FORTUNE
Prelims Precise

October 2026



enquiries@fortuneias.com | www.fortuneias.com | +91 94950 15888 | +91 81389 40888

@fortuneias @fortune_ias_academy

FORTUNE IAS

Toppers in Top 100



P K Sidharth Ramkumar
2024



Meera K
2021



Sidharth B
2017



Dilip K Kainikkara
2022



Hamna Mariyam
2017



Sreelakshmi Ram
2019



Vishnu Sasikumar
2024



Anand
2016



Arya V M
2023



Archana P P
2024



Safna Nazarudeen
2020



Nandanaa G P
2025



Renjina Mary V
2019



Sonnet Jose
2025



Dr. Arun S Nair
2020



Alfred O V
2022



Sreeja J S
2026



Hari Kallikkat
2018



Benjo P Jose
2024



Aparna M B
2021



Dheenah Dastageer
2021



Akhil V Menon
2022



Arjun Mohan
2019



Kasturi Sha
2024



Aditya Narayan H
2026



Fabi Rasheed
2024



Reenu Anna Mathew
2025



Malini S
2023



Devi Nandana
2020



Annie George
2024



Devika Priyadersini
2025



Kiran P B
2022

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 can be purchased for Rs.100 per issue

Test your preparation with
October 2026
Monthly Current Affairs
quiz here

Scan Here

INDEX - OCTOBER 2026

Polity & Governance 1

1. Legislative Council Elections 1
2. Special Summary Revision (SSR) 1
3. Overseas Citizenship of India (OCI) 2
4. National Human Rights Commission (NHRC) 2
5. BNSS Section 163 2
6. GST Council 3
7. Narcotics Control Bureau (NCB) 3
8. Union Public Service Commission (UPSC) 3
9. Press Council of India 4
10. Appointment of Governors: 4

Economy 5

11. NBFC-Account Aggregators 5
12. Indian G-Sec Yield 5
13. National Household Travel Survey 6
14. Financial Services Institutions Bureau (FSIB) 6
15. eMudhra and Digital Certificates 6
16. Initial Public Offering (IPO) 7
17. Infrastructure Investment Trust (InvITs) 7
18. Index of Core Industries (ICI) 7
19. Pradhan Mantri Samajik Sahayata Yojana 8
20. RBI Raises Repo Rate 8

International Relations 9

21. India–Poland Bilateral Relations 9
22. International Air Transport Association (IATA) 9
23. Southern Indian Ocean Fisheries Agreement (SIOFA) 9
24. India-New Zealand FTA 9
25. Financial Action Task Force (FATF) 10
26. CICA Summit 10
27. India–Azerbaijan Bilateral Relations 11

History & Culture 11

28. Basawan: Mughal Painter 11
29. SAMHiTA Project 11
30. Sengol 12
31. Kittur Fort 12
32. Maldharis 12

Geography 13

33. Cyclone Arnab 13
34. Drought in India 13
35. National Disaster Management Authority (NDMA) 14

Environment & Ecology 14

36. India's Ganges Dolphin recovery 14
37. New Ramsar Sites India 14
38. Loss and Damage Fund 15
39. Graded Response Action Plan (GRAP) 15
40. National Biodiversity Authority (NBA) 16
41. 10 Years of Kigali Amendment 16
42. Joint Crediting Mechanism (JCM) 17
43. Living Planet Report 2026 17
44. Conservation Assured | Tiger Standards (CA|TS) 17

Science & Technology 18

45. NVS-03 Satellite 18
46. OJ 287 Blazar 19
47. E100 Flex-Fuel Vehicles in India 19
48. Martian Moons eXploration (MMX) Mission 20
49. Soybean Varieties NRC 268 and NRC 270 20
50. Sex Reversal in Animals 21
51. Spinal Muscular Atrophy 21

Defence 22

Military Exercises 22

52. India–RoKN 22
53. GARUDA SHAKTI 22
54. SIMBEX-2026 22
55. IBSAMAR IX 2026 22
56. KONKAN 2026 22
57. INDRA-2026 22
58. National Maritime Search & Rescue Exercise (SAREX-2026) 22
59. Mountain Guardian 2026 22
60. AUSTRAHIND 22
61. Combined Task Force 154 22
62. Land Warfare Doctrine 23
63. 'Surya'- The First Indigenous Fleet Support Ship 23
64. Indo-Tibetan Border Police 23
65. Akash Missile System 23
66. JWALA Missile 24

Miscellaneous 24

67. Agrivoltaics World Conference 2026 24
68. Sakharov Prize 24

Nobel Prizes 2026 25

69. Nobel Prize in Economic Sciences 2026 25
70. Nobel Peace Prize 2026 25
71. Nobel Prize in Literature 2026 25
72. Nobel Prize in Chemistry 2026 25
73. Nobel Prize in Physics 2026 25
74. Nobel Prize in Physiology or Medicine 2026 25
75. Advanced Emergency Braking Systems (AEBS) 26

Places in News 26

76. Kariyachalli Island 26
77. Siang Dam Project (SUMP) 26
78. Kaliningrad 27
79. Raimona National Park 27
80. Zuqar Island 27
81. Jawahar Dweep 28

Species in News 28

82. Kufri Jamunia 28
83. Southern Right Whale 28
84. Green Keelback 29
85. Camels of Kutch 29
86. Jeypore Ground Gecko 29
87. Himalayan Tahr 30
88. Palmyra Palm Tree 30
89. Chocolate Mahseer 30

Keywords 31

90. Alberta's Referendumr 31
91. Jumping Genest 31
92. Oskar Klein Medal 31
93. Leave India Notice (LIN) 31
94. Adi people 31
95. Hydroseeding 31
96. Personally identifiable information (PII) 31
97. China Zorilla 31
98. PM Viksit Gram Swaraj Yojana (PM VGSY) 31
99. Surangam 31

Polity & Governance

Legislative Council Elections

- **Elections to the State Legislative Councils (Vidhan Parishad)** of Uttar Pradesh, Bihar, Maharashtra and Karnataka were held recently.
- Only **6 out of 28 States have Legislative Councils**, others being Andhra Pradesh, Bihar, Karnataka, Maharashtra, Telangana and Uttar Pradesh.
- **Article 169** provides that **Parliament can create or abolish** a State Legislative Council by a **simple majority,** provided the **State Legislative Assembly first passes a resolution** by a **special majority** (majority of total membership + at least 2/3rd of members present and voting).
- **Jammu and Kashmir had a Legislative Council** until its abolition under the Jammu and Kashmir Reorganisation Act, 2019.
  - **No Union Territory currently** has a Legislative Council.
- **Strength (Article 171):** Maximum strength **cannot exceed one-third of the total strength** of the Legislative Assembly; minimum strength is 40 members.
- Like the Rajya Sabha, the Legislative Council is a **permanent House** and cannot be dissolved and MLCs serve a **6-year term, with one-third retiring every two years**.
- The **Election Commission of India (ECI)** conducts Legislative Council elections under Article 324 and it uses **Proportional Representation by means of the Single Transferable Vote** (PR-STV).
- **Composition (Article 171)**: MLCs are elected through **different electoral colleges** and are not directly elected by universal adult franchise. The Constitution provides for:
  - **1/3rd elected** by electorates consisting of **members of local authorities** such as municipalities, district boards and other specified local bodies.
  - **1/12th elected by graduates** of at least three years' standing residing in the State.
  - **1/12th elected by teachers** of at least three years' standing in educational institutions not lower in standard than secondary schools.
  - **1/3rd elected by members of the State Legislative Assembly** from among persons who are not members of the Assembly.
  - **1/6th nominated by the Governo**r from persons having special knowledge or practical experience in **literature, science, art, cooperative movement and social service.**

Special Summary Revision (SSR)

- The ECI has ordered a **Special Summary Revision (SSR)** of electoral rolls in many states heading towards elections.
- SSR is an **annual exercise to update existing electoral rolls** by including new voters, correcting errors and deleting names of deceased, shifted or ineligible voters.
- **Article 324** gives the **ECI constitutional authority over the preparation of electoral rolls** and conduct of elections.
- **Legal validity of SSR** comes from **Section 21(2)** of the **Representation of the People Act, 1950**, that provides for the **revision of electoral rolls before general elections and periodically** as directed by the ECI
- Additionally, section 25 of **Registration of Electors Rules, 1960** provides that electoral rolls can be revised **intensively, summarily, or partly by both methods**.
- Importantly, SSR updates existing electoral rolls, whereas **Special Intensive Revision (SIR) prepares electoral rolls afresh** through intensive enumeration under **Section 21(3)** of the **RPA, 1950**
- Unlike SIR, SSR does **not involve house-to-house enumeration**.
- **Electoral forms** used during SSR are **Form 6 to apply for inclusion of a name** in the electoral roll, **Form 7 for deletion** of a name or objection to an existing entry, and **Form 8 for correction** of entries, change of residence or replacement of the Elector Photo Identity Card (EPIC).

Overseas Citizenship of India (OCI)

- The Bombay High Court recently **extended the suspension of a 'Leave India Notice'** issued to actor Imran Khan, a US citizen holding an OCI card.
- The **OCI Scheme**, operational since **2 December 2005**, allows eligible Persons of Indian Origin **(PIOs) and foreign spouses of Indian citizens or OCI cardholders** to register as OCI cardholders.
- **OCI is not dual citizenship:** It provides eligible foreign nationals a lifelong visa status; their foreign passport remains their primary travel document.
- **Legal basis:** Section **7A of the Citizenship Act, 1955** provides for OCI registration.
- **Ineligibility**: Persons whose parents, grandparents or great-grandparents were citizens of **Pakistan or Bangladesh,** or of other countries notified by the Central Government, are generally ineligible for OCI registration.
- **Path to Full Citizenship (Section 5(1)(g)):** An OCI cardholder who is an adult, has held the OCI registration for at least five years, and has been ordinarily resident in India for twelve months immediately before making an application, is eligible to apply for the grant of full Indian citizenship.
- **Restrictions (Section 7B(2)):** OCI cardholders **cannot vote, contest elections, hold constitutional offices** (President, Vice-President, Supreme Court/High Court judge) or enter **public services,** except where specifically permitted by the Central Government.
- They also **cannot acquire agricultural land,** farmhouses or plantation properties in India.
- OCI cardholders can conduct research only with prior permission.
- They have **no right to protest** as the **Constitution's Article 19(1)(a)** (freedom of speech) and **Article 19(1)(b)** (right to assemble peacefully) are available **only to Indian citizens**, not foreign nationals.

National Human Rights Commission (NHRC)

- **NHRC** celebrated its 33rd **Foundation Day on October 12.**
- NHRC, a statutory body, was formed under the **Protection of Human Rights Act (PHRA), 1993**.
- The PHRA in section 2(1)d **defines Human Right**s as Rights relating to life, liberty, equality and dignity guaranteed by the Constitution or embodied in international covenants and enforceable by Indian courts.
- The NHRC is established in conformity with the **Paris Principles (1991), endorsed by the United Nations General Assembly.**
- **Appointment (Section 4):** The **President** appoints the NHRC Chairperson and members on the recommendation of a **six-member committee** comprising the Prime Minister (Chairperson), Speaker of the Lok Sabha, Union Home Minister, Leaders of Opposition in both Houses of Parliament and Deputy Chairman of the Rajya Sabha.
- Composition (Section 3):
  - **Chairperson**: Former Chief Justice of India or Judge of the Supreme Court.
  - **Two judicial members**: One former or serving Supreme Court judge and one former or serving High Court Chief Justice.
  - **Three expert members:** Persons with knowledge or practical experience in human rights, with at least one woman.
  - **Deemed members**: Chairpersons of the National Commissions for SCs, STs, Backward Classes, Minorities, Women and Protection of Child Rights, and the Chief Commissioner for Persons with Disabilities.

Note: NHRC vs SHRC: Section 3(1) of the Protection of Human Rights Act, 1993 uses "shall" for the constitution of NHRC, whereas **Section 21(1)** uses "may" for State HRC. However, the Supreme Court in **K. Saravanan Karuppasamy v. State of Tamil Nadu (2014) interpreted "may"** as imposing a duty on State Governments to constitute SHRCs.

BNSS Section 163

- **Delhi Police** recently imposed **prohibitory orders under Section 163 of The Bharatiya Nagarik Suraksha Sanhita (BNSS)** across New Delhi district ahead of protests.
- **Section 163 replaced Section 144 of the Code of Criminal Procedure, 1973 (CrPC)** and empowers an **Executive Magistrate** (District

Magistrate, Sub-Divisional Magistrate, or a specially empowered Executive Magistrate) to issue **urgent orders to prevent danger** to human life, health or safety, or disturbance of public tranquillity.

- **Judicial Magistrates and police officers do not possess** independent powers to issue orders under this section

- It allows **restrictions** on public gatherings of **five or more persons**, processions, demonstrations, slogan-shouting and speeches without prior written permission, as specified in the order.
- **Duration**: An order can initially remain in force for a **maximum of 2 months**.
  - The **State Government can extend it** by notification for a further period of **up to 6 months** from the date on which the original order would have expired.

GST Council

- The **57th GST Council meeting** was recently held at Bharat Mandapam, New Delhi.
- The GST regime was introduced through the **101st Constitutional Amendment Act, 2016**.
  - GST came into **effect on 1 July 2017.**
- **Article 279A** provides for the **GST Council**, and **consists of 33 members**, which includes the Union Finance Minister as the Chairperson, the Union Minister of State for Finance, and 31 finance ministers or representatives from **all states** and **Union Territories with legislatures (Delhi, Puducherry and Jammu & Kashmir).**
- The Council **recommends** GST rates, exemptions, model GST laws, threshold limits and other GST-related matters to the Centre and States.
- **Decisions require a three-fourths weighted majority** of members present and voting.
- The **Centre has one-third of the total weighted votes,** while the States together have two-thirds.
- The Council may establish a mechanism to **resolve disputes** arising between the Centre and States or among States regarding its recommendations or their implementation.
- The Supreme Court ruled in the **Mohit Minerals** case that recommendations of the GST Council are **not legally binding** on Parliament and State Legislatures.

Narcotics Control Bureau (NCB)

- The Narcotics Control Bureau (NCB) launched **Operation Trident,** deploying 38 teams to conduct simultaneous raids across Assam, Mizoram and Manipur to combat **drug trafficking.**
- **Article 47 (Directive Principles of State Policy)** directs the State to endeavour to **prohibit the consumption of intoxicating drinks and drugs** injurious to health, except for medicinal purposes.
- Narcotics Control Bureau (NCB) is a **statutory body** constituted under **Section 4(3) of the Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985**, functioning under the **Ministry of Home Affairs (MHA)** to coordinate drug law enforcement.
- Other **important laws governing drug control** include:
  - **Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act, 1988:** Provides for preventive detention of persons involved in illicit drug trafficking, for up to two years.
  - **Drugs and Cosmetics Act, 1940:** Regulates the manufacture, sale and distribution of drugs and cosmetics.
- The NCB is **headed by a Director General (DG)**, generally an officer of the Indian Police Service (IPS) or Indian Revenue Service (IRS).
- The **National Narcotics Coordination (NCORD) mechanism** facilitates coordination among Central ministries, state governments and law enforcement agencies to combat drug trafficking.

Union Public Service Commission (UPSC)

- 1 October 2026 marked **100 years since the establishment** of the first Public Service Commission in India (1926).
- The **Royal Commission on the Superior Civil Services (1924)**, chaired by **Lord Lee,** recommended the establishment of a Public Service Commission in India.
- On 1st October 1926, the **first Public Service Commission** was established under the chairmanship of **Sir Ross Barker.**

- The **Government of India Act, 1935** provided for a Federal Public Service Commission and Provincial Public Service Commissions.
- With the **commencement of the Constitution on 26 January, 1950**, the Federal Public Service Commission became the Union Public Service Commission (UPSC) under **Article 315.**
  - **Shri R. N. Banerjee was its first Chairman** under the Republic.
- The **All India Services Act, 1951** provides for regulating the recruitment and conditions of service of persons appointed to All India Services.
- The **Indian Forest Service (IFoS)** was constituted in 1966 as the third All India Service, with the first selection conducted in 1967.
- In 1985, the **sanctioned strength of UPSC** was fixed at a Chairman and 10 Members.
- **Smt. Rose Millian Bathew Kharbuli** became the first woman Chairperson of UPSC in 1992.
- **Dholpur House**, built in 1920 by **Maharaja Rana Udaybhanu Singh**, became the permanent headquarters of UPSC in 1952.

Press Council of India

- The Press Council of India (PCI), the **country's statutory media watchdog,** has been operating at half its sanctioned strength for almost a year, without a single working journalist or newspaper editor appointed to it.
- The **Press Council of India (PCI)** was first established in **1966** under the **Press Council Act, 1965** based on the recommendations of the **First Press Commission (1954)**, with its functional start on **November 16, 1966** marked annually as **National Press Day**.
- Abolished during the **Internal Emergency in 1975** following the repeal of the 1965 Act, it was later revived and reconstituted as a statutory body on **March 1, 1979**, under the **Press Council Act, 1978**.
- PCI has formulated **'Norms of Journalistic Conduct'** which the Journalists and Newspapers have to follow.
- The Council takes cognizance, **suo-motu or on complaints**, of the contents in print media which are in violation of the 'Norms of Journalistic Conduct'.
- The PCI **comprises 28 members and** consists of a **Chairman** (traditionally a retired Supreme Court Judge) and **28 members** representing print media, Parliament, and specialized fields.
- The **28 members comprise** 13 journalists/ editors, 6 newspaper managers, 1 news agency manager, 3 experts (nominated by UGC, Sahitya Akademi, and Bar Council of India), and 5 MPs (3 Lok Sabha, 2 Rajya Sabha).
- The **Chairman** is appointed by a statutory committee comprising the **Chairman of the Rajya Sabha**, the **Speaker of the Lok Sabha**, and a member selected by the **28 PCI members** from among themselves.
- The remaining **28 members** are nominated by recognized media associations, the **Speaker of the Lok Sabha** (3 MPs), the **Chairman of the Rajya Sabha** (2 MPs), and bodies like the **UGC**, **Sahitya Akademi**, and **Bar Council of India**.

Appointment of Governors:

- President Droupadi Murmu effected a **gubernatorial reshuffle across six states**, **transferring** existing **Governors** and **appointing** new ones.
- **Article 153** provides for a Governor for each State.
- The Governor is the **constitutional (nominal) head** of the State, while the Council of Ministers headed by the Chief Minister exercises real executive power.
- **Article 155:** The Governor is **appointed by the President** by warrant under his hand and seal.
- **Article 156:** The Governor holds office during the **pleasure of the President,** normally for a **five-year term**.
- In **B.P. Singhal v. Union of India (2010),** the Supreme Court held that the **Governor can be removed without notice or a hearing**, but removal cannot be arbitrary or based merely on political differences or a change of government.
- **Article 157**: A person must be a citizen of India and at least 35 years of age to be appointed Governor.
- **Article 158:** The Governor cannot be a member of Parliament or a State Legislature and cannot hold any other office of profit.
  - The Governor's emoluments and allowances cannot be diminished during the term.

- The Governor takes the **oath before the Chief Justice of the respective High Court** (or, in their absence, the senior-most available judge) and addresses their resignation to the President of India.

Note: The **Sarkaria Commission (1988)** recommended appointing an eminent person from outside the State, consulting the Chief Minister and avoiding arbitrary removal of Governors. The **NCRWC (2002)** recommended consulting the Chief Minister before premature removal. The **Punchhi Commission (2010)** recommended removing the Governor through a State Legislature resolution instead of the President's pleasure and appointing Governors through a consultative committee involving the Prime Minister, Home Minister, Lok Sabha Speaker and Chief Minister.



Economy

NBFC-Account Aggregators

- The RBI plans to introduce **interoperability among Account Aggregators**, allowing customers to access their financial information through a single platform.
- The framework was **launched in 2021**, following RBI regulations issued in 2016.
- An **Account Aggregator (AA)** is an RBI-regulated NBFC that **enables individuals to securely share their financial information** between institutions digitally.
- It acts as a **consent manager**, transferring financial information from the **Financial Information Provider (FIP)** (e.g., a bank or insurance company holding the customer's data) to the **Financial Information User (FIU)** (e.g., a lender assessing a loan application), with the customer's permission.

  Example: While applying for a loan, a customer can use an AA to share bank statements from their existing bank (FIP) with the lending institution (FIU) securely, instead of submitting them manually.
- The **AA does not store customer data** or require users to share net-banking passwords.
- AAs act as **data-blind intermediaries,** transmitting **encrypted financial data** without storing or selling it, while **allowing customers to control** what is shared, with whom and for how long, and revoke consent at any time.

Indian G-Sec Yield

- The benchmark **10-year Government Security (G-Sec) yield** reached a two-year high of 7.21% on October 1.
- G-Secs are **debt instruments** issued by the Central Government or State Governments to borrow money.
- The RBI issues them on behalf of the government under **Government Securities Act, 2006.**
- **Investors** lend money to the government by purchasing G-Secs and in return, they **receive**

periodic interest (coupon) and repayment of the principal at maturity.

- G-Secs carry **zero or negligible credit risk**, as they are backed by the government.
- Each G-Sec has a **face value, fixed coupon rate and market price.**
- Its yield or the returns depends on the price at which it is purchased and is traded.

  Example: A G-Sec with a face value of ₹100 and an annual coupon of ₹5 has a 5% yield if purchased at ₹100. If its market price rises to ₹105, its yield falls to about 4.76%.

- **Bond prices and yields move inversely**: higher **demand raises bond prices** and lowers yields, while selling pressure lowers prices and raises yields.
- Rising G-Sec yields **increase government borrowing costs** as the government must offer higher interest rates on new borrowings to attract investors**.**
- it **can push up interest rates** on loans and other borrowings in the economy.
- The rise in G-Sec yields is driven by **higher global bond yields** particularly the US after it raised the interest rates, **domestic inflation expectations** and **investors shifting towards alternatives** such as gold, leading to Indian g-sec bond selling, lower prices and higher yields.

National Household Travel Survey

- **The National Statistics Office (NSO)** under the Ministry of Statistics and Programme Implementation (MoSPI) released the findings of **India's first National Household Travel Survey (NHTS).**
- **Workforce mobility:** 57.6% of workers aged 15 years and above travel more than 1 km daily for work (54.5% rural; 64.1% urban). The rate is higher among men (61.9%) than women (41.9%).
- **Transport modes:** Two-wheelers are the most common mode for work travel (42.6%), followed by walking (28.3%) and bicycles (10.7%). Metro, suburban rail, monorail and trams account for 5% of urban commutes.
- **Travel time:** Average commuting time is 25 minutes for workers and 23 minutes for students. About 83.4% of workers and 87.6% of students reach their destinations within 30 minutes.
- **Student mobility**: 66.4% of students aged 6 years and above travel more than 1 km daily. Walking (37%) is the most common mode, followed by buses (29.5%) and bicycles (15.8%).
- **Travel expenditure:** Average monthly commuting expenditure is ₹785 for workers (₹1,044 urban; ₹612 rural) and ₹443 for students (₹617 urban; ₹361 rural).
- **Overnight journeys:** Buses (55.8%) and railways (17.7%) account for 73.5% of household overnight travel. Social and religious activities constitute the main purpose (70.2%).
- **Non-work trips:** Unpaid domestic services for household members account for 54.1% of daily non-work and non-education trips.

Financial Services Institutions Bureau (FSIB)

- The Central Government **reconstituted** the Financial Services Institutions Bureau (FSIB).
- FSIB is the **government advisory body responsible** for recommending candidates for senior **leadership positions**, including whole-time directors and non-executive chairpersons, in **public sector banks, insurance companies and financial institutions.**
- Established in 2022, it **replaced the erstwhile Banks Board Bureau (BBB)** as a unified selection body.
- Its recommendations are subject to the **final approval of the Appointments Committee of the Cabinet (ACC),** headed by the Prime Minister.
- **Composition**: A Chairman and six part-time members divided into two panels:
  - ✓ Banking and Financial Institutions Panel: Three members.
  - ✓ Insurance Panel: Three members.
  - ✓ The Chairman and part-time members are appointed by the Central Government for a **three-year tenure.**

eMudhra and Digital Certificates

- **The Ministry of Electronics and Information Technology (MeitY)** is investigating the **leak of secret security keys** linked to digital certificates issued by Bengaluru-based eMudhra.

- Founded in 2008, **eMudhra** is an Indian company that **provides digital identity and cybersecurity services**, including issuing digital certificates.
- A **digital certificate** acts like an identity card for a website and is issued by a trusted organisation called a **Certificate Authority (CA)** and helps a browser verify whether the website is **genuine**.
- Each certificate **contains the website's public key,** which is shared openly and helps establish secure communication.
- It is **linked to a private key,** which is kept secret by the website owner and is used to prove the website's identity.
- Once the browser verifies the certificate, it can establish a secure, encrypted connection, protecting information such as passwords and banking details.
- **CERT-In (Indian Computer Emergency Response Team),** the national agency responsible for handling cybersecurity threats, found that **eMudhra's private keys were created using weak security methods**, making them easier for hackers to guess or steal.
- If hackers obtain these keys, they could **create fake digital certificates a**nd make fraudulent websites appear genuine, including banking and shopping websites.

Initial Public Offering (IPO)

- Jio Platforms Limited recently made its stock market debut on the National Stock Exchange (NSE) and the Bombay Stock Exchange (BSE) through what was reported as **India's largest Initial Public Offering (IPO).**
- An Initial Public Offering (IPO) is the process through which a c**ompany offers its shares to the public for the first time** to raise funds and gets listed on a stock exchange.
- Before an IPO, a company must **file an offer document with the Securities and Exchange Board of India (SEBI),** disclosing its financial position, promoters, business activities and issue details.
- Companies must meet **SEBI's eligibility requirements,** including minimum net tangible assets, net worth and profitability criteria.
- **Fresh Issue:** Money raised goes to the company for expansion, investment or debt repayment.
- **Offer for Sale (OFS):** Existing shareholders sell their shares, and the proceeds go to them rather than the company.
- The IPO price is **decided by the company in consultation with merchant bankers** based on factors such as demand, earnings and valuation. SEBI does not fix the share price.
- Investors are **broadly classified** into **Qualified Institutional Buyers (QIBs)**, such as mutual funds and banks; **Retail Individual Investors (RIIs);** and **Non-Institutional Investors (NIIs),** including high-net-worth individuals.

Infrastructure Investment Trust (InvITs)

- **Infrastructure Investment Trusts (InvITs)** are attracting more investors as they provide an **opportunity to invest in income-generating infrastructure projects** such as roads, power transmission networks and renewable energy.
- An InvIT is a **SEBI-regulated investment vehicle** that pools money from retail and institutional investors to invest in infrastructure assets**, either directly or through Special Purpose Vehicles (SPVs).**
- **Investors purchase units of the trust** and **earn returns** through interest, dividends and capital gains generated by these assets.
  - **Example**: A company owning a highway can transfer it to an InvIT. The InvIT raises money from investors by selling units and uses it to own and manage the highway. The toll income collected is then distributed among investors.
- InvITs were introduced by the SEBI in 2014 and are **regulated as business trusts.**
- Their u**nits are listed on stock exchanges.**
- Under SEBI rules, at least **80% of an InvIT's assets** must be invested in completed and revenue-generating projects.
- InvITs must distribute at least **90% of their net distributable cash flows to unitholders.**

Index of Core Industries (ICI)

- India's Index of Core Industries (ICI) recorded a **growth** of 7.9% in September 2026, driven by **increased production** in iron ore, electricity, coal and petroleum refinery products.

- The Index of Core Industries (ICI) is a **monthly index** that measures production in India's key infrastructure and industrial sectors.
- It acts as a **leading indicator of the broader Index of Industrial Production (IIP).**
- It is released by the **Office of the Economic Adviser (OEA),** Department for Promotion of Industry and Internal Trade (DPIIT), under the Ministry of Commerce and Industry.
- The **base year** has been revised from 2011–12 to 2022–23.
- Following the revision, **Iron Ore was added as the ninth core industry**, expanding the list from eight to nine.
- The **nine core industries** are Refinery Products, Electricity, Steel, Coal, Crude Oil, Natural Gas, Cement, Fertilizers and Iron Ore.
- These are called core industries because they **supply essential raw materials and energy to other sectors,** such as manufacturing and construction.
- Their performance indicates the **overall health of industrial activity.**
- Together, the nine industries account for **32.88% of the IIP's total weight.**

Note: **IIP is a monthly economic indicator** that measures the short-term volume changes in the output of India's manufacturing, mining, and electricity sectors relative to a fixed base year. It is compiled and released by the **Ministry of Statistics and Programme Implementation (MoSPI) t**hrough the National Statistical Office (NSO).

Pradhan Mantri Samajik Sahayata Yojana

- The Union Cabinet approved the continuation of the **National Social Assistance Programme (NSAP)** for five years (2026–27 to 2030–31),
- It has been **renamed Pradhan Mantri Samajik Sahayata Yojana**.
- Administered by the **Department of Rural Development, Ministry of Rural Development**, the programme provides financial assistance to vulnerable sections, particularly BPL households.
- It gives **effect to Article 41** of the Constitution (DPSP), which directs the State to provide public assistance in cases of old age, unemployment, sickness and disability.
- It is a **100% centrally funded scheme**, ensuring central assistance to eligible beneficiaries across States and Union Territories.
- Four sub-schemes have been renamed:
  - Old Age Pension: Pradhan Mantri Vridhavastha Pension Yojana.
  - Widow Pension: Pradhan Mantri Vidhawa Pension Yojana.
  - Disability Pension: Pradhan Mantri Divyangjan Pension Yojana.
  - National Family Benefit Scheme: Pradhan Mantri Parivar Labh Yojana.

RBI Raises Repo Rate

- The RBI **Monetary Policy Committee (MPC)** recently increased the repo rate by 25 basis points to 5.50% and shifted its stance from **'neutral' to 'calibrated tightening'**.
- The **repo rate** is the interest rate at which the RBI lends money to commercial banks against government securities.
- One **basis point** equals 0.01 percentage point.
- A repo rate hike **increases banks' borrowing costs**, which may lead them to raise lending rates, making loans more expensive.
- Banks generally use two lending benchmarks:
  - **External Benchmark Lending Rate (EBLR):** Directly linked to an external benchmark, usually the repo rate. Changes are passed on relatively quickly.
  - **Marginal Cost of Funds-based Lending Rate (MCLR):** Based on banks' cost of funds, so changes may take longer to affect borrowers.
- **Reasons for the hike:** Rising **food and fuel prices** with the impact of El Nino and **West Asia conflict**, and the increase by the **Federal Reserve of US interest rates** in September**.**
- **Neutral stance**: The RBI keeps the option of either increasing or reducing interest rates open, depending on inflation and economic conditions.
- **Calibrated tightening**: The RBI signals that rate cuts are unlikely in the near term. Its next steps are likely to be either a further rate hike or a pause, depending on economic conditions.

International Relations

India–Poland Bilateral Relations

- **Polish Prime Minister Donald Tusk** visited India to strengthen the India–Poland Strategic Partnership.
- The diplomatic relations between India and Poland were **established in 1954** and the relationship was elevated to a **Strategic Partnership in August 2024** during PM Narendra Modi's visit to Poland.
- Poland is India's **largest trading and investment partne**r in Central and Eastern Europe and the **bilateral trade reached US$6.36 billion in 2025**, with a target to double it by 2030.
  - ✓ India has a consistent **annual trade surplus**.
- The India–Poland Action Plan (2024–2028) provides a framework for **cooperation in political dialogue, security, defence, trade, energy, science, education and cultural exchanges**.
- **Historical relations with Poland started during World War II** where the **Maharajas of Jamnagar and Kolhapur sheltered Polish refugees**, a legacy commemorated through the Jam Saheb Memorial Youth Exchange Programme.
- Also **Poland supports India's candidature for a permanent seat in a reformed UN Security Council** and its non-permanent membership for 2028–29.

International Air Transport Association (IATA)

- **IATA** urged **Mumbai** International Airport Ltd. and airlines to consult each other to ensure that **Terminal 1 redevelopment** does not disrupt international connectivity to the Mumbai Metropolitan Region (MMR).
- IATA is a **global trade association representing airlines** and **promoting safe, secure, efficient and economical air transport.**
- It was established on 19 April 1945 in **Havana, Cuba**, as the **successor to the International Air Traffic Association, founded in 1919**.
- Its **headquarters is in Montreal, Canada,** and it **represents over 380 airlines** from more than **120 countries,** accounting for approximately 85% of global air traffic.
- IATA **develops global aviation standards** and **operational procedures**, including airline codes, airport codes, ticketing, cargo services and financial settlement systems.
- It r**epresents airline interests before governments** and regulators and works on aviation safety, security, environmental sustainability and passenger convenience.

Southern Indian Ocean Fisheries Agreement (SIOFA)

- The Central Government approved India's **accession to the Southern Indian Ocean Fisheries Agreement (SIOFA)**, elevating its status from a Cooperating Non-Contracting Party to a full Contracting Party.
- SIOFA is a **legally binding, multilateral regional fisheries agreement** aimed at the **long-term conservation and sustainable use of fishery resources** in the high seas of the Southern Indian Ocean.
- It was **signed in Rome, Italy, on 7 July 2006** under the auspices of the **Food and Agriculture Organization (FAO)** and entered into force on 21 June 2012.
- Its **jurisdiction covers fish, molluscs, crustaceans and certain sedentary species**, but **excludes highly migratory species** such as tuna and sedentary species under coastal States' fisheries jurisdiction.
- **SIOFA's area of competence covers the high seas** of the Southern Indian Ocean, broadly **between 10°N and 60°S**, from eastern Africa to western Australia.
- Its objectives include **sustainable fisheries management, scientific research**, conservation of marine resources and prevention of Illegal, **Unreported and Unregulated (IUU) fishing** and its **headquarters is located in Réunion Island, France**.

India-New Zealand FTA

- The **India–New Zealand Free Trade Agreement (FTA)** entered into force on 20 October 2026, following its signing on 27 April 2026.

- The agreement provides **100% duty-free access to the New Zealand market** for Indian exports, benefiting textiles, leather, footwear, pharmaceuticals, engineering goods and processed foods.
- India has offered **tariff concessions on approximately 70% of its tariff lines**, covering 95% of bilateral trade value, while **protecting sensitive sectors** such as dairy, sugar, onions and edible oils.
- New Zealand has committed to **facilitating US$20 billion in investment into India**, particularly in agriculture, manufacturing, infrastructure and start-ups.
- New Zealand has offered **market access in 118 services sectors** and **Most-Favoured-Nation (MFN) treatment in 139 sub-sectors.**
- The agreement also provides **5,000 temporary employment visas for Indian professionals** and enhanced post-study work opportunities for Indian students.
- It **promotes agricultural cooperation** through Centres of Excellence for apples, kiwifruit and Manuka honey, besides cooperation in AYUSH, pharmaceuticals and traditional medicine.

Bilateral trade: In 2025–26, **merchandise trade** was approximately US$1.71 billion, with **India enjoying a goods trade surplus** (exports: $1.21 billion; imports: $500 million). However, India had a **services trade deficit** (exports: $280 million; imports: $710 million), largely due to travel and education services, including spending by Indian students in New Zealand.

Financial Action Task Force (FATF)

- The Financial Action Task Force (FATF) **removed Bulgaria, the Democratic Republic of the Congo, Côte d'Ivoire and Monaco** from its **Grey List**, while retaining Vietnam under increased monitoring.
- FATF is an intergovernmental organisation established in **1989 at the G7 Summit in Paris** to combat money laundering and protect the international financial system.
- Its **headquarters is in Paris, France**, and it has **40 members**, including India (member since 2010), and works with a global network of over 200 jurisdictions.
- FATF develops **international standards to combat Money Laundering (ML), Terrorist Financing (TF) and Proliferation Financing (PF).**
- FATF maintains **two important lists:**
  - **Grey List:** Jurisdictions under increased monitoring that are working to address strategic deficiencies.
  - **18 jurisdictions:** Angola, Bolivia, Bosnia and Herzegovina, Cameroon, Haiti, Iraq, Kenya, Kuwait, Laos, Lebanon, Nepal, Papua New Guinea, South Sudan, Syria, Venezuela, Vietnam, British Virgin Islands (UK) and Yemen
  - **Black List:** High-risk jurisdictions subject to a call for action due to serious strategic deficiencies.
  - **3 jurisdictions**: Iran, North Korea (DPRK) and Myanmar.

CICA Summit

- The **7th Summit of the Conference on Interaction and Confidence Building Measures in Asia (CICA)** took place in **Baku, Azerbaijan.**
  - India was represented by the **Minister of State for External Affairs.**
- CICA is a **multinational forum promoting peace, security, stability** and confidence-building in Asia through dialogue and cooperation.
- The idea was **proposed by Nursultan Nazarbayev,** the first President of Kazakhstan, in 1992, during the 47th session of the UN General Assembly.
- The **Almaty Act (2002),** adopted at the first CICA Summit in Almaty, Kazakhstan, serves as its founding charter.
- **Headquarters**: Almaty, Kazakhstan. **India** is a founding member.
- CICA has **29 Member States**, representing nearly 90% of Asia's territory and population. Membership is open to states having at least part of their territory in Asia.

Members: Afghanistan, Azerbaijan, Bahrain, Bangladesh, Cambodia, China, Egypt, India, Iran, Iraq, Israel, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Laos, Mongolia, Pakistan, Palestine, Qatar, Republic of Korea (South Korea), Russia, Sri Lanka, Tajikistan, Thailand, Türkiye, United Arab Emirates (UAE), Uzbekistan and Vietnam.

- **CICA Observer States:** Belarus, Indonesia, Japan, Malaysia, the Philippines, Saudi Arabia, Turkmenistan, Ukraine and the United States (USA)
- The **Council of Heads of State or Government** is its highest decision-making body. Decisions are taken by **consensus**.
- **Summits** are held every **four years** and **meetings of Foreign Ministers every two years.**

India–Azerbaijan Bilateral Relations

- External Affairs Minister S. Jaishankar **visited Azerbaijan** to improve bilateral relations.
- India recognised **Azerbaijan as an independent country in December 1991** and established diplomatic relations in February 1992.
- Relations faced **tensions after Azerbaijan supported Pakistan following Operation Sindoor** and backed its position on Jammu and Kashmir.
- **Azerbaijan** maintains close strategic ties with Pakistan, while India has strengthened defence cooperation with **Armenia**.
- **Bilateral trade** peaked at approximately US$1.88 billion in 2022, declining to around US$401 million in 2025, mainly due to reduced Indian crude oil imports.
- ONGC Videsh holds stakes in **Azerbaijan's Azeri-Chirag-Gunashli (ACG) oil field** and the **Baku-Tbilisi-Ceyhan (BTC) pipeline**, supporting India's energy interests.
- Azerbaijan is an important partner in the **International North–South Transport Corridor (INSTC)**, connecting India with Iran, the Caspian region, Russia and Europe.
- The historic **Ateshgah Fire Temple** in Baku contains inscriptions in **Devanagari** and **Gurmukhi**, reflecting historical links with India.



History & Culture

SAMHiTA Project



- **India and Sri Lanka** launched the SAMHiTA Project at Gangaramaya Temple, Colombo, to digitise 100 ancient manuscripts.
  - **Gangaramaya Temple** is a Buddhist temple and cultural centre located in **Colombo, Sri Lanka** established in the late 19th century by **Venerable Hikkaduwe Sri Sumangala Nayaka Thero**
- SAMHiTA stands for **South Asian Manuscript Histories and Textual Archive**, is an initiative to **preserve and digitise ancient Indian and South Asian manuscripts**.
- It is not a government project but **undertaken by the India International Centre (IIC),** an NGO based in New Delhi, with grant assistance from the Government of India.
- The project aims to **document, preserve and digitise Indian and South Asian manuscripts** of different subjects and knowledge traditions that are held in libraries, museums, temples and other **repositories outside India.**
- The database will be maintained by **PANDiT (Prosopographical Database of Indic Texts and Records),** a research and digital database initiative based in Auroville, Tamil Nadu.

Basawan: Mughal Painter

- A nearly 450-year-old Mughal painting attributed to master artist Basawan, titled **A Family of Cheetahs in a Rocky Landscape**, sold at Christie's in London for £10.245 million from the private collection of Prince Sadruddin Aga Khan.



- Basawan was a **prominent Mughal miniature painter** who flourished during the **reign of Emperor Akbar (16th century)** and was one of the leading artists of the imperial court.
- He was known for his **naturalistic style, realistic human portraits, innovative compositions** and skilful use of colours, light and shade.
- Basawan **incorporated elements of European painting techniques**, particularly **linear perspective** and the **use of light and shadow**, into Mughal miniature painting.
- He contributed to the **illustration of important manuscripts, including the Akbarnama, Razmnama, Timurnama and Baharistan**.
- **Important painters during Akbar's reign (1556–1605)** included Daswanth, Basawan, Kesu Das, Miskin, Madhav, Farukh Beg and Tulsi, while **Persian masters** Mir Sayyid Ali and Abdus Samad played an important role in shaping the Mughal painting tradition.

Sengol



- NCERT **included the Sengol in its new Class 9 Social Science textbook** as a symbol associated with the transfer of power in 1947.
- Sengol is a **gold-plated silver sceptre** symbolising righteous governance, justice and Dharma; the term derives from the Tamil word Semmai, meaning righteousness.
- The tradition is associated with the **Chola dynasty,** where a royal guru presented it to a newly crowned king.
- On **14 August 1947, representatives of Thiruvaduthurai Adheenam**, a Shaivite institution in Tamil Nadu, presented it to Jawaharlal Nehru.
- Crafted by **Vummidi Bangaru Chetty**, it features Nandi at the top.
- Preserved at the **Allahabad Museum for decades**, it was installed near the Lok Sabha Speaker's chair in the **new Parliament building** in May 2023.

Kittur Fort



- The Karnataka government will develop **Kittur Channamma Freedom Park** at Kittur Fort ruins in **Belagavi** district at a cost of ₹40 crore.
- Kittur Fort was built in the **17th century by Allappa Gowda Sardesai**, using black basalt stone, with **Peshwa-Islamic architectural elements.**
- The fort contains palace ruins, watchtowers, water cisterns and an archaeological museum.
- **Rani Kittur Chennamma** led an armed rebellion against the British East India Company in 1824, making Kittur an important centre of early anti-colonial resistance.

Maldharis

- **Gujarat** announced a voluntary **relocation** scheme for **Maldharis** from **Barda Wildlife Sanctuary** to develop a second habitat for **Asiatic lions.**
- Maldharis are traditional **semi-nomadic pastoralists of Gujarat**, particularly associated with the **Gir Forest and Banni grasslands** of Kutch.
- The term Maldhari means **"keeper of animal stock"** and refers to several communities rather than a single tribe.
- **Major communities** include Bharvad, Rabari, Ahir and Charan, traditionally engaged in livestock rearing, cattle breeding and dairy farming.

Geography

Cyclone Arnab

- **Cyclone Arnab made landfall** after intensifying into a Very Severe Cyclonic Storm (VSCS) in Bay of Bengal.

Tropical Cyclone Intensity Scale

Category	Sustained winds
Very Intense Tropical Cyclone	>115 kt >212 km/h
Intense Tropical Cyclone	90–115 kt 166–212 km/h
Tropical Cyclone	64–89 kt 118–165 km/h
Severe Tropical Storm	48–63 kt 89–117 km/h
Moderate Tropical Storm	34–47 kt 63–88 km/h
Tropical Depression	28–33 kt 51–62 km/h
Tropical Disturbance	<28 kt <50 km/h

- It was the **first cyclonic storm of the 2026 North Indian Ocean cyclone season** and crossed the Andhra Pradesh–Yanam coast between Bapatla and Visakhapatnam.
- Tropical cyclones are intense **low-pressure systems** characterised by strong **rotating winds** and generally develop over warm tropical oceans.
- Tropical cyclones over different ocean basins are named by designated **Regional Specialised Meteorological Centres (RSMCs)** and Tropical Cyclone Warning Centres (TCWCs).
- In the North Indian Ocean (Bay of Bengal and Arabian Sea), the **India Meteorological Department (IMD),** New Delhi, which functions as an RSMC, names cyclones.
- The naming system was agreed upon by the **WMO/ESCAP Panel** on Tropical Cyclones in 2000 and began in September 2004.
- The Panel has **13 member countries**: Bangladesh, India, Iran, Maldives, Myanmar, Oman, Pakistan, Qatar, Saudi Arabia, Sri Lanka, Thailand, United Arab Emirates and Yemen. **Each country contributes 13 names,** making a list of 169 names.
- Names are **used sequentially,** column-wise, in the order prescribed in the list.
  - Once used, a name is not repeated.
- A cyclone is named when its **maximum sustained wind speed reaches 34 knots (62 kmph).**
- Names must be **short (maximum eight letters),** easy to pronounce, non-offensive and neutral towards politics, religion, culture and gender.
- The name Arnab, pronounced Ornab, was proposed by **Bangladesh**.

Drought in India

- **Maharashtra declared drought conditions** in 265 of 358 talukas (74%) due to deficient monsoon rainfall.
- Drought is **prolonged water scarcity** due to inadequate rainfall, affecting agriculture, water resources and livelihoods.
- According to the **Drought Atlas of India (1901–2020),** nearly two-thirds of India is drought-prone; 56% of its area experienced moderate to exceptional drought.
- Types of drought:
  - **Meteorological**: Rainfall deficiency.
  - **Agricultural**: Inadequate soil moisture for crops.
  - **Hydrological**: Reduced water in rivers, reservoirs and groundwater.
  - **Socio-economic**: Water scarcity affecting livelihoods and economic activities.
- **Declaration of drought in India:** The **State Government** is the final authority under the Manual for Drought Management, 2016 (updated 2020). Declaration follows a three-stage assessment:
  - **Rainfall trigger:** Examines rainfall deficiency, dry spells and the Standardised Precipitation Index (SPI). A dry spell generally means 3–4 consecutive weeks with rainfall below 50% of normal.
  - **Impact assessment:** At least 3 of 4 indicators are assessed: crop conditions, satellite-based vegetation data, soil moisture and hydrological conditions.
  - **Ground verification**: Field surveys are conducted in 10% of affected villages to verify crop damage before the final declaration. For Kharif droughts, the usual deadline is October 31; for Rabi droughts, March 31.

National Disaster Management Authority (NDMA)

- The Prime Minister **nominated two people** as new members of the National Disaster Management Authority (NDMA) and **re-nominated three existing members** for three years.
- NDMA was **established under the Disaster Management Act, 2005**, and became operational on 28 July 2006.
- The **Prime Minister is the ex-officio Chairperson of NDMA**, which is the **apex body for disaster management in India**.
- It consists of the **Chairperson and a maximum of nine nominated members** and the Chairperson may designate one member as Vice-Chairperson.
- **NDMA lays down national policies, plans and guidelines for disaster management** and **approves the National Disaster Management Plan (NDMP)** and plans of Union Ministries and Departments.
- NDMA promotes a holistic disaster-management framework based on **Prevention, Mitigation, Preparedness and Response**, rather than **focusing only on post-disaster relief**.



Environment & Ecology

India's Ganges Dolphin recovery

- The United Nations Environment Programme (UNEP) report had recognized **India's Ganges River dolphin species recovery program** as one of 35 **UN World Restoration Flagships.**
- The Ganges River Dolphin (Platanista gangetica) is an **obligate freshwater cetacean** (aquatic mammal that lives exclusively in freshwater rivers) **found in the Ganga–Brahmaputra–Meghna river systems of India, Nepal and Bangladesh**.
- It is **functionally blind and uses echolocation** (ultrasonic sounds and their echoes) to navigate and locate prey in murky river waters.
- It is **classified as Endangered on the IUCN Red List** and is protected under **Schedule I of the Wildlife (Protection) Act,** 1972 and **Appendix I of CITES**.
- **India declared it the National Aquatic Animal in 2009** and **launched Project Dolphin in 2020** to strengthen the conservation of riverine and marine dolphins.
- **India's Comprehensive Action Plan for 2022–2047** provides a long-term conservation roadmap and it becomes part of a **global restoration effort** recognised by the **United Nations (co-led by UNEP and FAO)**.

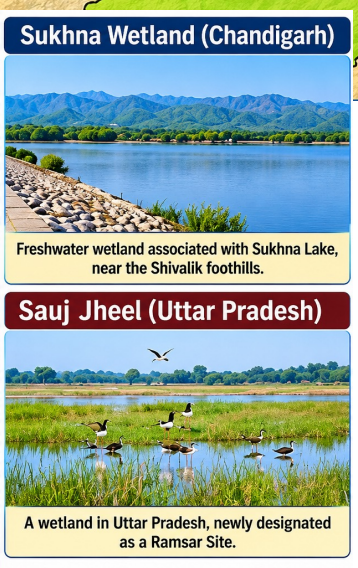


New Ramsar Sites India

- India's Ramsar site tally has reached 103 following the designation of **Sukhna Wetland** in Chandigarh and **Sauj Jheel** in Uttar Pradesh.

- **Sukhna Wetland** is located at the **edge of Chandigarh**, at the **foothills of the Outer Himalayas**, it is a peri-urban reservoir that regulates sediment and water flows from its catchment.
- Sukhna Wetland **supports resident and migratory waterbirds along the Central Asian Flyway**, including the vulnerable Common Pochard (Aythya ferina) and it also **provides habitat for the endangered Black Pond Turtle** (Geoclemys hamiltonii).
- **Sauj Jheel** is located in **Mainpuri district, Uttar Pradesh**, it is a **shallow lake in the floodplain of the Ganga River**, surrounded by agricultural land and forming part of a wider wetland network.
- **Sauj Jheel regularly supports more than 30,000 waterbirds** and is recognised as an **Important Bird and Biodiversity Area (IBA)** and it supports aquatic vegetation such as **Sacred Lotus (Nelumbo nucifera)** and wild sugarcane (Saccharum spontaneum).





Loss and Damage Fund

- The **Fund for Responding to Loss and Damage (FRLD)** provisionally approved $21.6 million for Nepal following the August 2026 Bhote Koshi glacial flood.
- FRLD was **established at COP27 (2022) Sharm el-Sheikh, Egypt** under the **UN Framework Convention on Climate Change (UNFCCC)** to **support vulnerable developing countries** facing the economic and non-economic impacts of climate change.
- Loss and Damage **refers to the adverse impacts of climate change that cannot be avoided through mitigation or managed through adaptation**.
  - It includes both **economic losses** (damage to infrastructure, crops and property) and **non-economic losses** (loss of human lives, cultural heritage and ecosystems).
- Loss and damage **can result from both sudden-onset events**, such as floods, cyclones and heatwaves, and **slow-onset events**, such as sea-level rise, desertification, ocean acidification and glacial retreat.
- The **Fund was operationalised at COP28 (2023), Dubai, UAE** and funds mobilised since the COP29 (2024, Baku).
- It functions under the **financial mechanism of the UNFCCC** and **Article 8 of the Paris Agreement**.
- It is governed independently by a **26-member Board** headquartered in **Manila, Philippines,** with the World Bank serving strictly as its interim trustee

Graded Response Action Plan (GRAP)

- The **Commission for Air Quality Management (CAQM)** recently invoked **Stage I** of the Graded Response Action Plan (GRAP) across **Delhi-NCR (National Capital Region)** after the **Air Quality Index (AQI)** entered the **Poor** category.
- **CAQM** is a **statutory body established under the CAQM Act, 2021**, to coordinate, monitor and implement measures to control air pollution in **Delhi-NCR and adjoining areas of Punjab, Haryana, Rajasthan and Uttar Pradesh.**
- Before CAQM, the **Environment Pollution (Prevention and Control) Authority (EPCA),** established in 1998 under the Environment

(Protection) Act, 1986, monitored air pollution in Delhi-NCR.

- **CAQM replaced EPCA in 2021,** providing a permanent statutory framework with wider powers.

- **GRAP** is an emergency mechanism to control air pollution through **graded preventive and restrictive measures** based on AQI.
  - It was initially notified in **January 2017,** following Supreme Court directions in 2016.
- **GRAP has four stages** based on Delhi's AQI:
  - Stage I – Poor: 201–300
  - Stage II – Very Poor: 301–400
  - Stage III – Severe: 401–450
  - Stage IV – Severe+: Above 450.

National Capital Region (NCR): The **National Capital Region** is a statutory inter-state planning area encompassing the National Capital Territory of Delhi alongside adjoining districts of Haryana, Uttar Pradesh, and Rajasthan to manage regional infrastructure and urban growth under the NCR Planning Board Act, 1985.

Air Quality Index (AQI): The **Air Quality Index** is a single-number, color-coded metric developed by the Central Pollution Control Board (CPCB) to communicate real-time ambient air pollution levels to the public across six severity categories ranging from Good (0–50) to Severe (401–500).

AQI Components: The index tracks **eight mandatory air pollutants**—Particulate Matter 10 (PM10), Particulate Matter 2.5 (PM2.5), Nitrogen Dioxide (NO_2), Sulfur Dioxide (SO_2), Carbon Monoxide (CO), Ozone (O_3), Ammonia (NH_3), and Lead (Pb)—requiring data from at least three pollutants including PM10 or PM2.5 to compute the final score.

National Biodiversity Authority (NBA)

- The **National Biodiversity Authority (NBA) disbursed** approximately ₹1.19 crore to 29 State Biodiversity Boards and one UT Biodiversity Council under the **Access and Benefit Sharing (ABS) mechanism.**
- The NBA is a **statutory body established in 2003 under the Biological Diversity Act, 2002**, under the **Ministry of Environment, Forest and Climate Change (MoEFCC)**.
- Its **headquarters is in Chennai** and it **performs facilitative, regulatory and advisory functions relating to biodiversity conservation**, sustainable use of biological resources and fair and equitable sharing of benefits.
- **NBA is headed** by an eminent conservation **Chairperson** alongside **16 appointed members** comprising 8 Central Ministry ex-officio representatives, 5 non-official biodiversity experts, and 3 rotating State Biodiversity Board Chairpersons.
- **India follows a three-tier biodiversity governance structure** comprising the NBA at the national level, State Biodiversity Boards (SBB) at the state level and Biodiversity Management Committees (BMCs) at the local level.
- The **NBA regulates access to biological resources and associated traditional knowledge by granting or rejecting approvals for activities** covered under Biological Diversity Act, 2002.
- **Access and Benefit Sharing (ABS) ensures** that **benefits arising from the utilisation of biological resources and associated traditional knowledge are shared fairly** and equitably with benefit claimers, including local communities.

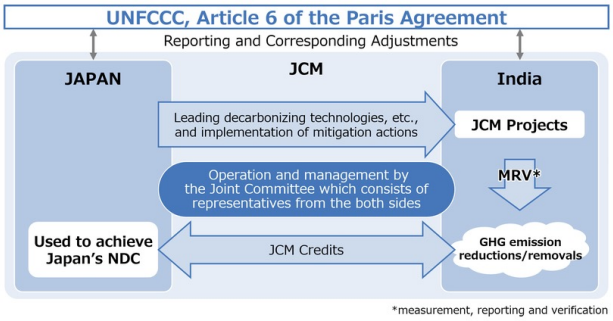
10 Years of Kigali Amendment

- The Kigali Amendment to the Montreal Protocol marked its **10th anniversary** on October 15, 2026, putting renewed focus on global commitments to curb potent hydrofluorocarbons (HFCs) to avert up to 0.5°C of warming by 2100.
- The **Kigali Amendment is an amendment to the Montreal Protocol (1987)**, adopted on 15 October 2016 in **Kigali, Rwanda**, to **phase down the production and consumption of Hydrofluorocarbons (HFCs)**, which are potent greenhouse gases.
- The **Montreal Protocol was adopted in 1987 to phase out ozone-depleting substances**, particularly Chlorofluorocarbons (CFCs) and HFCs were introduced as substitutes because they do not deplete the ozone layer, but their **high global warming potential** led to the Kigali Amendment.
- The Kigali Amendment entered into force on 1 January 2019 and **establishes legally binding schedules for reducing HFC production and**

consumption, with differentiated timelines for developed and developing countries.

- **Full implementation could prevent approximately 0.3–0.5°C of global warming by 2100**, making it an important international climate-change mitigation measure.
- **India ratified the amendment in 2021** and it must freeze HFC production and consumption in 2028, achieve a 10% reduction from the agreed baseline by 2032 and an 85% reduction by 2047.
- The **Multilateral Fund**, established in 1990 under the Montreal Protocol, provides **financial and technical assistance** to developing countries to meet their obligations and adopt environmentally friendly alternatives.

Joint Crediting Mechanism (JCM)



- India and Japan jointly launched the **Operational Manual for the India–Japan Joint Crediting Mechanism (JCM) in New Delhi**, signaling a transition from bilateral institutional design into full project execution.
- It is a **bilateral carbon-crediting mechanism** originally **launched by Japan in 2013 to promote greenhouse gas emission reductions** through cooperation with partner countries.
- The India–Japan mechanism facilitates the **transfer of Japanese low-carbon technologies, systems and infrastructure to India**.
- **JCM operates under Article 6.2 of the Paris Agreement**, which enables v**oluntary cooperation** between countries through Internationally Transferred Mitigation Outcomes (ITMOs) to achieve their Nationally Determined Contributions (NDCs).
- Under JCM, **Japan helps an Indian project adopt cleaner technology,** reducing its carbon emissions.
- The **emission savings are converted into carbon credits** and **shared** between India and Japan based on their **agreement**.
- Each country can count only its share towards its climate targets, preventing double counting.

Living Planet Report 2026

- The **Living Planet Report 2026,** released by the **World Wide Fund for Nature (WWF),** found a 73% decline in the average size of monitored wildlife populations between 1970 and 2022.
- It is a **biennial report** that presents the **Living Planet Index (LPI),** which tracks changes in the population sizes of monitored vertebrate species across terrestrial, freshwater and marine ecosystems.
  - It indicates **global biodiversity trends** and is not a census of all wildlife.
- The **2026 assessment covers 35,803 population trends** across 5,790 vertebrate species, including mammals, birds, fish, reptiles and amphibians.
- **Ecosystem-wise decline:** Freshwater populations recorded the steepest average decline (85%), followed by terrestrial (69%) and marine populations (59%).
- **Regional decline:** Latin America and the Caribbean recorded the steepest decline (95%), followed by Africa (80%) and Asia-Pacific (49%).
- **Major drivers of biodiversity loss** include habitat loss and degradation, overexploitation, climate change, pollution, invasive species and diseases.
  - The report identifies **food production and consumption** as the single largest driver.

World Wide Fund for Nature (WWF) is an international non-governmental organisation (NGO), established in 1961, headquartered in Gland, Switzerland, that works towards wildlife conservation, biodiversity protection and reducing humanity's ecological footprint.

Conservation Assured | Tiger Standards (CA|TS)

- **Nameri Tiger Reserve in Assam** secured the **Conservation Assured | Tiger Standards** (CA|TS) Approved status, making all four tiger reserves in Assam—Kaziranga, Manas, Orang and Nameri—CA|TS-approved.

- CA|TS is a **voluntary, independent global certification** framework that assesses the effectiveness of tiger conservation areas in protecting tigers and managing their habitats.
- It was launched at the **First Asian Parks Congress in Japan in 2013.**
- The first species-specific Conservation Assured standards were developed for **tigers** (Panthera tigris) in 2010, followed by standards for **jaguars** and **river dolphins.**
- CA|TS consists of **seven pillars and 17 elements**: Importance and Status, Management, Community, Tourism (optional), Protection, Habitat Management and Tiger Populations.
- Conservation areas are classified into two categories:
  - **Registered**: Standards have not yet been fully achieved.
  - **Approved**: Standards have been achieved through independent assessment and review.
- The **assessment process** includes self-assessment, national audits and approval by the International Executive Committee.
- The New Delhi based **International Big Cat Alliance (IBCA)** became the host and secretariat of CA|TS from 1 April 2025,.

Conservation Assured Tiger Standards

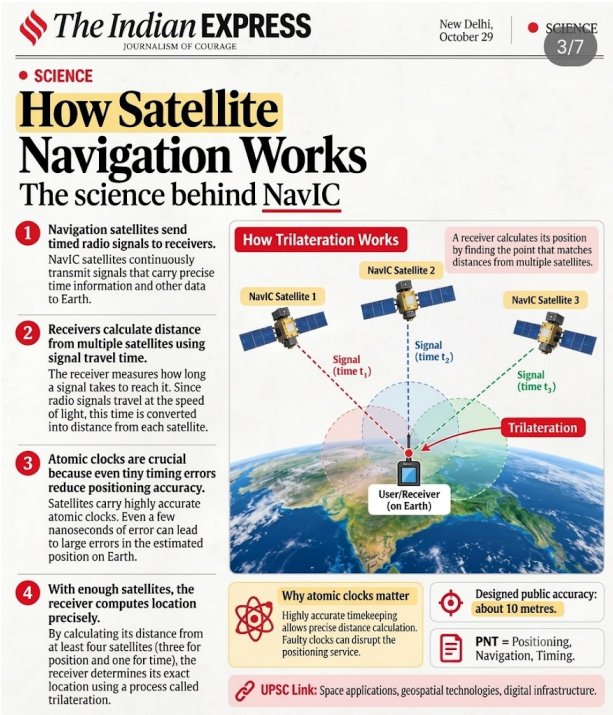
A Multifunctional Protected Area Management Tool to Aid Implementation of International Conventions, Multilateral Treaties, Global Initiatives & National Action

CATS
Conservation Assured | Tiger Standards

A step forward in Protected Area Management to ensure Tiger Conservation and Protection

Science & Technology

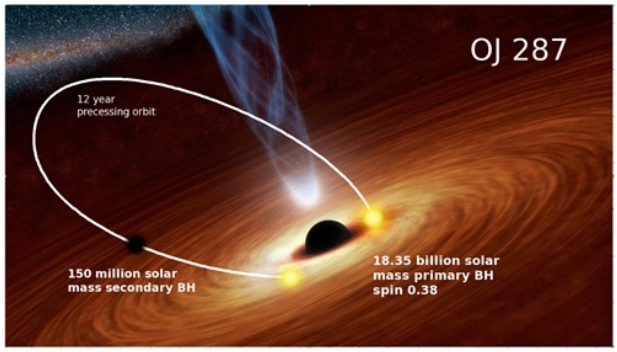
NVS-03 Satellite



- The ISRO successfully launched the **2,250 kg navigation satellite NVS-03** aboard the **Geosynchronous Satellite Launch Vehicle (GSLV-F18)** from the Satish Dhawan Space Centre, Sriharikota.
- **NVS-03 is a next-generation navigation satellit**e developed by ISRO to strengthen the **Navigation with Indian Constellation** (**NavIC**) and ensure continuity of India's indigenous Positioning, Navigation and Timing (**PNT**) services.
- NavIC was initially developed as the **Indian Regional Navigation Satellite System (IRNSS),** with a first-generation constellation of seven satellites.
- The **second-generation NVS series** (NVS-01 to NVS-05) was introduced to improve coverage, accuracy, reliability and continuity of services.
- NavIC provides **regional navigation coverage over India and approximately 1,500 km** beyond its geopolitical boundary.
  - Its original constellation comprises **three satellites in geostationary orbit** and **four in inclined geosynchronous orbit.**

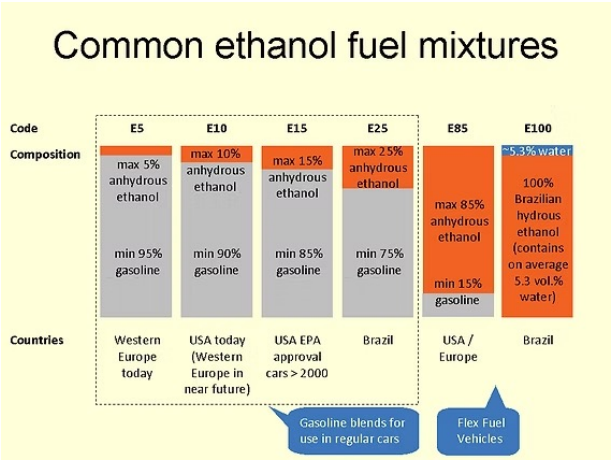
- NavIC **requires at least four operational satellites** for basic standalone positioning services.
  - ✅ Three satellites **determine the receiver's spatial coordinates (x, y, z)**, while the fourth is needed to correct the **receiver's clock error.**
- NVS-03 carries navigation **payloads in L1, L5 and S frequency bands** and **an indigenously developed atomic clock.**
- The **L1 signal improves compatibility** with other global navigation satellite systems and supports civilian applications.

OJ 287 Blazar



- **Aryabhatta Research Institute of Observational Sciences (ARIES), Nainital** has built the world's most detailed light-recording history of the rare cosmic blazar called **OJ 287**.
- While **most galaxies have quiet centers,** some unique galaxies have an exceptionally bright and energetic core powered by a **supermassive black hole** aggressively feeding on surrounding gas and dust.
- The **black hole pulls in nearby gas and dust**, which become extremely hot and release large amounts of energy and becomes bright.
- This extremely **bright central region** of a galaxy, powered by a supermassive black hole is called an **Active Galactic Nucleus (AGN).**
- This process can also produce **powerful jets of hot, electrically charged particles** called **plasma jets**.
- When these jets **point almost directly towards Earth**, the AGN is called a blazar.
- **OJ 287** is a **rare blazar located approximately 4 billion light-years from Earth**, containing **two supermassive black holes** orbiting each other in a binary system with an **orbital period of approximately 12 years**.
  - ✓ The primary ultramassive black hole, roughly 18 billion solar masses is orbited by a smaller secondary black hole of about 150 million solar masses.
- **Every 12 years**, the smaller black hole punches through the primary's dense accretion disk twice, violently heating the gas to trigger the **massive double-peaked outbursts**.
- The **study helps scientists** understand how supermassive black holes interact, orbit each other and influence their surrounding galaxies.
- It also improves our **understanding of powerful cosmic events,** the formation of plasma jets and multimessenger astronomy, particularly the study of black hole systems using electromagnetic radiation and gravitational waves.

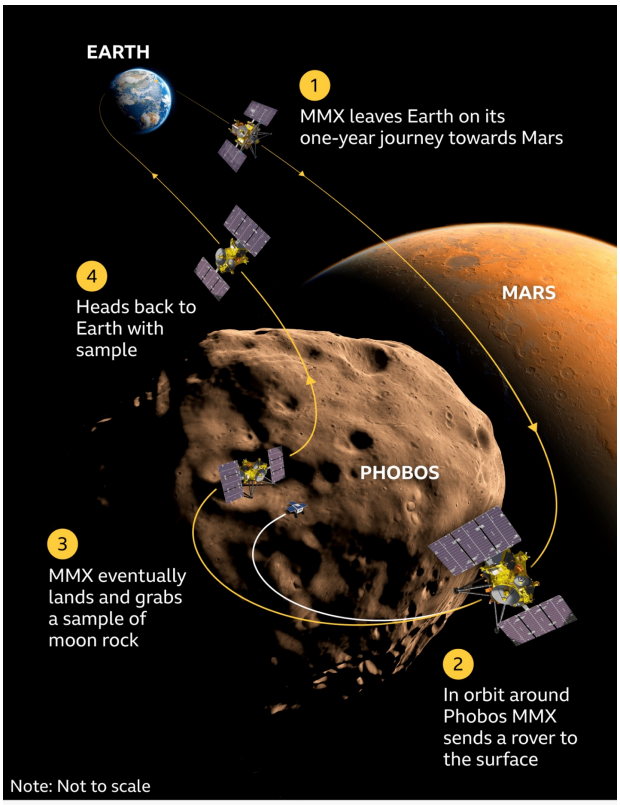
E100 Flex-Fuel Vehicles in India



- The **Ministry of Road Transport and Highways (MoRTH)** amended the **Central Motor Vehicles Rules (CMVR), 1989,** to permit the testing, certification and commercial rollout of flex-fuel vehicles capable of running on **ethanol blends up to E100.**
- **E100 is a high-ethanol fuel** containing nearly **100% ethanol**, produced through the fermentation of sugarcane juice, molasses, maize or damaged food grains.
- **Flex-Fuel Vehicles (FFVs)** are **internal combustion engine vehicles** designed to run on petrol, ethanol or different blends of both, such as E20, E85 and E100.
- Sensors and electronic **control systems automatically adjust engine** performance according to the fuel used.
- FFVs use **corrosion-resistant fuel systems**, specialised fuel injectors and cold-start assistance systems to handle ethanol's properties.

- **Ethanol has a high octane rating** (approximately 100–105 RON), which reduces engine knocking.
- However, its **lower energy content** compared with petrol can reduce fuel efficiency.
- **Significance**: E100-compatible FFVs can reduce dependence on imported crude oil, lower transport-related emissions and increase demand for domestic agricultural feedstocks, supporting farmers and rural employment.

Martian Moons eXploration (MMX) Mission



- The **Japan Aerospace Exploration Agency (JAXA)** launched the **Martian Moons eXploration (MMX) mission** aboard its H3 rocket from **Tanegashima Space Center**, Japan.
- MMX is a **robotic sample-return mission** led by JAXA, with international participation from **NASA (USA), European Space Agency (ESA), CNES (France) and DLR (Germany)**.
- The mission aims to **explore Mars's two natural satellites, Phobos and Deimos**, and collect at least **10 grams of surface material** (regolith) from Phobos for return to Earth.
- The spacecraft consists of **three modules:** propulsion, exploration and return modules.
- It will use **two sampling systems:** a mechanical corer developed by JAXA and a pneumatic sampler developed by NASA to collect material from Phobos.
- A **four-wheeled French-German rover**, developed by CNES and DLR, will explore Phobos for approximately 100 days, studying its surface, soil and terrain.
- The mission will **help scientists understand** the origin of Mars's moons, the evolution of the early Solar System and the characteristics of low-gravity environments.

Soybean Varieties NRC 268 and NRC 270

- The **ICAR–National Soybean Research Institute (NSRI), Indore,** showcased newly developed **improved soybean varieties** NRC 268 and NRC 270.
- Preliminary assessments indicated **approximately 20 quintals per hectare for each variety**, compared with I**ndia's average soybean productivity of around 10–11 quintals per hectare**.
- Soybean is predominantly a **self-pollinated crop**, meaning the flowers fertilize themselves using their own pollen to produce seeds that remain genetically identical to the parent plant.
  - Farmers thus harvest and **reuse seeds from the same crop** for subsequent seasons
- ICAR-NSRI developed NRC 268 and NRC 270 **through conventional plant breeding**, involving the selection and cross-pollination of soybean plants with desirable traits.
- Soybean is a **Kharif crop** in India sown during June–July and harvested in September–October, requiring a warm climate **15°C to 30°C** and moderate, well-distributed monsoon rainfall of 60–100 cm.
- It thrives best in **well-drained, fertile black cotton or loamy soils** with a neutral pH (6.5-7.5).
- **Madhya Pradesh** (known as the Soya Bowl of India) and **Maharashtra** are the leading producers in India, followed by **Rajasthan, Karnataka and Gujarat**.
- India ranks **5th in the world** in soybean production, after Brazil, the USA, Argentina and China,

Sex Reversal in Animals

- A study found that **rising temperatures can cause sex reversal** in wild agile **frogs** (Rana dalmatina) in Hungary.
- **Environmental Sex Reversal (ESR)** occurs when environmental conditions cause an **animal's physical sex to differ from its genetic sex.**
- Factors such as **high temperatures and chemical pollutants** can trigger this change, especially during **early development.**
  - In some animals, **sex development is influenced not only by genes** but also by environmental conditions, especially temperature.
- The study found that **heatwaves** during the **tadpole stage** can cause genetically female frogs (XX) to develop as males.
- This is an example of **Temperature-Induced Sex Reversal (TISR),** which is a type of Environmental Sex Reversal (ESR).
- These **sex-reversed males can reproduce** by mating with female frogs**,** but they **produce fewer offspring successfully in natural conditions** compared with normal males
- Their offspring are also **more vulnerable to viral infections** after exposure to heat stress.
- This can **disturb the male-female ratio,** reduce successful reproduction and increase the risk of population decline and local extinction.
- This is a **concern for ectotherms (cold-blooded animals),** whose body temperature is influenced by their surroundings.
- TISR **has been observed in several species,** such as the central bearded dragon (Pogona vitticeps) and eastern three-lined skink (Bassiana duperreyi), where temperature can cause **genetic males to develop as females** or genetic females to develop as males

Spinal Muscular Atrophy

- The Keralam government switched its **Spinal Muscular Atrophy (SMA) treatment program** from Roche's **branded Risdiplam** (Evrysdi) to **Natsmart**, a **generic** version of risdiplam manufactured by Natco Pharma.
- **Spinal Muscular Atrophy (SMA)** is a rare genetic disease in which motor neurons (nerve cells that control muscles) in the spinal cord are lost, causing muscle weakness and wasting.
- It is usually inherited through an **autosomal recessive pattern**, meaning a child must **inherit two faulty copies** of the gene (one from each parent) to develop the disease. Parents carrying only one faulty copy usually do not have the disease.
- It is mainly caused by the **loss or mutation of the SMN1 gene on chromosome 5,** resulting in a **shortage of Survival Motor Neuron (SMN) protein**, which is essential for motor neuron survival.
- SMA is classified into **Types 0 to 4**, based on the **age at which symptoms begin and their severity.**
  - Type 1 is severe and begins in infancy, while Type 4 is milder and begins in adulthood.
- It causes p**rogressive muscle weakness**, especially in muscles near the centre of the body, affecting movement, swallowing and breathing. Severe cases can lead to respiratory failure.
- There is **no definitive cure**, but treatments can slow disease progression.
- **Risdiplam increases SMN protein production** by changing how the SMN2 gene works.
- Other treatments include Nusinersen and Onasemnogene abeparvovec, a **gene-replacement therapy.**

Defence

Military Exercises

Exercise	Participating Countries	Force	Description
India–RoKN	Indian - Republic of Korea	Navy	The Indian Navy – Republic of Korea Navy (IN–RoKN) Bilateral Exercise was held at Busan, Republic of Korea.
GARUDA SHAKTI	India-Indonesia	Special Forces (Army)	The 11th edition of the Exercise was held at Banyuwangi, Indonesia.
SIMBEX-2026	India - Singapore	Navy	The 33rd edition of the Exercise was held at Visakhapatnam.
IBSAMAR IX 2026	India - Brazil - South Africa	Navy	The ninth edition of the IBSAMAR Exercise 2026 was held at Simon's Town, South Africa.
KONKAN 2026	India - UK	Navy	The annual bilateral maritime exercise was held at **Plymouth**, United Kingdom.
INDRA-2026	India - Russia	Military	The naval component was held at **Vladivostok** and the Sea of Japan. The land component was held in Russia's **Chelyabinsk** Region and the Far East.
National Maritime Search & Rescue Exercise (SAREX-2026)	Multilateral	The Indian Coast Guard	**The 12th SAREX-2026** was held off Paradip, Odisha, under the aegis of the National Maritime Search and Rescue Board (NMSARB). Observers from 30 countries attended the exercise
Mountain Guardian 2026	India - UAE	Military	The 3rd edition was held at Chaubatia, Uttarakhand.
AUSTRAHIND	India-Australia	Military	The 5th edition of the Exercise was held at the Foreign Training Node, Thiruvananthapuram, Kerala.

Combined Task Force 154

- The **Indian Navy is scheduled to hand over** command of Combined Task Force 154 (CTF 154) at a ceremony in Manama, Bahrain.
- CTF 154 is a **multinational maritime training task force** under the **Combined Maritime Forces (CMF)**, established in May 2023 to strengthen professional training, capacity building and interoperability among partner nations.
- The **Combined Maritime Forces (CMF)** is a **47-nation voluntary naval coalition** headquartered at **US Naval Support Activity Bahrain** in Manama, Bahrain that secures 3.2 million square miles of international waters, including the **Red Sea, Arabian Gulf, and Indian Ocean**.
  - The **CMF Commander** is a U.S. Navy Vice Admiral, and the **Deputy Commander** is a U.K. Royal Navy Commodore.
- CMF operates five task forces—**CTF 150** (Indian Ocean/Gulf of Oman anti-smuggling), **CTF 151** (Somalia counter-piracy), **CTF 152** (Arabian Gulf security), **CTF 153** (Red Sea/Bab el-Mandeb security), and **CTF 154** (regional partner training)—to maintain stability across critical Middle Eastern and Indian Ocean sea lanes
- **India** joined as an Associate Partner in 2022 and became a **full member in 2023.**
- India assumed command of CTF 154 in February 2026.

Land Warfare Doctrine

- The Defence Minister released the updated **Land Warfare Doctrine 2026** in New Delhi.
- The Indian Army's **first formal doctrine was published in 1998**, with the previous Land Warfare Doctrine issued in 2018.
- It provides **guidelines for how the Army prepares for and conducts** future land-based military operations.
- It incorporates **lessons** from the Russia–Ukraine war, Iran–US conflict, eastern Ladakh standoff and Operation Sindoor.
- It highlights the **growing role of drones, Artificial Intelligence (AI), autonomous systems**, surveillance, precision strikes and information warfare.
- It promotes **coordination** across land, air, sea, space and cyber domains, along with defence self-reliance, strong logistics and human leadership.
- It sets a **long-term strategic vision** for the Army over the next 20–30 years.

'Surya'- The First Indigenous Fleet Support Ship



- India launched Surya, the **Indian Navy's first indigenously built Fleet Support Ship (FSS)**, at Hindustan Shipyard Limited (HSL), Visakhapatnam.
- A Fleet Support Ship acts as a **floating supply platform**, providing fuel, fresh water, ammunition, food and other essentials to naval ships at sea.
- It has **onboard maintenance workshops, a helicopter deck and self-defence systems**.
- It enables **replenishment** at sea, allowing warships to receive supplies without returning to port, thereby improving their operational endurance and reach in the Indian Ocean Region.
- **Surya is the first of five FSS vessels** being built by HSL

Indo–Tibetan Border Police

- The Indo-Tibetan Border Police (ITBP) observed its **65th Raising Day**.
- The ITBP was **raised on 24 October 1962**, **following the India-China War**, initially with four battalions to strengthen security along **India's northern borders**.
- It was initially raised under the **CRPF Act, 1949**.
- The **ITBP Force Act, 1992** later provided its statutory framework, with rules framed in 1994.
- It **guards the 3,488-km India-China border**, from the Karakoram Pass in Ladakh to Jachep La in Arunachal Pradesh.
- Its personnel operate in **high-altitude areas**, often between 9,000 and 18,800 feet.
- Its duties include border surveillance, preventing cross-border crimes, intelligence gathering, patrolling along the **Line of Actual Control (LAC),** internal security and disaster relief.
- The **Shaurya Commandos** are an elite, specialized high-altitude combat force raised by the ITBP.

Akash Missile System

- India's reported sale of its **indigenous Akash air-defence missile system** to Tajikistan and Turkmenistan could strengthen its position as a global arms exporter.
- Developed by the **Defence Research and Development Organisation (DRDO),** Akash is produced with the involvement of **Bharat Dynamics Limited (BDL) and Bharat Electronics Limited (BEL).**

- It is a **mobile, medium-range surface-to-air missile (SAM) system** designed to protect military bases and formations from aerial attacks.
- It can target fighter aircraft, helicopters and Unmanned Aerial Vehicles (UAVs), with a range of approximately **4.5–25 km and altitude coverage of up to 20 km**.
- It uses **phased-array radar and command guidance** to track and engage targets.
- Its **anti-jamming capabilities** help it operate even in the presence of enemy electronic interference.

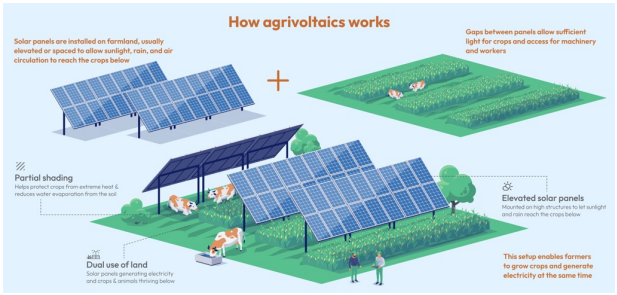


JWALA Missile

- Indian defense technology company **IG Defence** successfully test-fired **two solid rocket motors** for its **JWALA micro-missile programme** becoming India's first privately developed micro-missile..
- It is a **short-range Surface-to-Air Missile (SAM)** designed to physically destroy hostile drones, known as a hard-kill Counter-Unmanned Aerial System (C-UAS) to physically destroy hostile drones rather than just jamming them.
- The JWALA MK1 has a **proposed range of 2–5 km** and can engage aerial threats at **altitudes of 50 metres to 5,000 metres.**
- It uses a **dual-pulse solid rocket motor** and carries a small explosive warhead that can destroy drones.
- The micro-missile acts as the **physical interceptor within IG Defence's GRID Defend ecosystem**, which uses edge **AI to fuse data from radars and electro-optical sensors** into a single threat map.
- From there, the **platform automatically detects, tracks, and assigns** the hostile drone targets to **truck-mounted JWALA launchers**, coordinating a layered kinetic response within seconds.

Miscellaneous

Agrivoltaics World Conference 2026



- The 7th edition of the **AgriVoltaics World Conference (AWC) 2026** was held in New Delhi, marking the **first time** the global summit has been hosted in India and the Global South.
- The conference was **hosted by the Ministry of New and Renewable Energy (MNRE)**.
- The **theme was "Powering the Global South"** highlighting **Agrivoltaics** as a key pathway to reconcile food and clean-energy security across the Global South.
- **Agri-Photovoltaics or Agrivoltaics** is the **dual-use co-location of agriculture and solar energy** on the same parcel of land, where elevated solar panels generate power while crops or livestock are raised underneath.
- The **panels shade crops to reduce heat stress** and soil evapotranspiration, while **crop moisture release (transpiration) cools the panels above**, boosting their solar efficiency.
- It helps **diversify farm income** by allowing farmers to sell surplus power to local DISCOMs, protects shade-tolerant crops (fruits, vegetables, spices) from excessive radiation, and cuts water consumption.
- It is supported under the **PM-KUSUM Scheme** (specifically Component-A for decentralized solar plants on farmlands), with ICAR-CAZRI (Jodhpur) and ICAR-IARI leading regional crop-mapping pilots.

Sakharov Prize

- The **International Criminal Court (ICC)** and its officials won the **2026 Sakharov Prize** for Freedom of Thought, awarded by the European Union.

- The prize was established in **1988 by the European Parliament** and named after **Andrei Sakharov, a Soviet nuclear physicist and human rights activist.**
- It is awarded **annually** to individuals or organisations for **defending human rights**, freedom of expression, democracy, minority rights, international law and the rule of law.
- The prize carries €50,000 and the award ceremony is traditionally held during the **European Parliament's December plenary session** in Strasbourg, France.
- **Selection process:** Members of the European Parliament (MEPs) nominate candidates. The Foreign Affairs (AFET) and Development (DEVE) Committees shortlist three candidates, and the Conference of Presidents selects the final laureate.
- The ICC is a **permanent international court** established under the **1998 Rome Statute,** which came into **force in 2002;** it is headquartered in The **Hague, Netherlands**.
- It **prosecutes individuals** for genocide, crimes against humanity, war crimes and the crime of aggression. **India** is not a member.

Nobel Prizes 2026

1. Nobel Prize in Economic Sciences

- **Robert E. Hall and Michael Woodford (USA)** received the prize for **advancing the microeconomic foundations of macroeconomic stabilisation**, explaining how household consumption, income expectations and business decisions influence economic fluctuations.
- Their research helps **central banks and governments** frame **monetary and fiscal policies to stabilise the economy**.
- **Microeconomic foundations of macroeconomics:** Using the decisions of individual households and firms to understand broader economic phenomena such as inflation, unemployment and economic growth.

2. Nobel Peace Prize

- **Navanethem "Navi" Pillay (South Africa),** of Indian Tamil origin, received the prize for **promoting peace, human rights and international law.**
- She served as President of the **International Criminal Tribunal for Rwanda (ICTR)** and UN High Commissioner for Human Rights (2008–2014).

3. Nobel Prize in Literature

- **Anne Carson (Canada**) received the prize for **innovative literary works inspired by classical traditions**.
- A poet, essayist and classicist, her notable works include Autobiography of Red (1998), The Beauty of the Husband (2001) and Nox (2010).

4. Nobel Prize in Chemistry

- **Henri B. Kagan (France) and Kenso Soai (Japan)** received the prize for discoveries relating to **non-linear effects and asymmetric autocatalysis in chemical reactions**.
- Their work explains how **chemical reactions can favour one enantiomer** (one of two mirror-image forms of a molecule) and how a small initial imbalance can be amplified.
- **Asymmetric autocatalysis**: A reaction produces a molecule that itself acts as a catalyst, promoting the formation of more of the same molecular form. This helps explain homochirality, the preference of living systems for one mirror-image form of certain molecules.

5. Nobel Prize in Physics

- **Francis Halzen** (Belgian-born physicist based in the USA) received the prize for **contributions to the IceCube Neutrino Observatory and the discovery of high-energy astrophysical neutrinos**.
- **Neutrinos** are electrically neutral, extremely light subatomic particles that rarely interact with matter. IceCube, located at the South Pole in Antarctica, detects them using sensors embedded in about one cubic kilometre of ice.
- When neutrinos interact with ice, they can produce charged particles that emit faint blue light called **Cherenkov radiation**, which is detected by IceCube's sensors.

6. Nobel Prize in Physiology or Medicine

- **Karl Deisseroth** (USA), Peter Hegemann and Georg Nagel (Germany) received the prize for **discoveries concerning light-gated ion channels and the development of optogenetics**.
- **Optogenetics** uses **light-sensitive proteins** to control the activity of specific neurons, helping scientists study how neural circuits influence memory, emotions and behaviour.

- **Light-gated ion channels** are proteins in cell membranes that respond to light by allowing ions to pass through, thereby changing the electrical activity of neurons.

Advanced Emergency Braking Systems (AEBS)

- The **Roadways Ministry (MoRTH)** has proposed making Advanced Emergency Braking Systems (AEBS) **mandatory** for all new passenger car models from 1 October 2030, with existing production models required to comply by 1 October 2032.
- AEBS is an **active vehicle-safety technology** that detects potential collisions, alerts the driver and **automatically applies brakes** if the driver fails to respond in time.

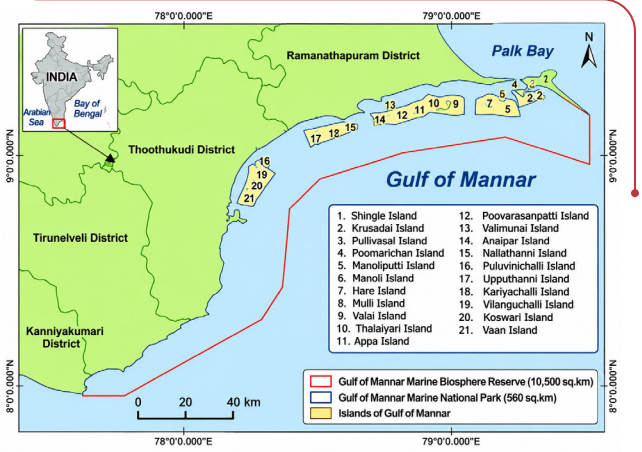
Active safety systems help prevent accidents (e.g., ABS and AEBS), while **passive safety systems** protect occupants and reduce injuries when an accident occurs (e.g., airbags, seat belts and crumple zones).

- **AEBS uses** radar, cameras and/or LiDAR sensors to detect obstacles and assess their distance and relative speed.
- AEBS generally **works in three stages**: collision warning, partial braking (pre-braking) and full emergency braking, helping prevent accidents or reduce their severity.



Places in News

Kariyachalli Island



- Kariyachalli Island is in the **Gulf of Mannar**, off the Thoothukudi coast of Tamil Nadu, and is **one of the 21 islands in the Gulf of Mannar Marine National Park.**
- The island has **lost over 85% of its land area,** shrinking to just 3.14 hectares in 2025, due to coastal erosion, rising sea levels and degradation of surrounding coral reefs and seagrass beds and **could disappear by 2036**.
- Under the **World Bank-funded Tamil Nadu SHORE** (Sustainably Harnessing Ocean Resources and Blue Economy) **Project, 8,500 artificial reef modules have been deployed** to reduce wave energy and promote sediment accumulation; restoration also includes coral reefs and seagrass beds.

Siang Dam Project (SUMP)



- Protests against the proposed **11,200 MW Siang Upper Multipurpose Project (SUMP)** turned violent in Pasighat, Arunachal Pradesh,

with incidents of arson and clashes with security forces.

- The project is **proposed on the Siang River, near Geku** in Upper Siang district, and is planned across Siang and Upper Siang districts; possible dam sites include Parong, Dite Dime and Uggeng (Ugeng).
- It is seen as a **strategic response to China's** proposed 60,000 MW hydropower project on the **Yarlung Tsangpo Rive**r in Tibet, which **enters India as the Siang River.**
- The project faces **opposition** from the Adi and Galo communities over possible **submergence** of ancestral land, displacement, loss of livelihoods and environmental impacts.

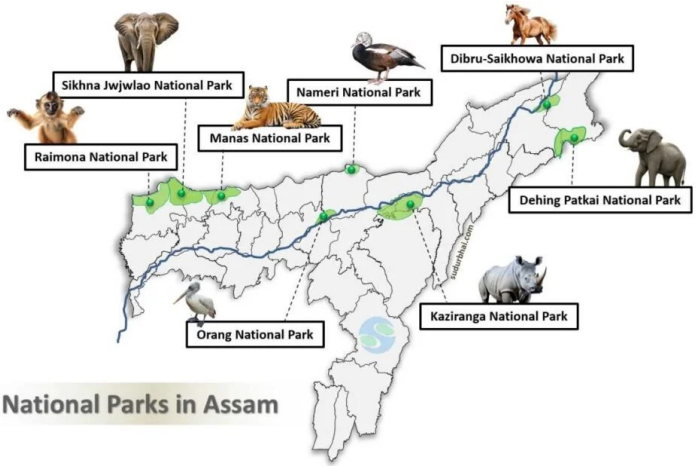
Kaliningrad



- Kaliningrad was in the news after **Russia warned NATO** that it could use its entire military arsenal, including nuclear weapons, if the alliance attempts to isolate the region.
- It is a **Russian exclave** on the **Baltic Sea**, bordered by **Poland** to the south and **Lithuania** to the north and east.
- An **exclave** is a part of a country geographically separated from its mainland.
- **Formerly part of Germany (East Prussia),** it was annexed by the Soviet Union in 1945 after World War II.
- It is strategically important as the **headquarters of Russia's Baltic Fleet** at Baltiysk and home to **Russia's only ice-free port** on the Baltic Sea.

Raimona National Park

- Raimona National Park in **Assam** was in the news after a **tigress translocated from Bihar to Buxa Tiger Reserve, West Bengal,** moved into the park.
- Declared a national park on 9 June 2021, it covers 422 sq. km. in the E**astern Himalayas Biodiversity Hotspot,** in Kokrajhar district within the Bodoland Territorial Region.
- It shares its **northern boundary with Bhutan** and western boundary with the **Sankosh River,** which separates Assam and West Bengal.
- It supports **transboundary wildlife movemen**t, particularly elephants, and is home to the endangered **Gee's golden langur** (Trachypithecus geei), endemic to Assam and Bhutan.



Zuqar Island

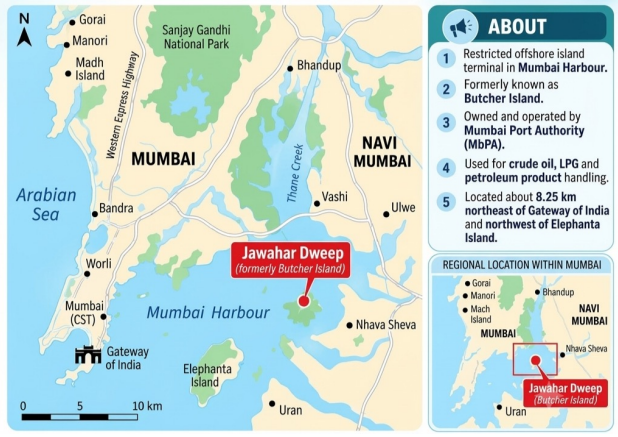


- **Zuqar Island (Jabal Zuqar)** was in the news after **Yemen's** Houthi rebels claimed that they were rescuing a boat here carrying 14 Indian nationals, allegedly targeted by Saudi Arabia.
- Zuqar is part of the **Hanish Islands**, a **volcanic archipelago** located in the southern Red Sea,

close to the **Eritrean coast and the Bab-el-Mandeb Strait.**

- In **1998**, an arbitral tribunal under the **Permanent Court of Arbitration (PCA)** awarded sovereignty over the Zuqar–Hanish island group to **Yemen**, while awarding certain other islands to **Eritrea**.
- Its **strategic importance** comes from its proximity to Bab-el-Mandeb, which connects the Red Sea with the Gulf of Aden, forming a vital shipping route between the Indian Ocean and the Mediterranean Sea through the Suez Canal.

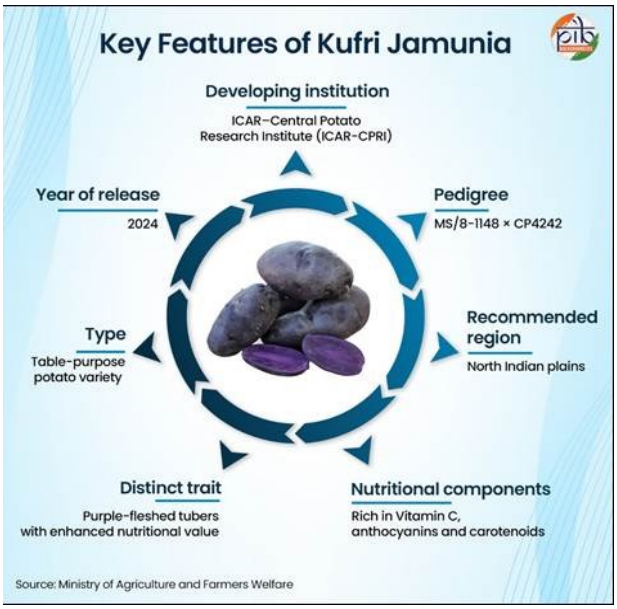
Jawahar Dweep



- Jawahar Dweep, formerly known as **Butcher Island,** is an **offshore island** in Mumbai Harbour, Maharashtra, in the Arabian Sea.
- It houses a **Marine Oil Terminal** operated by the Mumbai Port Authority (MbPA), which handles crude oil and petroleum products through five jetties.
- **During Swachhata Abhiyan 2026** on Gandhi Jayanti, MbPA declared Jawahar Dweep **India's first plastic-free oil terminal,** as part of efforts to reduce single-use plastic and improve waste management.
- **India has 1,298 offshore islands/islets** (1,059 islands and 239 rocks/rocky islets); Middle Andaman (1,535.5 sq. km) is the largest.

Species in News

Kufri Jamunia



- Kufri Jamunia, developed by Shimla based **ICAR–Central Potato Research Institute (ICAR-CPRI)** and released in 2024, is a **biofortified, purple-fleshed potato** variety.
- Its purple colour is due to **anthocyanins**; it is **rich in Vitamin C, carotenoids, iron and zinc,** helping address hidden hunger.
- It is a **medium-maturing** variety with **good storage quality,** suitable for North Indian plains, yielding about 32–35 tonnes per hectare under recommended conditions.
- India is the **2nd-largest potato producer,** after China..
- The **top three states** (UP, West Bengal and Bihar) account for about 72% of India's potato production.

Southern Right Whale



- The **Southern Right Whale** (Eubalaena **australis**) is in the news after **several calves were found dead along Argentina's Patagonian coast,** with a possible bacterial infection under investigation.
- It is a large **baleen whale** (**Mysticeti**) found in the **Southern Hemisphere,** mainly between 20°S and 65°S; it has a stocky, **dark body, no dorsal fin and rough skin patches** called **callosities** on its head.
- A **baleen whale** is a large marine mammal that **lacks teeth** and instead has rows of baleen plates which are **stiff, comb-like plates made of keratin** in its upper jaw
- It **migrates** between Southern Ocean feeding grounds and warmer breeding grounds, feeding mainly on krill and copepods using baleen plates.

Green Keelback



- The **Green Keelback** (**Rhabdophis plumbicolor**), also called the **Lead Keelback**, was recently spotted near Biligiri Rangana Betta (BR Hills), Karnataka.
- It is a **non-venomous snake** belonging to the Colubridae family, found across the **Indian subcontinent,** including India, Sri Lanka, Bangladesh and Myanmar.
- It inhabits **grasslands, gardens, moist areas and forest edges**, has a greenish body with keeled (ridged) scales, and may raise its neck in a hood-like posture when threatened, resembling a cobra.
- It helps **maintain ecological balance** by feeding on small animals and other snakes.

Camels of Kutch



- The camel population in **Kutch, Gujarat, has declined sharply from 17,639 in 1992.**
- The number of animals attending the **traditional Bhed Mata Camel Fair** has fallen from thousands to fewer than 200.
- Kutch is home to **two indigenous breeds of the dromedary camel (**Camelus dromedarius):
  - **Kharai Camel:** Known as the **swimming camel,** it can swim up to about 3 km across tidal creeks to reach mangrove islands called bets. It feeds on **mangroves**, particularly Avicennia marina, and other salt-tolerant plants.
  - **Kutchhi Camel**: Adapted to **inland dry grasslands**, thorn-scrub forests and the rocky terrain of the Rann of Kutch.
- These camels are t**raditionally reared by pastoral communities** such as the **Rabaris**, **Maldharis** and **Jaths**, following nomadic and semi-nomadic practices.
- Major **threats** include loss of grazing lands, industrialisation, mining, mangrove degradation and restrictions on traditional grazing access

Jeypore Ground Gecko



- The **Jeypore Ground Gecko** (**Cyrtodactylus jeyporensis**) is in the news after being sighted in **Odisha's Balda Hills**, where a proposed **bauxite mining project** threatens its habitat.
- It is a **rare, nocturnal, ground-dwelling gecko endemic to the Eastern Ghats** of southern Odisha and northern Andhra Pradesh.
- It inhabits **high-altitude forests, rocky areas and boulder crevices,** generally at 900–1,400 metres.

- First documented in 1878, it was **rediscovered in 2010** after being presumed extinct for about 130 years.
- The name **"Jeypore" comes from Jeypore**, a region and town in the **Odisha** (historically part of the Jeypore Hills/forests).
- **CITES**: Appendix II; **Wildlife (Protection) Act, 1972**: Schedule I.

Himalayan Tahr



- The **Kedarnath Wildlife Division (Uttarakhand)** plans to regulate tourism and conduct cleanliness drives after **tourist waste and feeding** were found to alter the foraging behaviour of Himalayan tahr.
- The **Himalayan tahr** (**Hemitragus jemlahicus**) is a large, wild **goat-like mammal** belonging to the Bovidae family, native to the **Himalayas** (India, Nepal, southern Tibet and Bhutan).
- In India, it occurs in **Jammu and Kashmir, Himachal Pradesh, Uttarakhand and Sikkim,** inhabiting rocky slopes, forests and alpine grasslands at **2,500–5,000 metres**; males are larger, with **backward-curving horns** up to 46 cm and a thick reddish-brown coat.

Note: The second Tahr species in India is the **Nilgiri tahr** (**Nilgiritragus hylocrius**) is an endangered mountain goat **endemic to the Western Ghats**, mainly found in Kerala and Tamil Nadu, and is the state animal of Tamil Nadu.

Palmyra Palm Tree



- **India exported** organic Palmyra jaggery powder from Erode, Tamil Nadu, to Varna, Bulgaria, in October 2026, facilitated by Agricultural and Processed Food Products Export Development Authority (APEDA).
- **Palmyra** (**Borassus flabellifer**), also called **Toddy Palm**, belongs to the Arecaceae (palm) family and is **native to tropical Africa but widely cultivated in India**, particularly Tamil Nadu.
- It is a **tall palm** (up to 30 metres) with fan-shaped leaves and **separate male and female trees (dioecious).**
- Its **sap (neera/toddy) is used to make jaggery, palm sugar and vinegar;** its fruits are edible, leaves are used for handicrafts and traditional writing, and wood for construction.
- Known as the **Tree of Life (Kalpaga Tharu),** it supports rural livelihoods and provides food and shelter for wildlife.

APEDA is a statutory body established in 1986 under the **Ministry of Commerce and Industry,** Government of India, to **promote the export and development of agricultural and processed food products** in India.

Chocolate Mahseer



- **Chocolate Mahseer** (**Neolissochilus hexagonolepis**), also called **Copper Mahseer** or locally **Katley**, was in the news after the Sikkim Chief Minister released it into the Rangeet River, a tributary of Teesta.
- It is a **freshwater fish** belonging to the Cyprinidae family, found in the rivers and hill streams of Northeast India and parts of South and Southeast Asia.
- It **inhabits cool, clear, fast-flowing waters** with rocky or gravelly beds and migrates upstream for breeding.
- It is an important **food and sport fish** and is designated as the **state fish** of Sikkim, Nagaland and Meghalaya.

Keywords

1. **Alberta's Referendum:** **Oil-rich Alberta (Canada)** held a non-binding referendum amid demands for separation and greater provincial autonomy.A referendum is a **form of direct democracy** in which citizens vote directly on a specific issue; it may be binding or non-binding. **India has no general constitutional provision** for referendums but the **Goa Opinion Poll (1967)** was held by the independent India government.

2. **Jumping Genes:** Also called **transposons** are DNA segments that **move within the genome**, influencing gene activity and contributing to genetic variation and evolution, but may also disrupt normal genes. The **human BC200 gene was recently found in a poxvirus**, indicating possible transfer of genetic material between organisms. The **CCR4-NOT protein complex,** found in humans, regulates jumping-gene activity and helps maintain genome stability.

3. **Oskar Klein Medal:** **Ashoke Sen** became the first Indian physicist to receive the Oskar Klein Medal. The award recognises his contributions to **string theory, quantum gravity and black hole physics.** Instituted in 1988, the medal is jointly awarded by **Stockholm University and the Nobel Committee for Physics of the Royal Swedish Academy of Sciences.**

4. **Leave India Notice (LIN):** It is an administrative direction issued by **immigration authorities**, usually the **Foreigners Regional Registration Office (FRRO)**, requiring a foreign national to leave India within a specified period.It is issued under the **Immigration and Foreigners Act, 2025**. Common **reasons** include visa overstays, violation of visa conditions and adverse security reports.

5. **Adi people:** The Adi, meaning **"hill people"**, are a major tribal community of the **Siang region of Arunachal Pradesh**, comprising subgroups such as Padam, Minyong and Pasi; the proposed **Siang Upper Multipurpose Project** has raised concerns over land submergence. Their livelihoods include **wet-rice cultivation, Jhum (shifting cultivation), fishing and animal husbandry**.**Solung** is their major agricultural festival, **Ponung** is a women's group dance, **Donyi-Polo** is their traditional belief system, and **Kebang** is their village council.

6. **Hydroseeding:** A **method of sowing seeds by spraying a slurry** of seeds, water, fertilisers, mulch and soil stabilisers onto the soil. It promotes **uniform seed distribution, moisture retention and faster germination,** helping restore vegetation on difficult terrain. It is used for **slope stabilisation, soil-erosion control and ecological restoration**.

7. **Personally identifiable information (PII):** It refers to i**nformation that can identify an individual directly or when combined with other data,** such as name, phone number ,and financial details. **SBI reported a data breach** that surfaced on the dark web.The **dark web** is a part of the internet not indexed by conventional search engines and accessed using s**pecialised software** such as Tor.

8. **China Zorilla:** It is the **world's largest battery-electric ship**, connecting Buenos Aires (Argentina) and Colonia del Sacramento (Uruguay) across the Río de la Plata. Built by Incat Tasmania for **ferry operator** Buquebus, it can carry **2,100 passengers and 225 vehicles.** It is named after **China Zorrilla, a renowned Uruguayan actress** known for her contributions to theatre, cinema and television.

9. **PM Viksit Gram Swaraj Yojana (PM VGSY):** It is a **five-year Centrally Sponsored Scheme** aimed at strengthening Panchayats through integrated planning, capacity building and digital governance. It builds on **eGramSwaraj and e-Panchayat systems**, with the AI-enabled **PANCHAM** chatbot supporting two-way communication in 17 Indian languages. It aims to improve the **utilisation of 16th Finance Commission grants** and increase Panchayats' Own Source Revenue (OSR).

10. **Surangam:** It is a **traditional horizontal underground water-harvesting tunnel** dug into laterite hills to collect groundwater seepage, mainly used in **North Kerala and South Karnataka**. It provides **water for drinking and irrigation**. **Other traditional water-harvesting systems** include Zing (Ladakh), Kuhl (Himachal Pradesh), Johads and Khadins (Rajasthan), Ahar-Pyne (Bihar), Bamboo Drip Irrigation (Meghalaya), Eri tanks (Tamil Nadu) and Kattas (Karnataka).

UPSC CIVIL SERVICES
EXAM RESULT 2026

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



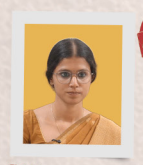
RAJATH R
AIR 348



AMAL KAMPIYIL
AIR 362
First Attempt Topper



HARSHIDAA S NAIR
AIR 372



SANDHRA S
AIR 380



ATHIDHI KRISHNADEV B
AIR 451
First Attempt Topper



SHEIK MOHAMED NISHATH M
AIR 497



JAHANA SAREEN V P
AIR 511



ARUNIMA M S
AIR 558



ASNA ANWAR
AIR 576
First Attempt Topper



NIDHIN R H
AIR 699



FAIRUZ FATHIMA M
AIR 708



MOHAMED HASHIM K
AIR 713



MUHAMMED SUHAIL
AIR 718



SHIYAD
AIR 743



NANDANA J S
AIR 745

FORTUNE IAS ACADEMY

+91 9495 015 888 // +91 8138 940 888
www.fortuneias.com

Admissions are now open
for offline and online batches.