to Rupees** to lend them out in India and make profits.
- However, **if the Rupee drops** in value by the time the deposit matures, the bank faces a **massive loss** when converting it back to foreign currency to pay the NRI.
- To protect themselves, banks pay a **currency hedging cost** (usually around 3% per year).
- Because that hedge is so expensive, banks **pass the cost onto the depositor** by keeping interest rates very low (around 3.5% to 4%), which **makes FCNR(B) less attractive to NRIs**.
- Under the new 2026 special window, the **RBI bears the exchange rate risk** for the **principal amount** of those 3-to-5-year deposits until **September 2026**.

Note: The ‘B’ in **FCNR(B)** comes from the fact that the **earlier scheme** of FCNR that ran from 1975–1994 had RBI and central government compensating the banks for the currency risk they faced when paying back depositors in foreign currency when rupee depreciated. Due to high fiscal costs, the RBI shut this down. **FCNR(B), the “Bank” Scheme was started in 1993** and the (B) signifies that **individual commercial banks now manage the deposit** and their own currency risk (without a safety guarantee from the RBI)

National Investment and Infrastructure Fund (NIIF)



- The Union Cabinet recently approved an **additional investment by the Government of India of ₹30,000 crore** in the National Investment and Infrastructure Fund (NIIF).
- The **NIIF** is India's first govt-backed investment fund, created to **attract global and domestic money to build major national projects** like highways, ports, and clean energy systems.
- It is set up as a **collaborative partnership** where the **Indian government owns 49%** to provide institutional backing, while the remaining **51%** is owned by **giant global institutional investors** like international pension funds, sovereign wealth funds, and domestic banks.
- **Instead of relying on regular bank loans**, which aren't built for long-term construction risks, NIIF channels this equity capital invest directly major national projects
- NIIF is managed by **National Investment and Infrastructure Fund Limited (NIIFL)**.
- With additional investment, **Government of India's total commitment** to NIIF now stands at **Rs. 60,000 crore**

Energy Transition Index

- India climbed **two places to 70th** in the **Energy Transition Index (ETI) 2026**, published by the **World Economic Forum (WEF)** in collaboration with **Accenture**.

- Published annually for the past **16 years**, the ETI assesses **120 countries** using **44 indicators** across two broad dimensions: **current energy system performance** (security, sustainability and equity) and **transition readiness**.
- The report noted a **global slowdown in energy transition** despite record investments in clean energy, driven by rising electricity demand and geopolitical disruptions.
- Sweden, Finland and Denmark** retained the top three positions globally.
- India emerged as one of the strongest performers, with a **1.9% increase in its overall score**, and was recognised for one of the **largest global gains in transition readiness**.
- The report also highlighted that India's **low-carbon jobs increased by 24% in 2024**, taking **renewable energy employment to 1.3 million**, with **hydropower** accounting for the largest share of jobs.

Current Account Surplus

- India recorded an unexpected **Current Account Surplus (CAS)** of **US\$7.1 billion (0.7% of GDP)** in the **January–March quarter (Q4 FY26)**, reversing the **US\$13.2 billion deficit** in the previous quarter.
- The **Current Account** tracks a nation's **net cross-border transactions** across three core components: **goods and services** (the balance of trade), **primary income** (investment earnings and employee compensation), and **secondary transfers** (remittances and foreign aid).
- A **Current Account Deficit (CAD)** occurs when a country spends more foreign currency on importing goods, services, and transfers than it earns from its exports and foreign income.
 - To fill this financial gap, the nation **must rely on foreign investment inflows** (Capital Account) or draw down its own foreign exchange reserves.
- Conversely, a **Current Account Surplus (CAS)** materializes when total export credits outpace import debits, indicating that the nation is a net creditor to the global economy.
- The recent surplus was driven by **strong net earnings from services exports** and **higher worker remittances**, despite a widening **merchandise trade deficit of US\$83.4 billion**, largely due to increased **non-monetary gold imports** (ie, gold not held by a central bank).

- For the **full financial year 2025–26**, India registered a **Current Account Deficit (CAD)** of **US\$25.2 billion (0.6% of GDP)**.
- The **Balance of Payments (BoP)** also recorded a **surplus of US\$7.2 billion** during Q4, boosting India's **foreign exchange reserves**, although the **overall BoP for FY26 remained in deficit at US\$23.6 billion**.

Updated IIP

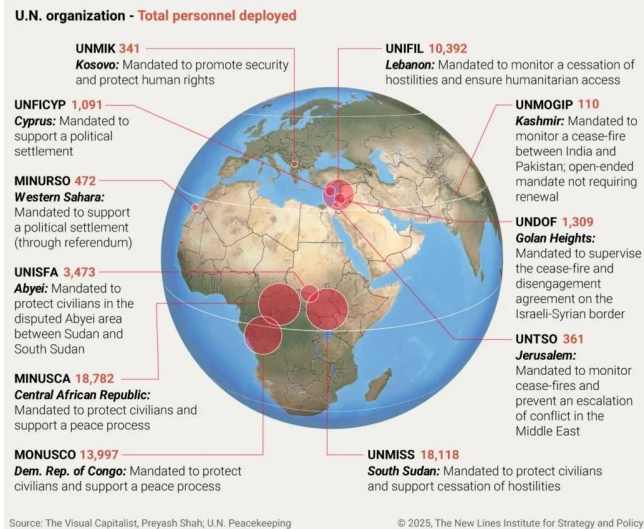
- The **Ministry of Statistics and Programme Implementation (MoSPI)** released the new **Index of Industrial Production (IIP)** series with the **base year revised from 2011–12 to 2022–23**.
 - Later, the IIP was further updated by using the **output PPI prices** over the previous **WPI prices**.
- The **new IIP has 4 items groups** - adding **Water Supply, sewerage and Waste Management** to the Mining and Quarrying, Manufacturing and Electricity.
 - It also adds **gas supply** to the electricity group.
- Mining and quarrying will have **Fuel Minerals** (coal, lignite, petroleum, and natural gas) as well as **Metallic Minerals and Non-metallic Minerals**.
- This update also **splits electricity tracking** into separate categories for **Renewable Sources and Non-Renewable Sources**.
- The product basket has been updated with the addition of **rare earth minerals, aircraft and spacecraft parts, medical stents, vaccines and CCTV cameras**, while obsolete items such as **kerosene, CFLs and fluorescent tubes** have been removed.

Change in item groups

	2011-12 series	2022-23 series
Mining and quarrying	1	3
Manufacturing	405	455
Electricity & gas supply	1	3
Water supply, sewerage & waste management	-	2
Total item groups	407	463

International Relations

UN Mission in South Sudan (UNMISS)



- At least **565 Indian peacekeepers** (called **Blue Helmets**), including **53 women**, serving with the **United Nations Mission in South Sudan (UNMISS)** were awarded the **United Nations Medal of Honour** for their distinguished service.
- **UNMISS** is a **UN peacekeeping mission** established under **UN Security Council Resolution 1996** and launched on **9 July 2011**, coinciding with the independence of **South Sudan**.
- The mission aims to **protect civilians, support peace and stability, facilitate humanitarian assistance**, and assist South Sudan in strengthening its **governance, justice and security institutions**.
- The **United Nations Medal of Honour** is awarded by the **UN Secretary-General** to military and police personnel who successfully complete the prescribed period of service in a UN peacekeeping mission.

Critical Minerals Global Supply Chain Observatory

- India and the **United Kingdom** jointly launched the **Critical Minerals Global Supply Chain Observatory (GSCO)** in **New Delhi** to strengthen critical mineral supply chain resilience.

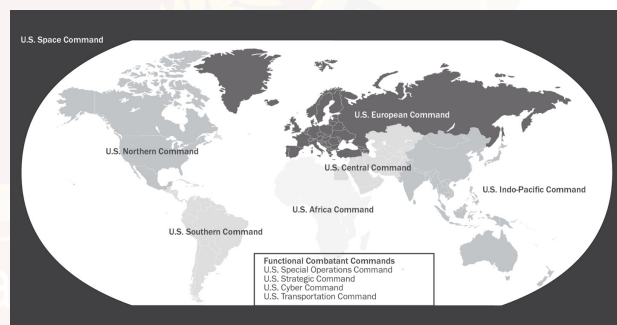
- The **GSCO** is a **tripartite initiative** of **TEXMin** (Technology Innovation in Exploration & Mining Foundation at IIT-ISM Dhanbad), **IIT (ISM) Dhanbad**, and the **University of Cambridge**.

TEXTMiN is a government-backed, non-profit company at **IIT (ISM) Dhanbad** that uses advanced technologies like **AI, drones, and robotics** to create smart, commercial solutions for the mining and mineral exploration sector. It was established by the Department of Science and Technology under the **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)**.

- It is a **data-driven digital platform** that monitors global critical mineral supply chains, identifies supply risks, anticipates market disruptions, and provides strategic intelligence to governments, industry and researchers.
- The platform supports **India's National Critical Mineral Mission (NCMM)** by facilitating mineral exploration, processing and recycling while reducing supply chain vulnerabilities.
- It also advances the **India-UK Vision 2035** partnership and complements the **India-UK Comprehensive Economic and Trade Agreement (CETA)**.

Note: India's **Ministry of Mines** has identified **30 critical minerals**—including key energy, high-tech, aerospace, and industrial elements like **Lithium, Cobalt, Nickel, and Rare Earth Elements**—essential for the country's economic development, national security, and clean energy transition.

US Pacific Command (USPACOM)



Note: U.S. Space Command is the seventh geographic combatant command. Its area of responsibility begins at the Kármán line (or 62 miles above sea level).
Sources: U.S. Department of Defense, "Combatant Commands," U.S. Space Command, "Frequently Asked Questions."

- The **United States** has renamed the **US Indo-Pacific Command (USINDOPACOM)** back to the **US Pacific Command (USPACOM)**.
- Established on **1 January 1947**, USPACOM is the **oldest and largest** of the **six geographic**

unified combatant commands of the US Armed Forces.

- It was renamed **USINDOPACOM** in **2018** to reflect the growing strategic importance of the **Indian Ocean**, but has now reverted to its original name.
- The command is responsible for safeguarding **US interests across the Indo-Pacific**, covering nearly **half of the Earth's surface**, and plays a key role in **regional security, military cooperation, humanitarian assistance and disaster relief (HADR)** operations across Asia.

Iraq and OPEC



- **Iraq**, the **second-largest crude oil producer in OPEC**, has threatened to withdraw from the organisation unless its **production quota** is increased to support its economic recovery and reconstruction needs.
- **OPEC** is a **permanent intergovernmental organisation** established in **1960** by **Iran, Iraq, Kuwait, Saudi Arabia and Venezuela**.
- It sets **oil production limits** for member countries to prevent price crashes or spikes, keeping global oil supply and prices stable.
- OPEC also publishes the **OPEC Reference Basket** as a benchmark for crude oil prices and established the **OPEC Fund for International Development (OFID)** to provide development assistance to developing countries.
- Since **2016**, OPEC has worked with major non-member producers through **OPEC+** to coordinate global oil production and improve market stability.

International Maritime Organisation (IMO)

- The **International Maritime Organization (IMO)** announced plans to coordinate the evacuation of ships and **11,000 seafarers** stranded in the **Persian Gulf** due to the conflict in West Asia.
- The **IMO** is a **specialized agency of the United Nations** responsible for setting global standards for the **safety, security and environmental performance of international shipping**.
- It was established as the **Inter-Governmental Maritime Consultative Organization (IMCO)** in **1948**, became a **UN specialized agency** in **1959**, and was renamed the **International Maritime Organization** in **1982**.
- Its objective is to promote **safe, secure, efficient and environmentally sustainable shipping** while ensuring a **level playing field** for all countries.
- The IMO has **176 member states**, with **India being a member since 1959**, and is headquartered in **London, United Kingdom**.

New Development Bank (BRICS)



- **Uzbekistan** officially joined the **New Development Bank (NDB)** as its **10th member**, becoming the **first Central Asian country** to join the BRICS-led multilateral development bank.
- The **NDB** was established by the **BRICS countries (Brazil, Russia, India, China and South Africa)** following the **6th BRICS Summit at Fortaleza, Brazil (2014)** and became operational in **2015**.
- Its mandate is to **mobilise resources for infrastructure and sustainable development projects** in **BRICS and other Emerging Market Economies and Developing Countries (EMDCs)**.
- The Bank follows the principle of **equal voting rights** (currently 18.72% with 100,000 shares), with **no member enjoying veto power**, although the combined voting share of the **founding BRICS members cannot fall below 55%**.

- Besides the founding members, the NDB now includes **Bangladesh (2021), United Arab Emirates (2021), Egypt (2023), Algeria (2025), and Uzbekistan (2026)**. Membership is open to **all United Nations member states**.

Tribunal for the Law of the Sea (ITLOS)



International Tribunal for the Law of the Sea

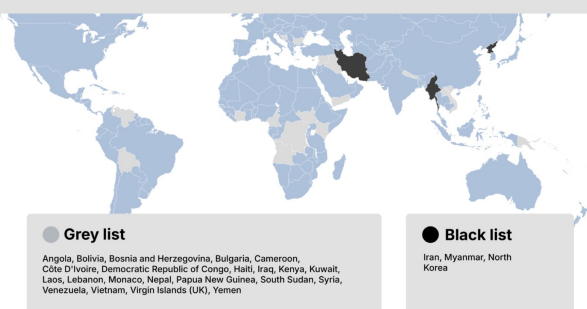
- India's **Professor Bimal N. Patel** has been elected as a **Judge of the International Tribunal for the Law of the Sea (ITLOS)** for the **2026–2035** term.
- ITLOS** is an **independent judicial body** established in **1996** under the **1982 United Nations Convention on the Law of the Sea (UNCLOS)** to settle disputes concerning the interpretation and application of the Convention.
- Headquartered in **Hamburg, Germany**, it comprises **21 independent judges** elected by the **States Parties to UNCLOS** by **secret ballot** for their expertise in the law of the sea.
- ITLOS adjudicates disputes relating to **maritime boundary delimitation, navigation, marine resource conservation and management**, and other matters under international agreements conferring jurisdiction.
- Dr. Neeru Chadha** was the **first Indian woman judge** of ITLOS, while **Prof. Bimal N. Patel** becomes the **second Indian** to serve on the Tribunal.

Financial Action Task Force

- India has been elected to the **Vice-Presidency of the Financial Action Task Force (FATF)** for the **first time**.
- Established by the **G7 in 1989**, the **FATF** is an **intergovernmental policy-making body** that develops global standards to combat **money laundering, terrorist financing** and, since **2012**, the **financing of the proliferation of Weapons of Mass Destruction (WMDs)**.
- The **FATF** comprises **40 members**, while over **200 jurisdictions** have committed to implementing its recommendations through **FATF-Style Regional Bodies (FSRBs)**.

- The **FATF Plenary**, held **three times a year**, reviews members' compliance and places jurisdictions on the **Grey List** (it is like a 'watch list' with increased monitoring but complying with FATF action plans) or **Black List** (it is like a 'sanctions list' with high-risk jurisdictions subject to a call for action).
- India became an **Observer in 2006** and the **34th member in 2010**, strengthening its anti-money laundering and counter-terror financing framework through the **Prevention of Money Laundering Act, 2002 (PMLA)** and the **Unlawful Activities (Prevention) Act, 1967 (UAPA)**.

FATF black list and grey list



Recent additions to FATF grey list and black list



Global Peace Index (GPI)

- India ranked **127th** in the **Global Peace Index (GPI) 2026**, slipping from **115th** in 2025.
- Published annually by the **Institute for Economics & Peace (IEP)**, the GPI assesses the level of peacefulness in **163 countries** using **23 indicators** grouped under **Societal Safety & Security, Ongoing Domestic and International Conflict, and Militarisation**.
- Iceland** retained its position as the **world's most peaceful country** for the **19th consecutive year**, followed by **New Zealand, Switzerland, Slovenia and Ireland**.
- Russia** was ranked the **least peaceful country**, followed by **Sudan, the Democratic Republic of the Congo, Ukraine and Israel**.

- In South Asia, **Bhutan** remained the **most peaceful country**, ranking **16th globally**.
- The report noted a continued decline in global peacefulness due to **rising armed conflicts, geopolitical tensions and increasing militarisation**.

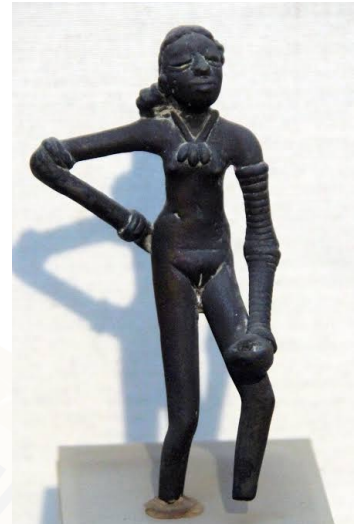
World Gold Council

- The World Gold Council's (WGC) Survey indicated that **central banks are expected to continue increasing their gold reserves**.
- This is done as part of **reserve diversification** ('de-dollarisation') and financial stability strategies and has implications for gold price fluctuations.
- The **World Gold Council (WGC)** is a **non-profit market development organisation** established in **1987** by the world's **leading gold mining companies** and currently comprises **29 major gold companies** (no Indian company).
- It works to **promote the responsible use of gold**, strengthen gold markets, encourage sustainable mining practices, and provide authoritative research on the global gold industry.
- The WGC is widely known for publishing the **Central Bank Gold Reserves (CBGR) Survey, Gold Demand Trends (quarterly)**, and other reports analysing global gold demand, supply and market developments.

History & Culture

Dancing Girl of Mohenjo-daro

- The **NCERT** announced that it will replace a **retouched image** of the **Dancing Girl of Mohenjo-daro** in its new **Class 9 Art textbook** with an authentic representation.



- The **Dancing Girl** is a **bronze sculpture** of the **Indus Valley Civilization**, dating to **c. 2300–1750 BCE**, and was crafted using the **Lost-Wax (Cire Perdue) casting technique**.
- About **10.5 cm (4 inches)** tall, it depicts a young girl in a **natural contrapposto posture**, with one hand on her hip and the body resting unevenly on the legs.
- The figurine is notable for its **minimal clothing, elaborate ornaments, and 24–25 bangles on the left arm**, reflecting the artistic sophistication and metallurgical skills of the Harappans.
- It was excavated at **Mohenjo-daro** and is currently preserved in the **National Museum, New Delhi**.

Shree Jagannath Temple

- The **Shree Jagannath Temple Administration (SJTA)** secured **trademark registrations** under the **Trade Marks Act** for the wordmarks **Ananda Bajara** and **Patitapabana**, along with the **Nilachakra** logo, to protect the temple's sacred identity and prevent commercial misuse.



- The **Jagannath Temple**, located at **Puri, Odisha**, is one of the **Char Dham** pilgrimage sites and is dedicated to **Lord Jagannath**, a revered form of **Vishnu/Krishna**.
- Also known as **Purushottama Kshetra** or **Nilachala**, the present temple was built in the **12th century** by **Anantavarman Chodaganga** of the **Eastern Ganga Dynasty**, and later patronised by **Anangabhima III**.
- A unique feature of the temple is that the deities are **carved from sacred neem wood (Daru Brahma)** rather than stone or metal and are ceremonially replaced during the **Nabakalebara** festival every **12 or 19 years**.

Thewa Art



- Indian Prime Minister presented to Slovakia **Thewa motif cufflinks**, highlighting Rajasthan's renowned **Thewa craft**.
- **Thewa** is a **traditional jewellery and decorative art** of **Pratapgarh, Rajasthan**, involving the intricate fusion of **hand-carved 23-carat gold sheets** onto specially treated **coloured molten glass** through a unique thermal bonding process **without using glue or solder**.
- The craft originated over **400 years ago** and is traditionally practised by the **Raj-Soni (Soni) artisan family**, with the technique passed down through generations.
- Thewa designs are inspired by **Hindu mythology, nature, folklore, royal life and historical events**, making each piece both artistic and culturally significant.
- The craft has been accorded **Geographical Indication (GI) status**.

Sushruta Statue

- The **Royal College of Surgeons** of **Edinburgh (Scotland)** unveiled a **90-kg bronze statue** of ancient Indian physician **Sushruta**, donated by the **Cheruvu Family Foundation** in recognition of his pioneering contributions to surgery.



- **Sushruta**, associated with **Varanasi** and generally dated to the **7th–6th century BCE**, is revered as the **“Father of Surgery”** and **“Father of Plastic Surgery”**.
- Traditionally regarded as a disciple of **Dhanvantari**, he authored the **Sushruta Samhita**, one of the foundational texts of **Ayurveda** and part of the **Ayurvedic Brihat Trayi (Great Trilogy)** along with the **Charaka Samhita** and **Ashtanga Hridaya**.
- The **Sushruta Samhita** is organized into **two main parts**: the **Purva-Tantra**, which covers basic **surgical principles and therapies** across five sections, and the **Uttara-Tantra**, a final section **added by Nagarjuna** focusing on specialized topics like eye, ear, nose, and throat diseases.
- The text describes over **300 surgical procedures** and **120 surgical instruments**, including **rhinoplasty (nose reconstruction)**, **cataract surgery**, **fracture management**, **caesarean delivery**, and **Karna Sandhan (otoplasty/ear reconstruction)**.

Ambubachi Mela



- The **annual Ambubachi Mela** commenced at the **Kamakhya Temple, Guwahati (Assam)**, one of the largest religious gatherings in Northeast India.
- Celebrated during the **monsoon (June)**, the festival marks the **annual menstruation of Goddess Kamakhya**, symbolising **fertility, creation and the regenerative power of nature**.
- During this period, the **temple remains closed for three days** and reopens after ritual purification.
- Also known locally as **Ameti** or **Amoti**, the festival is closely associated with the **onset of the monsoon**, and the name “**Ambubachi**” literally means “**water flowing**”.
- **Kamakhya Temple** is located on **Nilachal Hill** on the southern bank of the **Brahmaputra River** in **Guwahati, Assam**, it is one of the most important centres of **Tantric worship** and is revered as one of the **51 Shakti Peethas**, dedicated to **Goddess Shakti**.

Kalamkari Painting

- **India** gifted a **Kalamkari Mahabharata painting** to France, showcasing India's rich textile heritage.
- **Kalamkari** (from the Persian words **kalam** meaning **pen** and **kari** meaning **craftsmanship**) is a traditional **hand-painted and block-printed textile art** primarily practised in **Andhra Pradesh**.
- It flourished under the **Qutb Shahi Dynasty (16th–17th centuries)** and is distinguished by the use of **natural dyes** derived from plants and minerals.
- There are **two major styles**: the **Srikalahasti style**, which is entirely **freehand-drawn with a pen**, and the **Machilipatnam style**, which uses **hand-carved wooden blocks** for printing.
- The art predominantly depicts **episodes from the Ramayana, Mahabharata, Puranas**, and images of **Hindu deities**.



- Both **Srikalahasti** and **Machilipatnam Kalamkari** have **Geographical Indication (GI)** status.

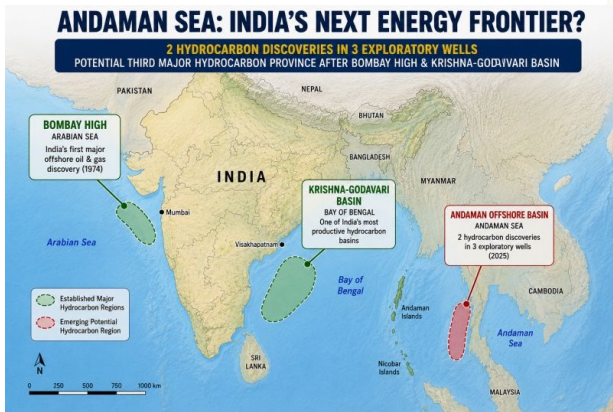
Holy Buddhist Relics of Arhats



- In a major boost to **India–Mongolia cultural and Buddhist ties**, the **holy relics of Arhat Sariputra and Arhat Mahamoggallana**, the two chief disciples of **Lord Buddha**, were ceremonially enshrined at the **Gandantegchenling Monastery** in **Ulaanbaatar, Mongolia**.
- **Sariputra** and **Mahamoggallana** were often referred to as his “**right-hand**” and “**left-hand**” disciples of **Buddha**.
- In Buddhism, an **Arhat (Sanskrit) or Arahant (Pali)** is a “**perfected person**” who has gained deep insight into the true nature of existence, eradicated all mental defilements, and achieved nirvana.
 - Becoming an Arhat is the **highest goal in Theravada** but below Bodhisattva goal in Mahayana form of Buddhism.
- **Sariputra (Sāriputta)** is revered as the **foremost in wisdom (Paññā)** and for his mastery of the **Dhamma** and leadership of the **Sangha**.
- **Mahamoggallana (Mahā Moggallāna)** is honoured as the **foremost in meditative attainments and supernatural powers (Iddhi)**.
- Their sacred relics are originally preserved at the **Chethiyagiri Vihara**, adjacent to the **Great Stupa at Sanchi, Raisen district, Madhya Pradesh**.

Geography

Andaman shallow offshore block



- Oil India Limited (OIL) announced a **natural gas discovery** at its exploratory well **Vijayapuram-3** in the **Andaman shallow offshore block**.
- This will mark the **second hydrocarbon discovery** in the region after **Vijayapuram-2 (2025)**.
- Natural gas** is a fossil fuel composed primarily of methane CH_4 , along with smaller amounts of other hydrocarbons.
 - ★ Formed over **millions of years** from the decomposed remains of ancient **marine microorganisms and plants**, it is a highly efficient, combustible energy source
- The Andaman Natural gas well is located about **15 km off the eastern coast of the Andaman Islands**, drilled at a **water depth of 355 m** and extending to a **sub-seabed depth of over 1,900 m** into the **Eocene geological formation**.

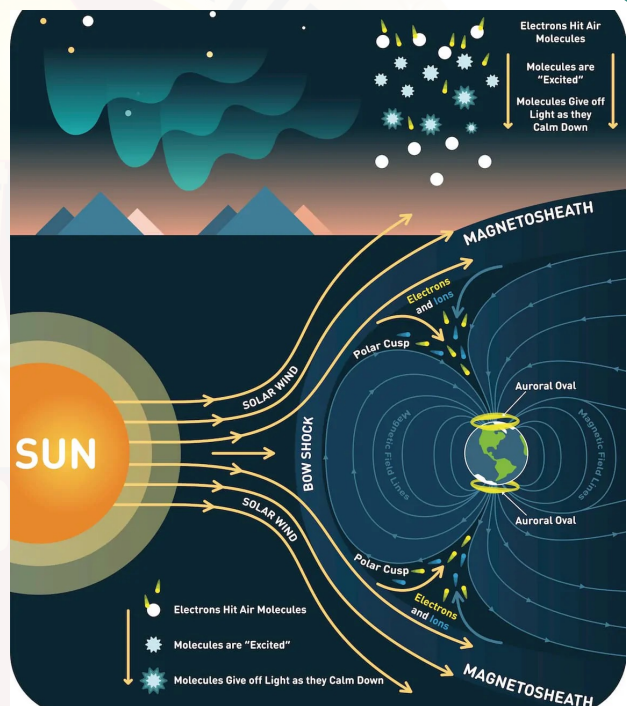
Note: The **Andaman block** typically refers to highly prospective natural gas and oil exploration zones in the Andaman Sea (part of the Bengal-Arakan sedimentary basin).

Ocean Information Services Centre (INCOIS)

- The **Indian National Centre for Ocean Information Services (INCOIS)** has begun issuing **Specialized El Niño Bulletins** to assess the likely impacts of **El Niño** on India's **maritime sectors**.

- INCOIS** is an **autonomous organisation** established in **1999** and functions under the **Earth System Science Organisation (ESSO)**, the executive arm of India's Ministry of Earth Sciences that coordinates government policy and scientific research, and operational services for weather, climate, and oceans.
- It provides **ocean information, forecasts and advisory services** to support fisheries, navigation, disaster management, coastal communities and scientific research through sustained ocean observations.
- INCOIS also hosts the **Indian Tsunami Early Warning Centre (ITEWC)**, which issues **tsunami alerts within 10 minutes** and serves **India and 28 Indian Ocean countries**.
- It is a **permanent member** of **UNESCO's Intergovernmental Oceanographic Commission (IOC)**.

Aurora Borealis

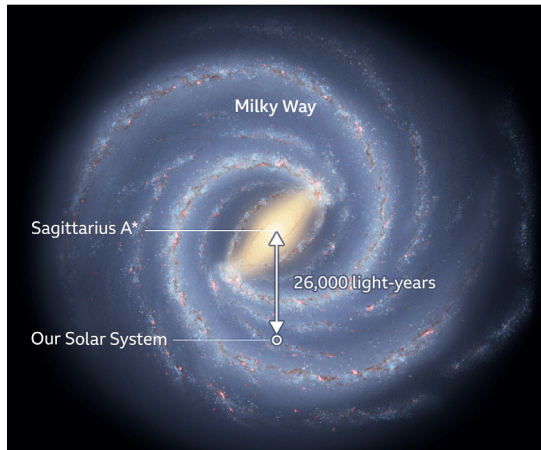


- The **Aurora Borealis (Northern Lights)** was recently expected to be visible from parts of **India** due to an intense **geomagnetic storm**.
- Auroras are spectacular displays of **coloured lights** produced when **charged particles (solar wind)** emitted during **solar eruptions** interact with the **Earth's magnetosphere** and collide with gases in the upper atmosphere.
- These collisions excite atmospheric atoms, which emit light of different colours—**green and red** from **oxygen**, and **blue and purple** from **nitrogen**.

- The phenomenon is known as the **Aurora Borealis** in the **Northern Hemisphere** and the **Aurora Australis** in the **Southern Hemisphere**.
- Auroras are usually confined to **high-latitude polar regions**, but during **strong geomagnetic storms**, they can extend to **mid- and lower latitudes**.

Sagittarius A*

Our Solar System is in the Milky Way Galaxy



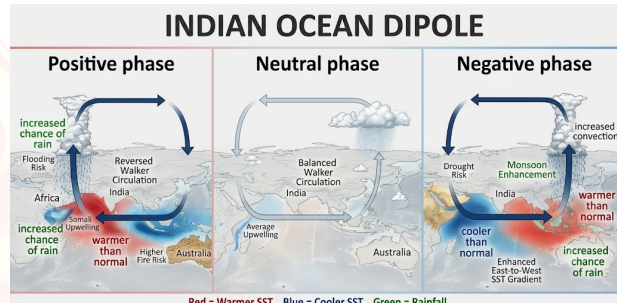
Source: Nasa illustration

BBC

- Astronomers using the Chile based telescope **Atacama Large Millimeter/submillimeter Array (ALMA)**, have found the first direct evidence of **winds emanating from Sagittarius A* (Sgr A*)**.
- **Sagittarius A*** is the **supermassive black hole** at the centre of the **Milky Way Galaxy**.
- Almost every large galaxy does have a **Supermassive Black Hole at its center**.
 - ★ However, recent studies show this is **not true for all Small Galaxies**.
- Discovered in the **1970s**, Sgr A* is located in the **constellation Sagittarius** and has a mass of about **4.3 million times that of the Sun**.
- Although largely **quiescent** (inactive or dormant), it occasionally accretes gas and dust, producing bursts of radiation.
- It is also a powerful **radio source**, with emissions generated through **synchrotron radiation**, indicating the presence of high-energy electrons and strong magnetic fields.
- Although a **black hole's gravity traps all light**, infalling **gas and dust swirl around it** at extreme speeds to form a highly compressed **accretion disk**.

- **Friction heats** this matter to millions of degrees, causing it to **glow intensely** and emit powerful, detectable bursts of radiation just before crossing the event horizon.

Indian Ocean dipole



- Recent updates show that **neutral conditions** in the **Indian Ocean Dipole (IOD)** will lead to **Moderate to strong El Nino conditions** to prevail during India's June-September monsoon season.
- Indian Ocean Dipole (IOD) is an **ocean-atmosphere coupled climate phenomenon** in the tropical Indian Ocean, characterized by **differences in Sea Surface Temperature (SST) between Western Indian Ocean and Eastern Indian Ocean**.

IOD has 3 phases - Positive IOD, Neutral Phase, Negative IOD

- **Positive event** - Warmer sea surface temperatures in the western Indian Ocean relative to the east which **brings more rainfall to India**.
- **Neutral event** - Water flows from the Pacific between Indonesia's islands, keeping seas warm to the northwest of Australia. This has **very less impact on the Indian monsoon**.
- **Negative event** - Cooler sea surface temperatures in the western Indian Ocean relative to the east which **brings less rainfall to India**.

Giant's Causeway

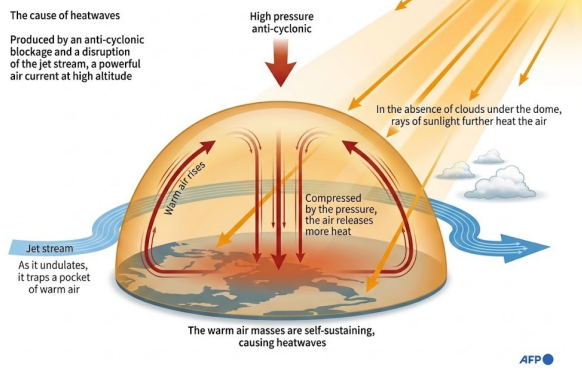


- Recent geochronological research has shown that the **Giant's Causeway** in **Antrim Plateau, Northern Ireland** was formed over about **5.5 million years**, nearly **8 million years shorter** than previously estimated.
- The **Giant's Causeway** is a geological wonder comprising **roughly 40,000 interlocking basalt columns** created around 60 million years ago (**Paleogene Period**) by **intense, cooling volcanic activity**.
 - It is called a "**causeway**" because the hexagonal stone pillars **tightly fit together** like a massive, hand-laid **cobblestone pavement**.
 - Its name derives from an ancient Irish legend of the **mythical giant Finn MacCumhaill**.
- The columns were created when **basaltic lava** erupted onto the surface, cooled and contracted, producing characteristic **columnar joints**.
- The site was inscribed as a **UNESCO World Heritage Site** in **1986** for its outstanding geological significance.

- Scientists suggest that **climate change** is increasing the frequency and intensity of heat domes by warming the atmosphere and making the **jet stream more variable**, leading to longer-lasting extreme heat events.

Heat Dome over Europe

What is a heat dome ?



- A **severe heatwave** across **Europe**, with temperatures nearing **40°C**, has been linked to the formation of a **heat dome**.
- A **heat dome** is a meteorological phenomenon in which a **strong high-pressure system traps hot air** over a region for an extended period, preventing it from escaping.
- The trapped air is continuously heated by the Sun, resulting in **prolonged and intense heatwaves**.
- Heat domes are closely associated with the **jet stream**; when the jet stream becomes **wavy or stagnant**, it locks the high-pressure system in place.



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Environment & Ecology

Pavona clavus Colony (Potato Patch)



- Marine researchers have documented a **giant coral colony** of **Pavona clavus** (commonly called **Potato Coral**), popularly known as the **“Potato Patch”**, near **Kadmat Island** in the **Lakshadweep** archipelago.
- The colony covers about **4,250 sq. m.**, making it **one of the largest known coral colonies in the world**, larger than similar colonies reported from the **Great Barrier Reef** and the **Solomon Islands**.
- Named for its **club-shaped, potato-like coral formations**, the colony extends from a **5.2 m reef flat to nearly 20 m depth** and supports a rich diversity of marine life.
- Surveys indicate that **about 58.5% of the coral tissue remains alive**, suggesting that the colony is in a relatively healthy condition despite increasing environmental pressures.

Carbon Credits Under the Paris Agreement

- The **United Nations** issued its **first-ever carbon credits** under **Article 6.4 of the Paris Agreement** for a **clean-cooking project in Myanmar**, marking the operationalisation of the UN-supervised global carbon market.
- A **carbon credit** is a **tradable certificate** representing the **reduction, removal or avoidance of one tonne of CO₂** (or its equivalent greenhouse gases).
- Article 6.4** establishes a **UN-regulated international carbon market**, where emission

reduction projects generate **high-integrity carbon credits** that can be traded to help countries and companies meet climate goals while promoting sustainable development.

- This centralized, UN-supervised global carbon market **replaces the older Kyoto Protocol framework** (Clean Development Mechanism) with much stricter environmental rules.
- The first project distributes **clean cooking stoves** in **Myanmar’s Dry Zone**, reducing **firewood consumption, indoor air pollution, deforestation**, and greenhouse gas emissions.
- The mechanism **quantifies the carbon emissions avoided** (1 Carbon Credit = 1 Metric Tonne of CO₂ equivalent tCO₂{e} prevented from entering the atmosphere) by distributing energy-efficient cookstoves into high-integrity, UN-verified carbon credits.
 - These credits are then **sold to foreign governments or corporations to offset** their emissions and fulfill Paris Agreement climate targets.

International Big Cat Alliance

- Bangladesh** has become the **27th member** of the **International Big Cat Alliance (IBCA)**.
- Launched by **India in April 2023** during the **50th anniversary of Project Tiger**, the **IBCA** is an **intergovernmental international organisation** dedicated to the conservation of **seven big cat species—Tiger, Lion, Leopard, Snow Leopard, Cheetah, Jaguar, and Puma**.
- The Alliance promotes **global cooperation, knowledge sharing, capacity building, research, and conservation financing** among **range and non-range countries**, conservation organisations, scientific institutions, and other stakeholders.
- In India, it is implemented through the **National Tiger Conservation Authority (NTCA)** under the **Ministry of Environment, Forest and Climate Change (MoEFCC)**. Membership is open to **all UN Member States**.



India's first 3D-Printed Reef



- **Tamil Nadu** successfully deployed **India's first 3D-printed artificial reefs** off the **Ramanathapuram coast, Gulf of Mannar**.
- This was under **Phase II of the Pradhan Mantri Matsya Sampada Yojana (PMMSY)**, in collaboration with the **ICAR–Central Marine Fisheries Research Institute (CMFRI), Visakhapatnam Regional Centre**.
- **3D-printed artificial reefs** are **man-made underwater structures** designed to restore degraded marine habitats and enhance biodiversity.
- Unlike conventional concrete reefs, they are fabricated using **3D-printing technology**, enabling **species-specific designs** with varied cavities, textures, and complex surfaces that provide shelter, breeding grounds, and attachment sites for marine organisms.
- These structures facilitate the colonisation of **corals, sponges, algae, crustaceans, fish, and other reef-associated species**, helping rebuild healthy marine ecosystems and improve fishery resources.

Caustic Soda



- India's **Environment (Protection) Second Amendment Rules, 2025** require **caustic soda**

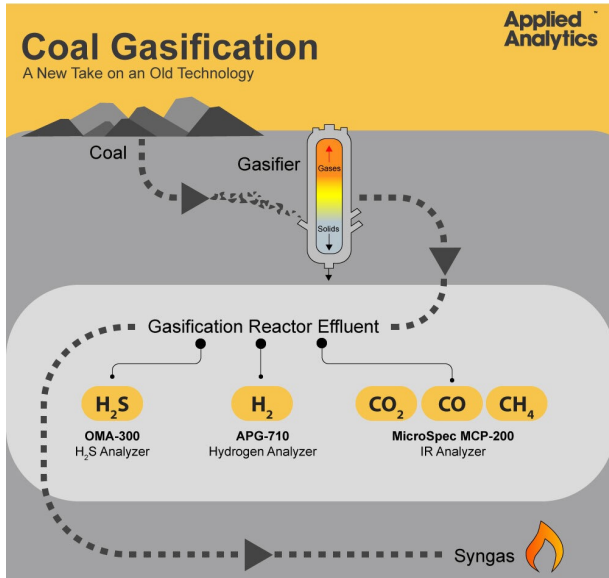
plants using **membrane cell technology** to pass a **fish-survival test** to ensure that treated wastewater is non-toxic before discharge.

- **Caustic soda (Sodium Hydroxide – NaOH)** is a **highly alkaline, corrosive white solid** widely used in industry.
- It is primarily produced by the **electrolysis of brine (chlor-alkali process)** and, to a lesser extent, by reacting **sodium carbonate with calcium hydroxide**.
- Although **membrane cell technology** is the cleanest method of production and eliminates the use of toxic **mercury**, the process still generates wastewater with **high alkalinity, salinity, chloride, and residual chlorine**, which can harm aquatic ecosystems if untreated.
- Caustic soda is extensively used in the **paper, textile, soap and detergent, aluminium, chemical, petroleum refining, metal processing, and water treatment** industries.

State of India's Environment Report

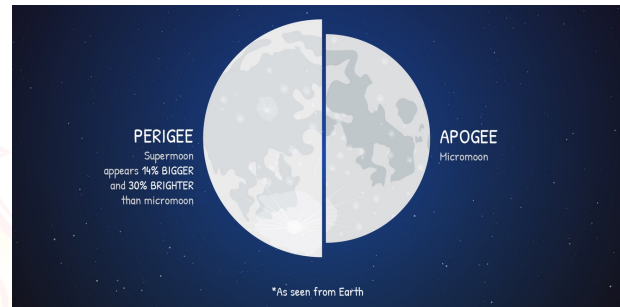
- The **Centre for Science and Environment (CSE)** and **Down To Earth** released their latest annual **State of India's Environment Report** highlighting a deteriorating environmental scenario in India.
- The **CSE** not-for-profit research and **advocacy group** and **Down to Earth** is a fortnightly **magazine** focused on politics of environment and development, both based in New Delhi.
- Based on **official government data**, the **report tracks** trends in climate, extreme weather, forests, biodiversity, groundwater, air pollution, waste management, and public health.
- The report found that **extreme weather occurred on 99% of days in 2025**, resulting in **4,421 deaths** and damage to **17.41 million hectares of crops**.
- Between **2020 and 2025**, about **97,000 hectares of forestland** were diverted for non-forest use, contributing to increased **human-wildlife conflict**.
- It also noted that **15 States/UTs**, led by **Punjab, Rajasthan, and Haryana**, are **over-exploiting groundwater**, while **PM2.5-related deaths** increased by **61% over the last decade**, with India accounting for **25.34% of global air pollution deaths in 2023**.

Coal Gasification



- The **Union Cabinet** has approved the **Scheme for Promotion of Surface Coal/Lignite Gasification Projects** with a financial outlay of **₹37,500 crore** to promote the conversion of domestic coal into value-added fuels and chemicals.
- Coal gasification** is the process of converting **coal or lignite into synthesis gas (syngas)** by reacting it with **air (or oxygen) and steam** at **high temperatures** under controlled conditions.
- The resulting **syngas**—mainly **carbon monoxide (CO)** and **hydrogen (H₂)**—is used to produce **hydrogen, synthetic natural gas (SNG), methanol, ammonia**, and other industrial chemicals.
- Unlike **combustion**, which burns coal to generate heat, **gasification converts the chemical energy of coal into useful feedstocks**, making coal a raw material for the chemical industry.
- The technology is expected to **reduce import dependence**, improve **energy security**, and create value from India's abundant **coal (~401 billion tonnes)** and **lignite (~47 billion tonnes)** reserves.

Blue Micromoon



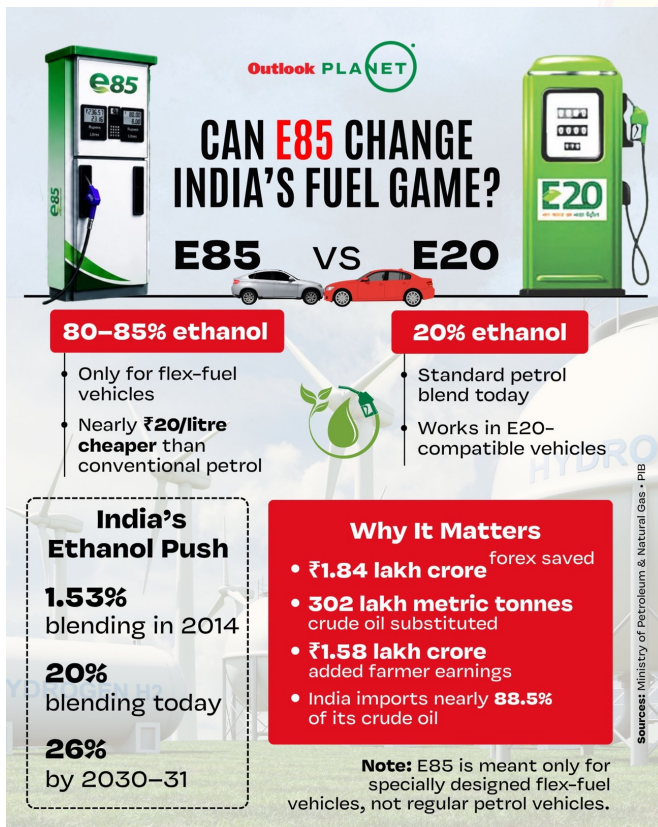
- A rare lunar event featuring both a **Blue Moon** and a **Micromoon** was observed recently.
- A **Blue Moon** is **not blue in colour**; it commonly refers to the **second full moon in a calendar month**, while a **seasonal Blue Moon** is the **third full moon in a season containing four full moons**.
- ➡ The phrase **“once in a blue moon”** signifies a rare occurrence.
- A **Micromoon** occurs when a **full moon coincides with the Moon's apogee** (its farthest point from Earth), making it appear **slightly smaller and dimmer** than a typical full moon.
- The Moon follows an **elliptical orbit** around the Earth, completing one revolution in about **27.3 days**.
- It is approximately **363,711 km** from Earth at **perigee (closest point)** and about **403,945 km** at **apogee (farthest point)**.
- Historically, volcanic eruptions have occasionally made the Moon appear bluish due to atmospheric dust, but this is **unrelated to the astronomical definition of a Blue Moon**.

India's First Flex-Fuel Passenger Vehicle

- Maruti Suzuki** has unveiled **India's first flex-fuel car**, the **WagonR FFV**, capable of running on **E85 fuel** (85% ethanol and 15% petrol).
- A **Flex-Fuel Vehicle (FFV)** is designed to operate on **petrol, ethanol, or any blend of the two**, unlike conventional petrol vehicles in India, which are generally compatible only up to **E20**.
- Since **ethanol is corrosive**, FFVs are equipped with **ethanol-resistant fuel lines, specialised fuel injectors, modified fuel pumps, and recalibrated Engine Control Units (ECUs)**.

that automatically detect the ethanol–petrol ratio and optimise engine performance.

- **Ethanol**, a biofuel, is produced from crops and agricultural residues such as **sugarcane, maize, and rice**.
- Wider adoption of FFVs can **reduce crude oil imports**, lower vehicular emissions, enhance **energy security**, and provide better market opportunities for farmers through increased ethanol production.



- Because **solar and wind energy are inherently intermittent**—generating power only when the sun shines or the wind blows—a **BESS acts as a vital buffer** that prevents blackouts, balances sudden supply-demand mismatches, and **stores cheap, excess clean energy during off-peak hours to deploy when the grid is under maximum stress** (high energy demand).

Drop Shipping



- The rapid growth of **AI-powered online storefronts** and **social media commerce** has accelerated the global adoption of **dropshipping**.
- Drop Shipping is an **e-commerce business model** in which the seller **does not maintain inventory or handle shipping**.
- Instead, when a customer places an order, the seller forwards it to a **third-party supplier** (such as a wholesaler or manufacturer), who directly ships the product to the customer.
- The seller pays the supplier **only after receiving the customer's order**, making dropshipping a **low-investment, low-inventory** business model.
- However, it is associated with **low profit margins, intense competition, dependence on suppliers for product quality and delivery**, and customer service challenges.

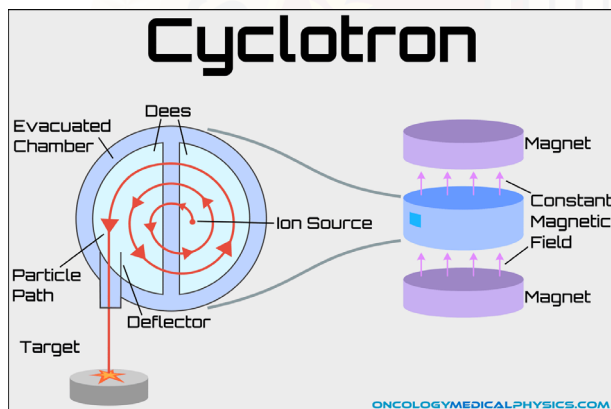
High-Energy Medical Cyclotron Project (HEMCP)

- The **Maharashtra Cabinet** has approved the **High Energy Medical Cyclotron Project (HEMCP)** in **Nagpur** to boost cancer diagnosis, treatment, and radiopharmaceutical research.

Sitapur 250 MW Solar-BESS Project

- The **Defence Ministry** recently approved the development of a 250 MW Solar Power Project with **Battery Energy Storage System (BESS)** at Sitapur (Ex-Cantonment), Uttar Pradesh.
- **BESS** is an **integrated electrochemical setup** that captures electricity from the grid or renewable sources, stores it in rechargeable batteries, and discharges it back when energy demand peaks or generation drops.
- Managed by **specialized software and bi-directional inverters** to smoothly convert power between Direct Current (DC) and Alternating Current (AC), this system is **needed to stabilize the modern power grid** as it transitions away from fossil fuels.

- A **cyclotron** is a **particle accelerator** that uses **electric and magnetic fields** to accelerate charged particles (such as protons or ions) in a spiral path to high speeds.
- These accelerated particles (e.g. Hydrogen ions) are then directed at target materials (e.g. Oxygen-18 enriched water) to produce **radioisotopes** (e.g. Fluorine-18), which are widely used in **nuclear medicine**, especially for **PET (Positron Emission Tomography) scans** and cancer treatment.
- In **cancer treatment**, the radioisotope like Fluorine-18 chemically bonded to ordinary glucose (sugar) molecules to make **radioactive sugar**, is injected into a patient.
- **Cancer cells consume sugar at an accelerated rate**, and so it pulls in this radioactive compound, allowing a **PET scanner to detect the radiation** and reveal the exact location of the cancer for treatment.
- The cyclotron was **invented in 1931** by **Ernest O. Lawrence** and **M. Stanley Livingston**, for which Lawrence received the **1939 Nobel Prize in Physics**.
- Since medical radioisotopes have **very short half-lives**, local production reduces transport delays and ensures timely availability.



Ammonia Gas

- A **fatal ammonia gas leak** at a seafood processing unit in **Tiruvallur, Tamil Nadu**, highlighted the hazards associated with industrial use of ammonia.
- **Ammonia (NH₃)** is a **colourless, pungent-smelling alkaline gas** composed of **one nitrogen and three hydrogen atoms**.
- It can be liquefied under pressure, dissolves readily in water, and is widely used in the manufacture of **fertilisers, chemicals, plastics,**

dyes, cleaning products, and as a **refrigerant** in cold storage and food-processing industries.

- Exposure occurs mainly through **inhalation**, but can also result from skin or eye contact.
- High concentrations can cause **severe irritation and burns of the respiratory tract, pulmonary oedema, respiratory failure**, and may be fatal.
- Since **there is no specific antidote**, treatment is primarily supportive and immediate removal from exposure is critical.

Fixed Dose Combination Drug Ban

- The Union Ministry of Health has banned 16 Fixed Dose Combination (FDC) drugs under **Section 26A of the Drugs and Cosmetics Act, 1940**, after expert review found them to be irrational and potentially harmful.

FIXED DOSE COMBINATIONS (FDCs) EXPLAINED

BENEFITS

- Simplified treatment regimen
- Improved patient adherence
- Convenience with fewer pills
- Lower cost compared to separate drugs

RISKS

- Less flexibility in dosing
- Increased risk of side effects
- Difficult to identify cause of adverse effects
- Limited options for dose adjustments

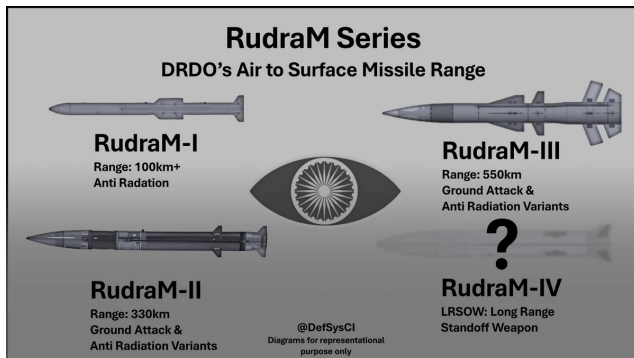
EXAMPLES

- Amoxicillin + Clavulanic acid
- Amlodipine + Valsartan
- Metformin + Sitagliptin

- A **Fixed Dose Combination (FDC)** is a medicine containing two or more active pharmaceutical ingredients in a fixed proportion within a single dosage form.
- These combinations are widely used because they **improve patient compliance by reducing “pill burden”**—allowing a patient to take a single dose instead of multiple individual tablets—and can **enhance therapeutic effectiveness** when the drugs work synergistically.
- However, they **can be dangerous** because unscientific or “irrational” combinations increase the risk of severe **adverse drug interactions** and side effects, complicate diagnosis when a reaction occurs, and contribute heavily to **antimicrobial resistance** when antibiotics are unnecessarily bundled into the mix.

Defence

RudraM-II Missile



- The **DRDO** and the **Indian Air Force (IAF)** successfully flight-tested the indigenous **RudraM-II** air-to-surface missile from an airborne platform at the **Integrated Test Range (ITR), Chandipur, Odisha**.
- RudraM** is a family of **indigenous air-to-surface anti-radiation missiles (RudraM-I through IV)** developed by **DRDO**, with **Research Centre Imarat (RCI), Hyderabad** as the nodal laboratory, to strengthen the IAF's **Suppression of Enemy Air Defence (SEAD)** capability.
- The missile employs a **hybrid guidance system** comprising an **Inertial Navigation System (INS)**, **GPS**, and a **passive homing seeker**, enabling it to detect and home in on **enemy radar and radio-frequency emissions**.
- By destroying enemy radars and communication systems, RudraM enables **friendly aircraft to operate more safely** during the opening stages of an air campaign.

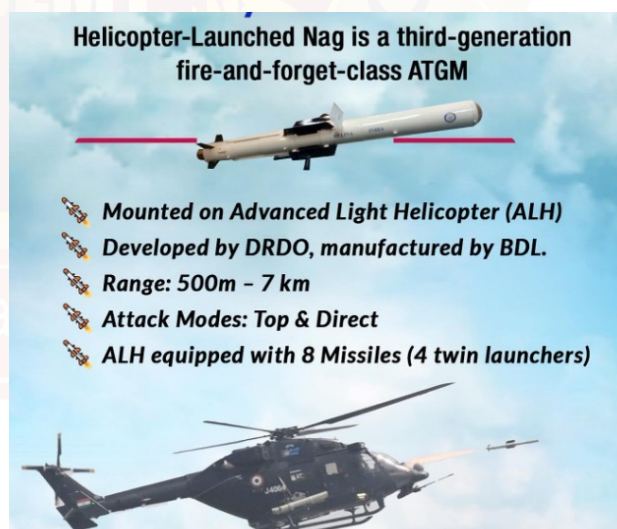
Tri-Commissioning of INS warships



Together they create a layered maritime picture of awareness, surveillance and combat power.

- Prime Minister of India presided over the historic **tri-commissioning of INS Dunagiri, INS Sanshodhak, and INS Agray** in Kolkata.
- Designed by the **India Navy's Warship Design Bureau** as well as by Garden Reach Shipbuilders & Engineers (GRSE), Kolkata.
- Dunagiri: The fifth Project 17A stealth frigate** - is equipped with advanced weapons and sensors, including **BrahMos surface-to-surface missiles** and the Medium Range Surface-to-Air Missile system, significantly enhancing the Navy's combat capability.
- Sanshodhak: The fourth Survey Vessel (Large)** - is designed for **coastal and deep-water hydrographic surveys** and collection of oceanographic and geophysical data for defence and civil applications, and is equipped with advanced survey systems including **Autonomous Underwater Vehicles** and Remotely Operated Vehicles.
- Agray: The fourth of the Arnala-class Anti-Submarine Warfare Shallow Water Craft** - is equipped with lightweight torpedoes, indigenous rocket launchers, and shallow-water sonar systems to detect and engage underwater threats in littoral waters.

HELINA Missile

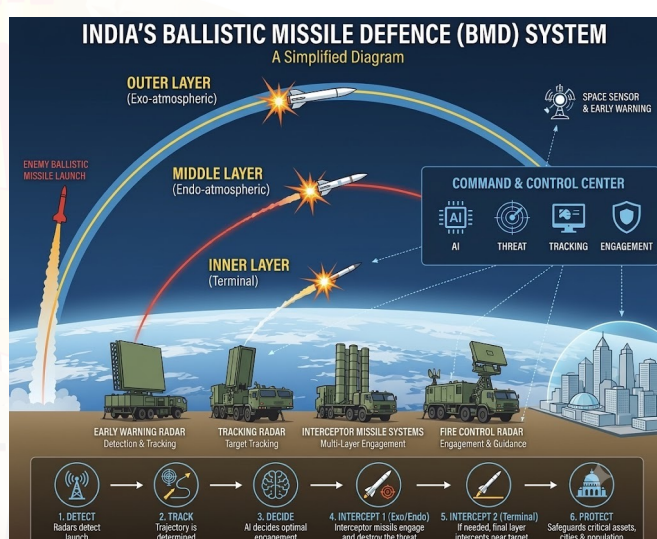


- Bharat Dynamics Limited (BDL)** has secured an order from **Hindustan Aeronautics Limited (HAL)** to supply launchers for the **HELINA** anti-tank missile.

- **HELINA (Helicopter-launched Nag)** is an **indigenously developed, third-generation, fire-and-forget Anti-Tank Guided Missile (ATGM)** developed by the **DRDO**.
- It is the helicopter-launched variant of the **Nag missile**, while its **Air Force version is called Dhruvastra**.
- The **Nag Anti-Tank Guided Missile** is an Indian third-generation, “fire-and-forget” anti-tank weapon developed by the DRDO and manufactured by Bharat Dynamics Limited.
- HELINA uses a **high-resolution Imaging Infrared (IIR) seeker** to lock onto the target before launch, enabling autonomous guidance without further operator intervention.
- It can engage targets in **direct-attack** or **top-attack** mode, the latter striking the thinner top armour of tanks, making it highly effective against heavily armoured vehicles.
- The missile is capable of **day-and-night operations** and functions effectively even in **adverse weather conditions**.

Multi-Layered Ballistic Missile Defence (BMD) System

- The **DRDO** recently conducted **three consecutive flight-tests** demonstrating India's **multi-layered Ballistic Missile Defence (BMD)** capability.
- Launched in **1999**, the programme aims to protect India against **ballistic missile attacks** through a **two-tier interception system** comprising **endo-atmospheric** (within the atmosphere) and **exo-atmospheric** (outside the atmosphere) interceptors.
- The first successful interception was achieved in **2006**, when a **Prithvi-II missile** was intercepted at an altitude of about **48 km**.
- The BMD operates as an **integrated network** in which **long-range tracking radars, Mission Control Centres, Launch Control Centres, and interceptor missiles** work together to detect, track, classify, and destroy incoming missiles. .



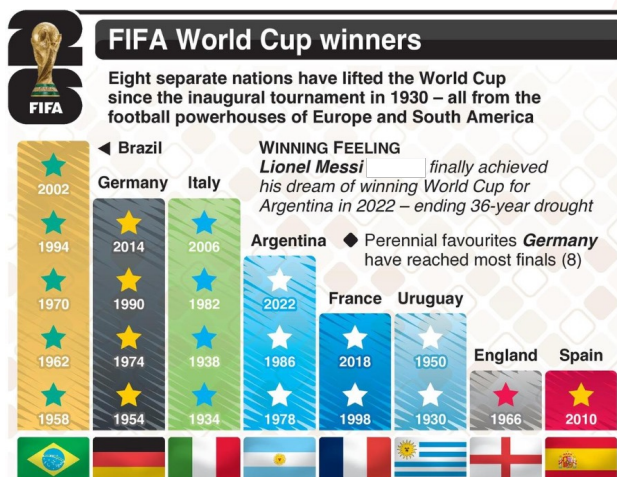
Military Exercises

Exercises	Participants	Force	Description
RIMPAC 2026	Multinational	Navy	Rim of the Pacific Exercise (RIMPAC) – the world's largest naval exercise hosted by the U.S. Pacific Fleet . The series of exercises began in 1971. India participated with its P-8I long-range maritime reconnaissance and anti-submarine aircraft.
Pitch Black	Multinational	Air Force	Exercise Pitch Black is the Royal Australian Air Force's (RAAF) largest international air combat exercise . Along with India, participating countries include Brunei, Canada, Fiji, Finland, France, Indonesia, Japan, Malaysia, New Zealand, Papua New Guinea, the Philippines, Republic of Korea, Singapore, Spain, Sweden, Thailand, the United Kingdom, the United States, and host nation Australia
Khaan Quest	Multinational	Army	The Exercise was held at Five Hills Training Area, Ulaanbaatar, Mongolia . The exercise first started as a bilateral event between USA and Mongolian Defence Forces in the year 2003. Subsequently, from the year 2006 onwards the exercise graduated to a Multilateral Peacekeeping Exercise with the current one being the 23rd iteration. India is a participant.

Miscellaneous

- The tournament's **official song** is **"Dai Dai"** by Colombian superstar Shakira and Nigerian Afrobeat artist Burna Boy

FIFA World Cup 2026



- The **quadrennial 23rd edition** of the FIFA World Cup officially kicked off on June 11, 2026, marking the start of a historic 39-day international men's football championship.
- FIFA (Fédération Internationale de Football Association)** is the international governing body of association **football, futsal, and beach soccer**.
- Founded in **1904** and headquartered in **Zürich, Switzerland**, it oversees 211 national member associations.
- FIFA World Cup 2026 is jointly hosted by three nations** across sixteen multi-national host cities in the **United States**: 11 host cities, **Mexico**: 3 host cities and **Canada**: 2 host cities (first time with 3 host nations).
- The **only other co-hosting** happened in the 2002 FIFA world cup that saw **Japan and South Korea** teamed up to co-host the event for the first time ever.
- The tournament field has expanded from 32 teams to **48 teams** (first edition in Uruguay (1930) had only 13 teams) for the first time.
- Four countries are making their historic World Cup debuts** in this edition: **Cape Verde, Curaçao, Jordan, and Uzbekistan**.
- The **official anthem** of the 2026 FIFA World Cup is **"DNA (More Than a Game)"** by legendary singers Andrea Bocelli, David Guetta, EJAE, and Megan Thee Stallion.

Food Planet Prize 2026



- The **Andhra Pradesh Community Managed Natural Farming (APCNF)** programme won the prestigious **Food Planet Prize 2026** in Båstad, Sweden.
- Established by Sweden's **Curt Bergfors Foundation**, the Food Planet Prize is the world's **largest environmental award** dedicated to transforming global food systems and carries a **\$1.5 million prize**.
- Natural farming** is a chemical-free agricultural method that **mimics nature** by relying entirely on **local, on-farm resources**—like cow dung, urine, and plant mulch—to nourish the soil and grow crops without any synthetic inputs.

Schedules of the Drugs Rules, 1945

- The **Union Ministry of Health and Family Welfare** amended the schedules K and H2 **Drugs and Cosmetics Rules, 1945**.
- Under the **Drugs and Cosmetics Rules, 1945**, which contain 23 active alphabetical schedules, **Schedule H** governs over 500 prescription-only medicines that require a valid doctor's prescription and must bear a distinct red-boxed "Rx" warning.
- Schedule H2** (added in 2022) is a regulatory tracking mechanism that mandates **unique QR codes or barcodes** on the packaging of high-risk drugs—such as vaccines, antibiotics, and anti-cancer medications—to ensure supply chain traceability and fight counterfeiting.

- **Schedule K** grants **special exemptions** from strict licensing rules for **common household remedies** and basic over-the-counter items like **paracetamol and antacids**, allowing general retail stores to sell them without requiring a registered pharmacy license.
- The recent amendment **removes the word “syrup”** from the specified entry under **Schedule K**, thus, cough syrups can only be sold with a valid doctor’s prescription and through licensed pharmacies.

ASPIRE Scheme

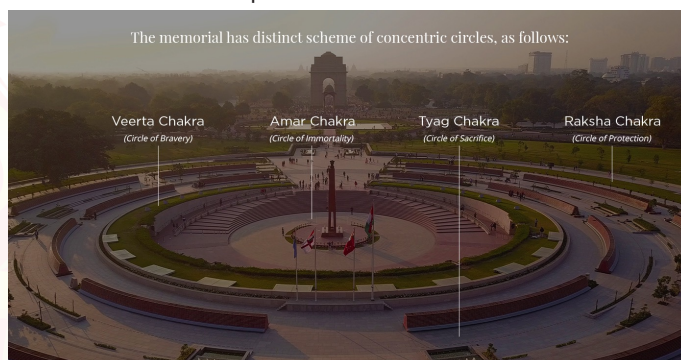
- The **Ministry of Micro, Small & Medium Enterprises (MSME)** released a progress report on the ASPIRE Scheme, highlighting its major role in boosting rural livelihood.
- The **ASPIRE (A Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship)** scheme supports rural entrepreneurship and livelihood generation by providing training, incubation and business development assistance.
- Launched in **2015** by the **Ministry of MSME**, it provides financial, technical and mentoring support through incubation centres and cluster-based development.
- The scheme promotes **agro-based and rural enterprises**, supports **Technology Business Incubators (TBIs)** for innovation-driven start-ups, and is open to government institutions, PSUs, private and PPP organisations for establishing incubators, as well as eligible MSMEs.

National War Memorial (NWM)

- The names of **six military personnel (five from the Indian Army and one from the Indian Air Force)** who died during **Operation Sindoor** were inscribed on the **National War Memorial** as a tribute.
- The **National War Memorial (Rashtriya Samar Smarak)** was established in **January 2019** in **New Delhi** to honour India’s fallen soldiers.
- Its main structure consists of **four concentric chakras**: **Amar Chakra** (inner-most circle with the eternal flame and obelisk), **Veerta Chakra** (bronze murals depicting battles and military valour), **Tyag Chakra** (granite wall with names of soldiers who died after Independence)

and **Rakshak Chakra** (outer ring of trees symbolising the continuous protection by armed forces).

- The complex also houses a tribute to the **21 Param Vir Chakra awardees** through bronze busts of the recipients.



Narco-Coordination Centre

- The **Union Home Minister** chaired the 10th Apex-Level Meeting of the **Narco-Coordination Centre (NCORD)** in New Delhi.
- The **NCORD mechanism** was established in **2016** by the **Ministry of Home Affairs** and strengthened into a **four-tier system** in **2019** to improve coordination among states, central agencies and stakeholders in tackling **drug trafficking and abuse**.
- It consists of **Apex Level** (headed by Union Home Secretary), **Executive Level** (headed by Special Secretary, MHA), **State Level** (headed by Chief Secretaries), and **District Level** (headed by District Magistrates) committees.
- Initiatives under NCORD include the **Anti-Narcotics Task Force (ANTF)** for enforcement and compliance, and the **MANAS Helpline (1933)** for reporting drug-related issues.

Anthropological Survey of India (AnSI)

- The **Archaeological Survey of India (ASI)** handed over human skeletal remains excavated from the **largest Harappan site of Rakhigarhi, Haryana**, to the **Anthropological Survey of India (AnSI)** for further research.
- AnSI is a premier anthropological research organisation under the **Ministry of Culture**, established in **1945** and headquartered in **Kolkata**.

- It conducts **research** in bio-cultural, socio-cultural and linguistic **anthropology**, with a focus on **tribes**, endangered **communities** and documentation of India's diverse cultures.
- It has a **multidisciplinary team** of anthropologists, sociologists, linguists, archaeologists and allied experts **for studying human populations and societies**.

National Internet Exchange of India

- The **National Internet Exchange of India (NIXI)** celebrated its 23rd Foundation Day on June 19.
- Established in **2003**, NIXI is a **not-for-profit organisation** registered under **Section 8 of the Companies Act, 2013** and functions under the **Ministry of Electronics and Information Technology (MeitY)**.
- The **NIXI** acts like a domestic traffic junction for the internet.
- Instead of sending local Indian data on a long detour through international servers abroad, **NIXI connects Indian internet service providers directly to each other**.
- By keeping **local traffic within the country**, it makes your internet faster, cuts costs for providers, and keeps data more secure.
- NIXI manages India's **country-code top-level domains (ccTLDs) '.IN' and '.Bharat'**, supports domain registrations in **22 Indian languages**, and promotes a secure, resilient and inclusive digital ecosystem.



GI-Tags

Product Name	State	Key Features
Bhagaiya & Kuchai Silk	Jharkhand	Eco-friendly wild Tussar silk; natural golden sheen; produced through indigenous hand-reeling techniques.
Munda Jewellery	Jharkhand	Traditional tribal metalcraft handcrafted with unique geometric patterns and nature-inspired motifs.
Jharkhand Bamboo Craft	Jharkhand	Eco-friendly rural craft using local bamboo for utility products and decorative items; supports sustainable livelihoods.
Sitahi & Nagdaman Kutki	Madhya Pradesh	Naturally organic, climate-resilient traditional minor millet varieties preserved by Baiga and Gond tribes.
Baigani Arhar	Madhya Pradesh	Local pigeon pea (toor dal) variety completely cultivated using organic, age-old tribal practices of the Baiga tribe.
Chhatriya Dhan	Madhya Pradesh	Aromatic local rice variety known for adaptability; retains nutrient-rich bran layer high in Vitamin B1.
Khurasani Imli	Madhya Pradesh	Tangy, light green fruit from Mandu's iconic 14th-century Baobab trees; boosts tribal livelihoods.
Sarinda	Tripura	Traditional bowed string musical instrument crafted from a single block of wood with a hollow resonator.

Places in News

India–Nepal Border Dispute



- The Nepal Prime Minister Balendra Shah stated that **Nepal has also encroached upon some Indian territories** amid the India-Nepal boundary dispute.
- The dispute involves a **372 sq km area comprising Limpiyadhura, Lipulekh and Kalapani** at the India-Nepal-China trijunction in **Uttarakhand's Pithoragarh district**.
- The boundary issue traces back to the **Treaty of Sugauli (1816)** signed after the Anglo-Nepalese War (1814–16), under which **Article 5 restricted Nepal's jurisdiction to the east of the Kali River**.
- Nepal is a **landlocked Himalayan country** located between India and China, with about **75% of its area covered by mountains**.
- Its major physical regions from south to north are **Tarai plains, Churia foothills and Inner Tarai, mid-mountain region, and the Great Himalayan Range**.

India's 100th Ramsar Site

- Jai Prakash Narayan Bird Sanctuary (Surha Tal)** in Uttar Pradesh has been designated as India's 100th Ramsar Site.
- Located in **Ballia district** near the confluence of the **Ganga and Ghaghara rivers**, it is a **natural freshwater oxbow lake** covering about **34 sq km (3,432.93 ha)** and supports rich aquatic biodiversity.
- It is the **13th Ramsar Site in Uttar Pradesh** and was renamed in honour of freedom fighter **Jai Prakash Narayan**.

- Ramsar sites** are **wetlands** of international importance designated under the Ramsar Convention, an intergovernmental environmental treaty established in **1971** in Ramsar, Iran.
- Globally, there are over 2,500 Ramsar sites. India has 100 designated sites, the highest in Asia, with **Tamil Nadu leading the states with 20**.

Gilgit-Baltistan

- India has lodged a strong diplomatic protest against **Pakistan's unilateral plan to hold elections**



- to the so-called Gilgit-Baltistan Assembly, reiterating that the region is an integral part of India.
- Gilgit-Baltistan is an administratively **autonomous territory**, currently under Pakistan's control, bordered by Afghanistan, China, and Indian-administered Jammu & Kashmir.
- It is a high-altitude, sparsely populated region at the **junction** of the Hindu Kush, Karakoram, and Himalayan ranges.
- The region contains the **largest glaciers** outside the polar regions, including the area **around K2**, the world's second-highest peak.
- It is the **upper catchment** of the Indus River basin, with major rivers including the Indus, Gilgit, Hunza, and Shyok.

Sea of Azov:

- The Sea of Azov has become a **geopolitical flashpoint** following Ukrainian drone strikes on cargo vessels in **Taganrog Bay**.



- It is an inland sea off the southern coasts of **Ukraine** and **Russia**, forming the northern extension of the **Black Sea** and connected to it by the **Kerch Strait**.

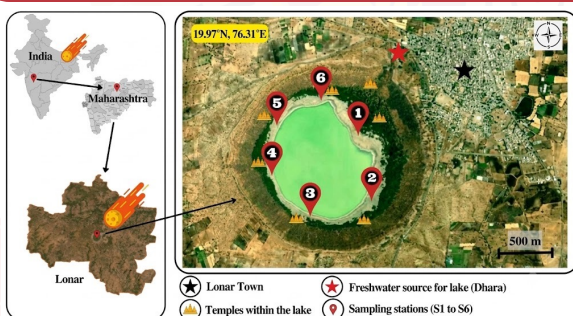
- Fed by the **Don and Kuban rivers**, its waters are nearly fresh in the northeast, and with a maximum depth of about 46 ft (14 m)—reducing to 3 ft (1 m) or less in the Taganrog Gulf due to silt—it is the world's **shallowest sea**.

Padma Barrage



- Bangladesh has approved the **Padma Barrage** to address seasonal water scarcity and strengthen lower-riparian control over its water resources.
- It is a planned **transboundary water-management structure** across the Padma River, located 180 km **downstream** of India's **Farakka Barrage** in West Bengal, close to the India–Bangladesh border.
- The Padma River is the main **distributary of the Ganga** after it enters Bangladesh from India.
- The **barrage** aims to regulate downstream flows, enhance groundwater recharge, and ensure water equity against upstream diversions such as the Farakka Barrage.

Lonar Lake



- The water level of **Maharashtra's Lonar Crater Lake** has risen despite widespread water scarcity, puzzling scientists.
- Located in **Buldhana district**, **Lonar Lake** was formed about **50,000 years ago** by a **meteorite impact** and is the **world's only known saline and alkaline lake formed in basaltic rock (Deccan Traps)**.

- The crater is about **1.8 km wide and 150 m deep**, and its water is sustained by **four perennial springs**.
- The lake is also known for its **changing water colours** (green, pink, red or sea green) and serves as an important analogue for studying impact craters on the **Moon and Mars**.

Caspian Sea

- Recent data show that the **Caspian Sea** has lost about **24,000 km² of surface area** and its water level has fallen by nearly 2 metres since the mid-1990s.
- The **Caspian Sea** is the **world's largest inland body of water**, bordered by **Russia, Kazakhstan, Turkmenistan, Iran and Azerbaijan**.
- It receives inflow mainly from the **Volga, Ural and Terek rivers** and is rich in **offshore oil and natural gas reserves**.



Lake Baikal



- Ancient DNA from burial sites near **Lake Baikal in Russia** revealed the oldest-known strains of **Yersinia pestis**, the **bacterium** that causes plague.
- Lake Baikal, located in eastern **Siberia (Russia)**, is the **world's oldest** (20–25 million years), **deepest** (1,642 m) and **largest freshwater lake by volume**.
- It is a **UNESCO World Heritage Site** (1996) and is home to the **Buryat** people, who traditionally follow Tibetan Buddhism.

Species in News

Kashmir Saffron



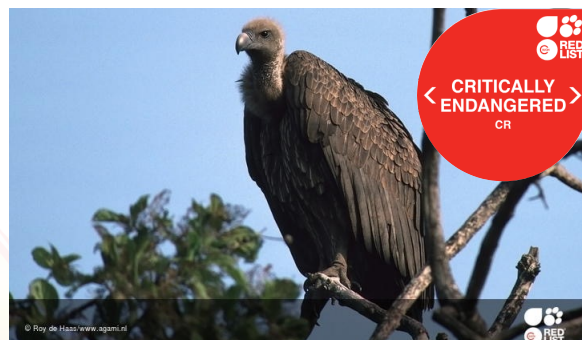
- The ongoing **West Asia crisis** and a sharp decline in Iran's saffron production have **increased global demand** for premium Kashmiri saffron.
- Saffron (Crocus sativus)** is a moisture-sensitive crop requiring assured irrigation during **July–September** for flowering.
- Kashmiri saffron** is renowned for its **high crocin content (~8%)**, which gives it superior colour and medicinal value, compared to the Iranian variety.
- It is mainly marketed as **Mongra** (finest grade with only deep red stigmas) and **Lacha** (contains some yellow styles and is relatively cheaper).

Aldabra Giant Tortoise (*Geochelone gigantea*)



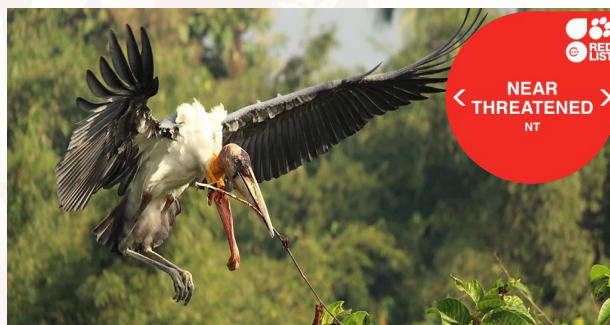
- Prime Minister met **Jonathan**, the Aldabra giant tortoise recognised by **Guinness World Records** as the **world's oldest living land animal**, during his visit to **Seychelles**.
- The Aldabra giant tortoise (*Aldabrachelys gigantea*) is native to **Aldabra Atoll** in the Seychelles and is among the world's largest land tortoises.
- It **inhabits** scrublands, mangrove swamps and coastal dunes, **feeding** mainly on grasses and woody plants.

White-Rumped Vulture



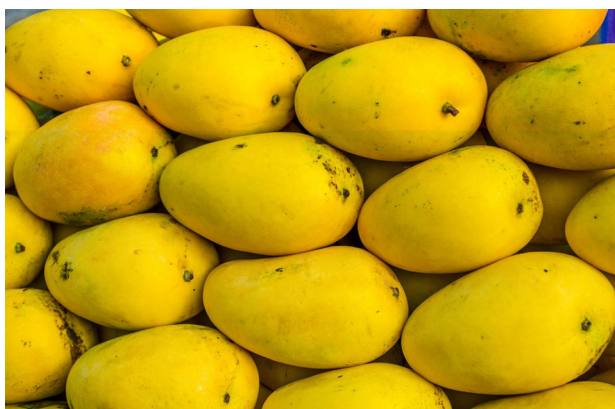
- The first attempted **reintroduction of a captive-bred White-rumped Vulture** in South India failed after the radio-tagged bird was electrocuted near Mudumalai Tiger Reserve.
- The **White-rumped Vulture (Gyps bengalensis)** is found across **South and Southeast Asia**, inhabiting plains, open woodlands and areas near human settlements, where it nests colonially in tall trees.
- Once among the world's most abundant raptors, its population crashed by over **99%** due mainly to **poisoning from the veterinary drug diclofenac**, along with habitat changes and reduced carcass availability.

Hargila Bird



- The Prime Minister highlighted the conservation efforts of **Assam's 'Hargila Army'**, a women-led movement to protect the **Greater Adjutant stork (Hargila)**.
- The **Greater Adjutant (Leptoptilos dubius)** is a large scavenging stork found in **India (mainly Assam and Bihar) and Cambodia**, playing a vital role in wetland ecosystems by removing carcasses and recycling nutrients.
- It breeds during the **dry season (October–April/May)**, nesting in tall trees near wetlands.
- Its major threats include **habitat loss, disturbance of breeding sites, hunting, and collection of eggs and chicks**.

Banganapalle Mango



- India made the first commercial sea shipment of **GI-tagged Banganapalle mangoes** from India to Singapore, boosting agricultural exports.
- Banganapalle mangoes, grown for over a century in **Andhra Pradesh**, originated in **Kurnool district** (primary centre) and are also known as **Benishan, Safeda and Banaganapalli**.
- They are distinguished by **light spots on the skin, a thin seed with sparse fibre, excellent aroma, sweet taste, and a shelf life of about 7 days without refrigeration**, making them ideal for exports.
- India is the **world's largest producer of mangoes**, accounting for **over 45% of global fresh mango production**.

Nagori Ashwagandha



- The Prime Minister presented **GI-tagged Nagori Ashwagandha** as a traditional Indian gift during the G7 Summit, highlighting India's Ayurvedic heritage.
- **Ashwagandha (Withania somnifera)** is a **hardy, drought-tolerant medicinal herb** grown in **semi-arid tropical regions** receiving **500–750 mm annual rainfall**.

- **Nagori Ashwagandha**, cultivated in the **Nagaur district of Rajasthan**, is renowned for its **high withanolide content**, valued for its antioxidant, anti-inflammatory and

Sistan sand boa



- A recent study reported the **first confirmed record** of the Sistan sand boa (*Eryx sistansensis*) in India, from the **northern Thar Desert in Rajasthan**.
- First described in **2020** from **Iran**, this **rare, non-venomous snake** is found in **farmlands, scrublands and compact sandy soils** near human habitation.
- It is distinguished by **persistent dark body bands and a gradually tapering tail**, unlike the **red sand boa** (*Eryx johnii*), whose bands fade with age.
- Other sand boas found in India are **red sand boa** (*E. johnii*), **rough-scaled sand boa** (*E. conicus*) and **Whitaker's boa** (*E. whitakeri*).
- **IUCN status:** Not evaluated

Keywords

- **Top Ship Recycling Nation:** India captured a **35.4% share of the global ship recycling** market in 2025, reaching a volume of 2.99 million gross tons. This achievement **fulfills the Maritime India Vision (MIV) 2030 target** five years ahead of schedule, confirming India's position as the world's number one ship recycling hub. The bulk of this activity is centered at the **Alang Ship Recycling Yard in Gujarat**.
- **Downblending Process:** It is the process of mixing highly **enriched uranium (HEU)** with natural, depleted, or slightly enriched uranium. This **lowers the concentration** of the fissile isotope U-235. It turns dangerous, weapons-grade material into **safe, low-enriched uranium (LEU)** that can be used as civilian nuclear reactor fuel. The **MoU between Iran and the USA** mentions this as a solution for the Iran nuclear issue.
- **Drunix:** It is an enterprise-grade **distributed ledger technology** platform by the **National Payments Corporation of India (NPCI)** designed to help organizations build and scale tokenization platforms, digital asset ecosystems, and multi-organization networks. It is **NPCI's second major open-source blockchain** initiative after **Falcon** and aims to accelerate blockchain adoption and strengthen India's digital public infrastructure.
- **ANCHOR:** ANCHOR (Atlas of Neurochemical Characterization of the Human Brainstem with 3D Reconstruction) is the **world's most detailed 3D atlas of the human brainstem**, developed by the **Sudha Gopalakrishnan Brain Centre, IIT Madras**. It maps **over 200 brainstem nuclei and fibre tracts** at **cellular (micron) resolution**, providing far greater detail than conventional MRI scans. The atlas is expected to improve research and **early detection of neurodegenerative diseases** such as Parkinson's and Alzheimer's.
- **Biochar:** It is a stable, charcoal-like substance **rich in carbon**. It is made by **heating organic waste** like plant scraps and wood in a special oven with **very little oxygen**, a process called pyrolysis. People use it to **boost soil health**, hold onto plant nutrients and water, and safely lock away carbon to fight climate change.
- **MAVEN Mars Mission:** Mars Atmosphere and Volatile Evolution was NASA's **first robotic space probe** explicitly **devoted to observing the Martian upper atmosphere**, ionosphere, and its overall climate evolution which was **launched in November 2013** has successfully completed over 11 years in orbit around the Red Planet. It **lost contact in 2025 December** and has now been declared unrecoverable.
- **Varya AI Model:** It is **India's first distilled** (meaning smaller but faster model that learns from another giant AI model) **video AI model**. Developed by **Avataar.AI** (Bengaluru based AI company) with backing from the **IndiaAI Mission**, it turns **text or images into high-quality video** stories. It cuts video generation time from 50 steps to just 4. This makes it 10x faster and highly affordable.
- **Isobutanol:** India is advancing a plan to blend up to **15% isobutanol in diesel**. Isobutanol ($C_4H_{10}O$) is a **four-carbon alcohol** used as an industrial solvent and **an advanced next-generation biofuel**. Unlike ethanol, it is **highly compatible** with existing fuel infrastructure, boasting higher energy density, lower hygroscopicity (does not attract water), and safer flashpoints.
- **Doctrine of Promissory Estoppel:** A legal principle that **prevents a person or the government from going back on a clear promise** if another person has relied on it and changed their position. It is an **equitable principle** aimed at ensuring fairness, even in the absence of a formal contract. However, it **cannot be invoked to compel the government to act contrary to law or overriding public interest**.
- **Doctrine of Forum Non Conveniens:** Legal principle that allows a court to decline jurisdiction if another court or forum is **more appropriate and convenient** to hear the case. The Supreme Court of India, using the doctrine may decline to entertain a petition under **Article 32** if the matter can be more appropriately dealt with by the concerned High Court under **Article 226**, especially when the dispute is fact-intensive or primarily concerns a particular State.

Record Breaking Results

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



Kerala Rank 1
SREEJA J S
AIR 57
First Attempt Topper



DIVYA S
AIR 166



HRIDYA S BIJU
AIR 202



ANJANA B
AIR 222



**ARAVIND
ISWARANKUTTY**
AIR 248



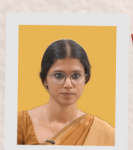
RAJATH R
AIR 348



AMAL KAMPTIYIL
AIR 362
First Attempt
Topper



**HARSHIDAA S
NAIR**
AIR 372



SANDHRA S
AIR 380



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



**SHEIK MOHAMED
NISHATH M**
AIR 497



**JAHANA
SAREEN V P**
AIR 511



ARUNIMA M S
AIR 558



ASNA ANWAR
AIR 576
First Attempt
Topper



NIDHIN R H
AIR 699



FAIRUZ FATHIMA M
AIR 708



**MOHAMED
HASHIM K**
AIR 713



**MUHAMMED
SUHAIL**
AIR 718



SHIYAD
AIR 743



NANDANA J S
AIR 745



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